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October 19, 2015

Lynn Nakashima
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700 Heinz Avenue
Berkeley, CA 94710

**Subject: Final 2015 Groundwater Sampling Results Technical Memorandum
Berkeley Global Campus, Richmond Field Station Site
University of California, Berkeley
Site Investigation and Remediation Order I/SE-RAO 07/07-004**

Dear Ms. Nakashima:

Please find enclosed the *Final 2015 Groundwater Sampling Results Technical Memorandum*, dated October 19, 2015. The final version replaced the draft report submitted on July 24, 2015 with minor changes, as documented in the responses to DTSC comments received on September 25, 2015, included as Appendix E of the report.

This technical memorandum presents data collected during the water level sampling events in October 2014 and April 2015, and groundwater sampling event conducted in April 2015. This submittal includes two hard copies and two electronic copies on disc. A hard copy with disk has been delivered to the City of Richmond Public Library and the document is also available for public review at Building 478, Berkeley Global Campus.

If you have any questions or need further information regarding this submittal, please call me at (ghaet@berkeley.edu, 510-642-4848) or Karl Hans (khans@berkeley.edu, 510-643-9574).

Sincerely,

A handwritten signature in blue ink, appearing to read "G. Haet".

Greg Haet, P.E.
EH&S Associated Director
Environmental Protection

Enclosures

cc: Bill Marsh, Edgcomb Law Group

FINAL

2015 Groundwater Sampling Results Technical Memorandum

Richmond Field Station Site
Berkeley Global Campus at Richmond Bay
University of California, Berkeley

Prepared for

Office of Environment, Health and Safety
University of California, Berkeley
317 University Hall, No. 1150
Berkeley, California 94720

October 19, 2015

Prepared by

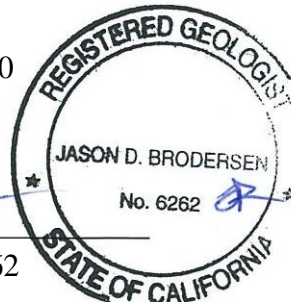


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- D Water Level Measurement Sampling Forms
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Attachment

- 1 Curtis & Tompkins, Ltd. Laboratory Reports (*Provided on CD only*)

ACRONYMS AND ABBREVIATIONS

µg/L	Micrograms per liter
BAPB	Biologically active permeable barrier
bgs	Below ground surface
DCA	Dichloroethane
DCE	Dichloroethylene
DQO	Data Quality objective
DTSC	Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
FSP	Field sampling plan
FSW	Field Sampling Workplan
ft/ft	Feet per foot
IDW	Investigation-derived waste
J	Estimated value
MCL	Maximum contaminant level
MDL	Method detection level
ORP	Oxidation-reduction potential
PAH	Polycyclic aromatic hydrocarbons
PCE	Tetrachloroethylene
PVC	Polyvinyl chloride
QA	Quality assurance
QC	Quality control
QL	Quantitation limit
R	Rejected data
RFS	Richmond Field Station
SIM	Selective ion monitoring
SVOC	Semivolatile organic compound
TCE	Trichloroethylene
TDS	Total dissolved solids
U	Not detected
UC	University of California
UJ	Not detected at an estimated value
VOC	Volatile organic compound

1.0 INTRODUCTION

This technical memorandum was prepared on behalf of The Regents of the University of California (UC) in accordance with California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), Site Investigation and Remediation Order, Docket No. IS/E-RAO 06/07-004, dated September 15, 2006. The order provides for investigation and cleanup of 96 acres of upland and 13 acres of tidal marsh and transition habitat within the Richmond Field Station (RFS) Site.

This technical memorandum presents the results of annual groundwater monitoring and maintenance conducted during the October 2014 to June 2015 time period as proposed in the Final Phase I November 2010 through April 2012 Groundwater Sampling Results Technical Memorandum, dated December 12, 2012 (Tetra Tech 2012). The groundwater monitoring was conducted as a part of the selected remedy for groundwater within the RFS Site as presented in the Final Removal Action Workplan, Research, Education, and Support Area and Groundwater within the Richmond Field Station, dated July 18, 2014 (Tetra Tech 2014a).

The field work consisted of dry and wet season water level measurements, wet season groundwater sampling, and maintenance activities. The sampling event was conducted in accordance with the Final Phase I Groundwater Sampling, Field Sampling Workplan (FSW) dated June 2, 2010 (Tetra Tech 2010). The objective of the FSW was to address data gaps identified in the Current Conditions Report (Tetra Tech 2008) and to identify immediate or potential risks to public health and the environment. The objective of continued groundwater monitoring is to fulfill in part the selection of remedy for groundwater by (1) monitoring the water level and direction of groundwater flow bi-annually, and (2) monitoring concentrations of chemicals in groundwater at piezometers where sample results exceeded one-half of screening criteria during any of the first four Phase I monitoring events conducted in 2010 to 2012.

This technical memorandum presents a summary of field activities, site hydrology, data quality assessment, and data evaluation associated with the October 2014 water level measurement and April 2015 groundwater sampling event. The report presents a general comparison of the April 2015 results to the previous six rounds of groundwater sampling. The report appendices and attachment provide field documentation forms as well as complete analytical results. This final document incorporates comments received from the DTSC on September 25, 2015; the comment letter and response to comments are included in [Appendix E](#).

1.1 PHYSICAL SETTING

The RFS Site is located at 1301 South 46th Street, Richmond, California, along the southeastern shoreline of the City of Richmond on the San Francisco Bay and northwest of Point Isabel (see [Figure 1](#)). It consists of upland areas developed for academic teaching and research, an upland remnant coastal terrace prairie, a tidal salt marsh, and a transition zone between the upland areas and the marsh. Between the late 1800s and 1948, several companies, including the California Cap Company, manufactured explosives at the RFS Site. In 1950, the UC Regents purchased the property from the California Cap Company. UC Berkeley initially used the Site for research for the College of Engineering; later, it was also used by other campus departments.

Three habitat type areas have been identified at the site: (1) the Upland Area, (2) the Transition Area, and (3) the Western Stege Marsh (see [Figure 2](#)). The Upland Area consists of 96 acres of land bounded by Meade Street to the north, South 46th Street to the east, the Transition Area to the south, and Meeker Slough and Regatta Boulevard to the west. The Transition Area occupies approximately 5.5 acres and is bounded to the north by the Upland Area at the location of a buried, former seawall that is believed to have been the edge of the historical mudflats, and to the south by Western Stege Marsh at the 5-foot elevation upper extent of the marsh (National Geodetic Vertical Datum 29). The Transition Area is believed to consist entirely of artificial fill placed on historical mudflats. Western Stege Marsh occupies approximately 7.5 acres and is bounded by the Transition Area to the north, the RFS connector trail to the East Bay Regional Park District Trail and Eastern Stege Marsh to the east, the Bay Trail to the south, and Meeker Slough and Marina Bay housing development to the west (see [Figure 2](#)).

1.2 INVESTIGATION PURPOSE

The Current Conditions Report (Tetra Tech 2008) for the RFS Site identified the possible presence of contaminants in groundwater as a data gap. Potential sources include contamination from off-site sources as well as previous site activities that may have leached contaminants from soil or underground utilities to groundwater. The Phase I FSW field effort addressed this data gap by installing 51 piezometers throughout the Site: 47 in the shallow groundwater zone and four in a deeper zone (see [Figure 3](#)). Data collected included groundwater samples, geology, and depth to water, which were used to develop a hydrogeologic conceptual model of the site and improve the understanding of overall site-wide groundwater quality.

Continued groundwater monitoring evaluates seasonal groundwater elevations and fluctuations in chemical concentrations. The 2015 annual groundwater sampling consisted of the following activities:

- Collecting depth-to-water measurements at all 50 shallow zone piezometers and four deep piezometers in October 2014. These 50 piezometers include the 47 shallow piezometers installed by UC Berkeley during 2010 and three piezometers (PZ8, PZ9, and PZ11) previously installed by consultants on behalf of the Campus Bay respondents to the DTSC Order.
- Collecting depth-to-water measurements at all 50 shallow zone piezometers (per above), four deep piezometers, and four new shallow zone piezometers (ETA01, ETA02, ETA03, and WSM01 in the Biologically Active Permeable Barrier [BAPB] Area) in April 2015. The four new piezometers were installed in January 2015 as part of the Phase IV Field Sampling Plan (FSP) investigation of groundwater in the vicinity of the BAPB (Tetra Tech 2015).
- Sampling 40 shallow zone piezometers (including 37 installed in 2010 and PZ-8, P-9, and PZ-11) in April 2015 for chemical analysis, based on the results of past rounds of groundwater investigations.
- Manually removing roots from piezometer B178 because roots had grown within the well casing.

- Conducting maintenance on the well boxes to improve conditions and replace aging components including the gaskets, well locks, casing plugs, and bolts.

2.0 FIELD ACTIVITIES

In October 2014, depth-to-water measurements were collected at all 50 shallow zone piezometers and four deep piezometers to calculate the potentiometric surface. The 2015 sampling strategy consisted of measuring depth to water on April 1, 2015 consistent with the October 2014 approach, with one change: water levels in the four new BAPB Area piezometers were also measured. In addition, groundwater sampling was conducted at 40 piezometers in April 2015. Groundwater samples were analyzed for dissolved metals (field-filtered), semivolatile organic compounds (SVOC), polycyclic aromatic hydrocarbons (PAH), or volatile organic compounds (VOC), as indicated in [Table 1](#). Monitoring consisted of chemical analysis at piezometers with previous sample results exceeding one-half of the lesser of the California or federal maximum contaminant levels (MCL) during any of the first four monitoring events conducted between 2010 to 2012 (Tetra Tech 2012).

In addition, the following water quality parameters were measured at each of the 40 sampled locations during the April 2015 sampling event: pH, temperature, specific conductance, turbidity, dissolved oxygen, total dissolved solids (TDS), salinity, and oxidation-reduction potential (ORP). Groundwater sampling locations, depths, and the analytical suite are presented in [Table 1](#). Water level measurement sampling forms are included as [Appendix D](#).

2.1 WATER LEVEL MEASUREMENTS

A comprehensive set of depth to water measurements for all piezometers were recorded on October 1, 2014, and April 1, 2015, to coincide with similar field events occurring on the adjacent Campus Bay property. The depth to water in all 50 shallow and four deep piezometers was measured from the top of the polyvinyl chloride (PVC) casing to 0.01-foot accuracy using an electronic water level indicator; the data are presented in [Table 2](#). The April 1, 2015 event also included measurement of water levels in the four new BAPB Area piezometers installed in January 2015.

The well caps were removed a minimum of 15 minutes before the depth to water measurement was collected to allow the water level to adjust to ambient conditions. These groundwater measurements were mapped to assess seasonal variation in groundwater elevations and contours. The measurements were recorded on groundwater water level logs and are reported in [Figures 4 through 13](#).

2.2 PIEZOMETER MAINTENANCE

Piezometer B178 was observed to be blocked at 5 feet below ground surface (bgs) during water level measurements conducted in April 2015. Tetra Tech personnel employed a snake device to clear a root mass from the well casing; no inorganic debris was observed. Based on observations made within the wells during inspection and root mass removal, it appears roots entered the casings through the screens by thin dendritic roots, and subsequently grew within the piezometer casing, thereby not damaging the actual well screen.

During water level measurements conducted in April 2015, the condition of each piezometer well box was observed, and an inventory of items needed to improve the condition of the

piezometer well box was recorded. Maintenance activities were conducted during the week of June 1, 2015, which consisted of removing dirt and rust, and replacing original gaskets to prevent water from entering the well box. New gaskets were applied to the well lip using weather-proof adhesive Permatex Silicone 100 percent. Casing plugs were replaced with all rubber and plastic J-plugs, and any missing bolts were replaced.

2.3 GROUNDWATER SAMPLING

Groundwater samples were collected from April 10 through April 17, 2015. The groundwater from each piezometer sampled was collected through sterile polyethylene and silicon tubing using a low-flow, peristaltic pump. The discharge from the pump ran through a flow cell that measured pH, temperature, specific conductance, turbidity, dissolved oxygen, TDS, salinity, and ORP. Groundwater samples were collected from each piezometer after the parameters stabilized to within the acceptable ranges, as shown on the groundwater sample collection sheets included in [Appendix A](#) and summarized in [Table 3](#). The flow-through cell was disconnected from the sampling system prior to sample collection. Groundwater results are discussed in [Section 6.0](#).

Ample sample volume was collected from the shallow piezometers to submit samples for laboratory analysis of VOCs, SVOCs, PAHs, or dissolved metals, as indicated in [Table 1](#). Samples were immediately placed in coolers containing ice. At the end of each day, the samples were delivered to Curtis and Tompkins laboratory located in Berkeley, California, using chain-of-custody procedures.

2.4 WASTE CHARACTERIZATION AND DISPOSAL

All investigation-derived waste (IDW) created during the field effort was drummed, labeled, and moved to a fenced storage location west of Building 110. The IDW produced from this sampling investigation consisted of three drums containing water purged from piezometers during the sampling processes.

The decontamination water drums were characterized based on results from the April 2015 groundwater samples and determined to be nonhazardous. The drums were transported off-site on June 11, 2015 by Clean Harbors for disposal in Buttonwillow, California.

3.0 GEOLOGY

Four major geologic units are defined for the RFS Site as presented in the Site Characterization Report (Tetra Tech 2013a):

- Artificial Fill
- Quaternary Alluvium
- Bay Sediments
- Yerba Buena Mud (Older Bay Mud)

The borings for the FSW investigation were drilled within the upper 40 feet bgs; therefore, only the artificial fill, alluvium, and, to a lesser extent, bay sediments were encountered during piezometer installation in 2010. During the installation, artificial fill was difficult to differentiate from the underlying alluvium because it was of a similar lithology and texture. The lithology of the fill and alluvium can be grouped into four basic soil types: silt/clay, clayey gravel, clayey/silty sand, and sand. In most cases, the gravels contained clay and sand and the clays layers were found to have an estimated 5 to 40 percent sand or gravel. The relationship between the lithologies of the alluvium is typical of a coastal alluvial plain: thin interbedded layers of clays, silts, sands, and gravels that are laterally discontinuous. The fine-grained sediments (clays and silts) may have been deposited as over-bank flood-plain deposits and the coarse grained sediments may be from former stream or river beds meandering across a flood plain. The meandering of former surface water channels likely causes the lateral variation in the lithologies observed in the borings.

Two geologic cross sections were developed to aid in the description of the site stratigraphy; the transects of the cross-sections are shown on [Figure 3](#). The cross sections were developed for the technical memorandum presenting the October 2010 groundwater results (Tetra Tech 2011), and have been updated to include measured groundwater levels from all rounds of sampling. Cross section A-A' is along an east-west transect and is shown on [Figure 14](#). Cross section B-B' is along a north-south transect and is shown on [Figure 15](#). Generally, the horizontal extent of individual layers of clay, sand, and gravel is limited in the upper 20 feet bgs, as would be expected in a coastal alluvial depositional environment. Between 20 and 44 feet bgs, less variation in lateral extent was observed, although this could be an artificial result of fewer borings to define the deeper horizons.

4.0 HYDROGEOLOGY

The geologic materials at the site consist of clays, silts, sands, and gravels. Generally, the coarser-grained materials are expected to transmit or yield more groundwater; however, most of the gravels and sands contained a silt/clay fraction that may inhibit groundwater flow or yield. A few exceptions were encountered where cleaner, well-graded and poorly graded sand lenses occurred. These sand lenses occurred only over short lateral distances in the upper 20 feet bgs. Based on the limited number of deeper borings, a more continuous thin layer of sand may be present between depths of 35 and 40 feet bgs.

In total, UC Berkeley installed 55 piezometers throughout the site as part of the FSW investigations: 51 shallow piezometers were installed with 10-foot screen intervals to a maximum total depth of 20 feet bgs, and four deep piezometers were installed with 10-foot screen intervals, with the exception of piezometer B480deep which has a 5-foot screen interval, to a maximum depth of 40 feet bgs. In addition, three piezometers (PZ8, PZ9, and PZ11) were installed by consultants for the adjacent Campus Bay property. Piezometers B197 and DH were abandoned due to root blockage and were replaced with B197R and DHR in 2013 (Tetra Tech 2013b).

Site-wide groundwater contours and flow directions were estimated using the Natural Neighbor interpolation function within the geographic information systems program based on water level measurements from the shallow piezometers at the Site and available water level measurements from wells at the adjacent Campus Bay property. Groundwater flow directions are inferred in areas where there are no piezometers or wells with available measurements. [Figures 4 through 13](#) present the shallow groundwater elevations measured between November 2010 and April 2015 and the corresponding elevation contours for the shallow piezometers. The November 2010, October 2011, October 2012, October 2013, and October 2014 groundwater elevations are likely representative of the dry season because no major rainfall had occurred in the 6 months prior to either event. The April 2011, 2012, 2013, 2014, and 2015 measurements were collected toward the end of the annual wet season; the 2015 wet season was drier than usual as Northern California experienced extreme ongoing drought conditions (from 2011 to present).

Groundwater generally flows onto the site from the northeast and across the site to the southwest. Minor seasonal variation in groundwater flow direction and gradients were observed, as would be expected from wet to dry seasons. Groundwater elevations will continue to be measured semiannually to gather a comprehensive dataset and continued assessment of seasonal variation in groundwater flow.

The horizontal groundwater gradient or slope is estimated from the groundwater contours. Horizontal gradient is expressed as a ratio of change in vertical elevation by change in horizontal distance; a steep gradient is larger than a flat gradient. The horizontal groundwater gradient varies across the Site with representative slopes ranging from 0.004 feet per foot (ft/ft) to 0.01 ft/ft. Representative gradients calculated for the October 2012 through April 2015 events are shown in several locations on [Figures 8 through 13](#).

Fall measurements are intended to represent the dry season; the October 2014 gradients are consistent with previous measurements conducted in the fall (November 2010, October 2011, October 2012, October 2013, and October 2014). Dry season groundwater contours are shown

on Figures 4, 6, 8, 10, and 12. Spring measurements are intended to represent the wet season. While there are some differences between northern and southern gradients measured in April 2015 compared with previous events (April 2011, April 2012, April 2013, March 2014, and April 2015), generally the gradients are consistent. The April 2015 gradients include water level measurements for the BAPB area wells for the first time. Wet season contours are shown on Figures 5, 7, 9, 11, and 13. Comparing the dry and wet seasons, the dry season gradients tend to be shallower in the central and southern portions of the site and slightly steeper in the northeast portion of the site.

The variation in gradients within the site and seasonally is likely influenced by changes in seasonal and local areas of recharge caused by varying surface cover and features and the variation in hydraulic conductivity of the soil. For example, extremely low hydraulic conductivity in clays result in slower response to increases in groundwater recharge than sands which have higher conductivity. While the site is underlain predominantly by clayey soil with low conductivity, there are localized areas with higher silt and sand content throughout.

A localized variation in the groundwater gradient had been identified near location B150, where the groundwater elevations were higher than in nearby piezometers during water level measurement events from 2010 through 2015. In April 2015, this mound was also present, as indicated by the concentric groundwater contours around location B150 and B121 shown on Figure 13. Continued elevated measurements in the area suggest there may be ongoing artificial sources of water from nearby irrigation, landscape maintenance, or other leaky pipes contributing to higher water levels in the area. A decrease in the mounding had been observed since the initial groundwater elevation measurements; however, as of April 2015, this groundwater variation is still present.

Vertical groundwater gradients were also estimated from the water level measurements at the shallow/deep well pairs. The following table shows the vertical gradients estimated from the water level measurements collected between November 2010 and April 2015.

Vertical Groundwater Gradients (ft/ft)									
Well Pair	2010 Dry Season	2011 Wet Season	2011 Dry Season	2012 Wet Season	2012 Dry Season	2013 Wet Season	2013 Dry Season	2014 Wet Season	2015 Wet Season
B480/ B480deep	0.25 Up	0.13 Up	0.23 Up	0.19 Up	0.22 Up	0.19 Up	0.22 Up	0.20 Up	0.19 Up
B128/ B128deep	0.03 Dn	0.05 Up	0.02 Dn	0.09 Dn	0.01 Up	0.08 Up	0.082 Up	0.01 Up	NM
B38/ B38deep	0.02 Up	0.04 Dn	0.02 Up	0.06 Dn	0.02 Up	0.00 None	0.01 Up	0.00 None	0.01 Up
CTP/ CTPdeep	0.04 Dn	0.07 Dn	0.01 Dn	0.01 Up	0.01 Up	0.01 Up	0.08 Up	0.01 Up	0.01 Up

Notes:

- NM Not measured
- Dn Downward gradient
- Up Upward gradient

Temporal changes in the vertical gradients are likely the result of seasonal variations in surface water infiltration and recharge. Spatial variation in the vertical gradients is likely due to the spatial variability in the aquifer properties from more permeable sands to less permeable clays.

5.0 DATA QUALITY ASSESSMENT

This section presents the data quality assessment for the 2105 groundwater sampling event. A summary of data quality objectives (DQO), review of analytical data and findings, and any deviations from the work plans or previous sampling events is presented below.

5.1 DATA QUALITY OBJECTIVES

DQOs were developed during the FSW planning process to help ensure data appropriate to support defensible decisions is collected. The DQOs stated the need for additional groundwater data collection to develop a hydrogeologic model of the site and to improve overall understanding of groundwater quality. This objective was achieved through the strategic placement of the 51 groundwater monitoring piezometers during the Phase I FSP investigation that spanned the entire site and also targeted specific locations defined as data gaps in the Current Conditions Report (Tetra Tech 2008). Of the 51 piezometers installed in 2010, 40 were sampled in April 2015, along with five duplicate samples, three trip blanks, five equipment rinsate blanks, and one source water blank.

The data collected during the first six rounds of groundwater sampling were adequate to create hydraulic gradient maps to gain a better understanding of the general hydrology at the Site. Additionally, the chemical data collected have improved site knowledge relative to previously identified data gaps and has provided data for previously uncharacterized areas.

All locations were sampled in April 2015 according to the methods described in the sampling plan and quality assurance project plan in the FSW (Tetra Tech 2010). The analytical data achieved appropriate method detection levels (MDL) to be compared with relevant state and federal groundwater criteria and are presented in [Section 6.0](#), along with a general comparison to the previous five rounds of data in [Section 7.0](#).

5.2 LABORATORY DATA REVIEW

Assignment of data qualification flags for analytical data from Curtis and Tompkins conformed to U.S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA 2008) and Inorganic Data Review (EPA 2010). Data review specifications require that various data qualifiers be assigned when a deficiency is detected or when a result is less than its detection limit. If no qualifier is assigned to a result that has been reviewed, the data user is assured that no technical deficiencies were identified during validation. The qualification flags used are defined as follows:

- U – Indicates that the chemical was not detected at the numerical detection limit (sample-specific detection limit) noted. Non-detected results from the laboratory are reported in this manner.

- UJ – Indicates that the chemical was not detected; however, the detection limit (sample-specific detection limit) is considered estimated based on problems encountered during laboratory analysis. The associated numerical detection limit is regarded as inaccurate or imprecise. This qualifier is also added to a positive result (reported by the laboratory) if the detected concentration is determined to be attributable to contamination introduced during field sampling or laboratory analysis.
- J – Indicates that the chemical was detected; however, the associated numerical result is not a precise representation of the concentration that is actually present in the sample. The laboratory-reported concentration is considered an estimate of the true concentration.
- R – Indicates that the chemical may or may not be present, and that the data was rejected. The non-detected analytical result reported by the laboratory is considered unreliable and unusable. This qualifier is applied in cases of gross technical deficiencies (for example, a holding time missed by a factor of two times the specified time limit, severe calibration non-compliance, or extremely low analyte recovery in quality control [QC] spike samples).

The preceding data qualifiers may be categorized as indicating major or minor problems. Major problems are defined as issues that result in the rejection of data and qualification with R. These data are considered invalid and are not used for decision-making unless they are used in a qualitative way and the use is justified and documented. Minor problems are defined as issues resulting in the estimation of data and qualification with U, J, and UJ qualifiers. Estimated analytical results are considered suitable for decision-making unless the data use requirements are stringent and the qualifier indicates a deficiency that is incompatible with the intended data use. A U qualifier does not indicate that a data deficiency exists because all non-detect values are flagged with the U qualifier regardless of whether a quality deficiency has been detected.

5.3 DATA QUALITY REVIEW FINDINGS

The following section addresses quality review findings for the inorganic and organic data collected in April 2015.

A review of the inorganic data quality determined that quality assurance (QA)/QC objectives for bias and precision were met for the analytical results, with the following exceptions:

- As a result of low recoveries in the matrix spike/matrix spike duplicate in the dissolved metal analysis, the selenium result in one sample (20150414B197R) was “J” qualified as estimated based on QC spike violations.
- As a result of high percent difference in serial dilution for the dissolved metal analysis, potassium and sodium results in three samples (20150415CCC2, 20150410TP1, 20150414B197R), iron in two samples (20150410TP1, 20150414B197R), and chromium in one sample (20150415CCC2), was “J” qualified as estimated based on serial dilution violations. Less than 1.5 percent of the inorganic groundwater data were qualified based on serial dilution violations.

- As a result of laboratory blank contamination, dissolved chromium results in two samples (20150410B178, 20150410TP1), the dissolved copper result in one sample (20150414B450), dissolved molybdenum results in twenty samples (20150413B128, 20150413B128D, 20150415B150, 20150415B150D, 20150416B158, 20150414B163, 20150415B175S, 20150414B195, 20150414B450, 20150417B480, 20150415CCC2, 20150415CCC3, 20150417CTP, 20150416EERC, 20150416FG, 20150416NRLF, 20150414PZ8, 20150414PZ8D, 20150414B197R, 20150413DHR), dissolved selenium in five samples (20150413B128, 20150413BULB1, 20150413BULB1D, 20150413ETA, 20150413DHR), and dissolved vanadium results in one twelve samples (20150413B128, 20150413B128D, 20150410B178, 20150413BULB1, 20150413BULB1D, 20150413BULB2, 20150416EERC, 20150413ETA, 20150410TP1, 20150413DHR, 20150413SWB, 20150413ER), are considered nondetect and “UJ” qualified. Less than 5 percent of the inorganic groundwater data were qualified based on laboratory blank contamination problems.
- Due to field blank contamination, dissolved aluminum and manganese results in two samples (20150415B150, 20150415B150D), dissolved beryllium in one sample (20150413ETA), dissolved chromium in one sample (20150415B175S), dissolved copper in nine samples (20150415B150, 20150415B150D, 20150416B158, 20150415B175S, 20150416B474, 20150415CCC2, 20150415CCC3, 20150416EERC, 20150416FG), dissolved lead in seven samples (20150415B150D, 20150416B158, 20150415B175S, 20150416B474, 20150417CTP, 20150416FG, 20150416NRLF), dissolved nickel in two samples (20150417B480, 20150417CTP), and dissolved vanadium in four samples (20150415B150, 20150415B150D, 20150415B175S, 20150415CCC2) are considered nondetect and “UJ” qualified. Less than 4 percent of the inorganic groundwater data were qualified based on field blank contamination problems.
- Several inorganic sample results were “J” qualified as estimated because they were reported at concentrations between the MDL and the laboratory quantitation limit (QL). The analytical instrument can make reliable qualitative identification of analyte concentrations above the MDL but below the QL; however, detected results below the QL are considered quantitatively uncertain. Approximately 15 percent of the inorganic groundwater data was affected; however, these results are considered usable as qualified.

A review of the organic data quality determined that QA/QC objectives for bias and precision were met for analytical results, with the following exceptions:

- As a result of low response in the continuing calibration verification in the VOC analysis, tert butyl alcohol results in seven samples (20150410B120, 20150410B178, 20150410B185, 20150410TP1, 20150410TP2, 20150410TP2D, 20150410TB), and Freon 12 in one sample (20150416EERC), were “J” qualified as estimated based on calibration QC violations. Less than 1 percent of all the organic groundwater data were qualified as a result of these criteria violations.

- Matrix spike duplicate spike recoveries resulted in qualification of results as estimated (“J”) for SVOC bis(2-ethylhexyl)phthalate in one sample (20150415CCC2).
- As a result of laboratory blank contamination, the bis(2-ethylhexyl)phthalate result in three samples (20150417EPA, 20150415CCC2, 20150415ER), acetone results in six samples (20150415B175S, 20150415B175W, 20150415CCC3, 20150415CCCT, 20150415TB, 20150415ER), carbon disulfide in five samples (20150415B175S, 20150415B175W, 20150415CCCT, 20150415TB, 20150415ER), and methylene chloride in one sample (20140413TB), are considered nondetect and “UJ” qualified. No results were qualified as a result of field blank contamination. Less than 0.4 percent of the organic groundwater data were qualified as a result of laboratory field blank contamination problems.
- The results for several organic compounds in a few samples were estimated because they were reported at a concentration between the MDL and the QL. The analytical instrument can make reliable qualitative identification of analyte concentrations above the MDL but below the QL; however, detected results below the QL are considered quantitatively uncertain. Less than 1.2 percent of the organic groundwater data was affected.

Although some qualifiers were added to the data, a final review of the dataset compared with EPA data quality parameters indicate that the data are of high overall quality. The data meet all the requirements of the precision, accuracy, representativeness, completeness, and comparability described in EPA guidance for quality assurance project plans (EPA 2002) and the Quality Assurance Project Plan (Tetra Tech 2010), and are usable for meeting the project DQOs and future risk assessments. The overall assessment of the sampling program, QA/QC data, and data review indicates the data from this investigation are of acceptable precision, accuracy, representativeness, completeness, and comparability.

5.4 DEVIATIONS

One deviation from the sampling plan proposed in the Final Phase I November 2010 through April 2012 Groundwater Sampling Results Technical Memorandum (Tetra Tech 2012) was identified during the April 2015 sampling event. The original FSP recommends that 10 percent of the samples be analyzed in duplicate. For VOCs, only two of 31 samples, instead of three, were analyzed in duplicate. In future events, the third duplicate will be collected. This deviation does not represent a significant data gap and does not impact the data quality or data evaluation presented in this report.

6.0 DATA EVALUATION

This section provides an overview of the compounds detected during the groundwater sampling conducted between April 10 and April 17, 2015. State and federal water quality criteria and risk-based concentrations consistent with those used for the groundwater data evaluation presented in the Final Site Characterization Report (Tetra Tech 2013a), as presented in [Table 5](#), were identified to help evaluate the groundwater data. The comparisons are intended solely to provide a baseline comparison and are not intended to represent remedial or cleanup criteria or triggers for further sampling. [Tables 6 through 9](#) provide summaries of the detected data. Complete analytical results are included in [Appendix B](#), and the laboratory reports are provided in [Attachment 1](#). [Appendix C](#) presents concentration-time graphs for piezometers where carbon tetrachloride, trichloroethylene (TCE), or dissolved mercury results have exceeded an MCL in at least one sampling event from 2010 to 2015.

6.1 VOLATILE ORGANIC COMPOUNDS

Groundwater samples from 31 piezometers were submitted for analysis of VOCs by EPA Method 8260 ([Table 1](#)); two duplicate samples were also collected. While VOCs were detected at all 31 sampling locations, only 13 of the 71 target analytes analyzed by this method were detected. These results are presented in [Table 7](#). Similar to the groundwater results from 2013 and 2014, of the VOCs detected, seven compounds — 1,2-dichloroethane (DCA), carbon tetrachloride, cis-1,2-dichloroethylene (DCE), tetrachloroethylene (PCE), trans-1,2-dichloroethene, TCE, and vinyl chloride — exceeded an MCL; results for these compounds are discussed below.

1,2-Dichloroethane. 1,2-DCA was detected at seven locations with concentrations ranging from 0.2 to 7.6 micrograms per liter ($\mu\text{g/L}$); results from five locations (B120, B163, B178, B185, and B197) equaled or exceeded the California MCL of 0.5 $\mu\text{g/L}$, and one location, B163, exceeded the federal MCL of 5 $\mu\text{g/L}$, at a concentration of 7.6 $\mu\text{g/L}$. [Figure 16](#) presents concentrations of 1,2-DCA detected at piezometers where results have equaled or exceeded an MCL in at least one sampling event from 2010 to 2015.

Carbon Tetrachloride. Carbon tetrachloride was detected at five locations: B185, B277, B280A, CTP, and GEO. Concentrations ranged from 0.4 to 11 $\mu\text{g/L}$; all but the minimum detection exceeded the California MCL of 0.5 $\mu\text{g/L}$, and carbon tetrachloride exceeded the federal MCL of 5 $\mu\text{g/L}$ at piezometers B185 (8.2 $\mu\text{g/L}$) and CTP (11 $\mu\text{g/L}$). Carbon tetrachloride concentrations reported between 2010 and 2015 are presented in [Figure 17](#). [Appendix C](#) presents concentration-time graphs for piezometers where carbon tetrachloride results have equaled or exceeded an MCL in at least one sampling event from 2010 to 2015.

Cis-1,2-Dichloroethylene. Cis-1,2-DCE was detected at 17 locations with concentrations ranging from 0.3 to 480 $\mu\text{g/L}$; one location, PZ11, exceeded the California MCL of 6 $\mu\text{g/L}$ and the federal MCL of 70 $\mu\text{g/L}$ at a concentration of 480 $\mu\text{g/L}$. [Figure 16](#) presents concentrations of cis-1,2-DCE detected at piezometers where results have equaled or exceeded an MCL in at least one sampling event from 2010 to 2015.

Tetrachloroethylene. PCE was detected at 16 locations with concentrations ranging from 0.2 µg/L to 9 µg/L. PCE was detected at a concentration of 9 µg/L at B163 which exceeded the California and federal MCLs of 5 µg/L; all other results were 3 µg/L or lower. [Figure 16](#) presents concentrations of PCE detected at piezometers where results have equaled or exceeded an MCL in at least one sampling event from 2010 to 2015. [Figure 16](#) also presents concentrations of PCE breakdown products 1,2-DCA, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride. Analytical results for TCE, also a known breakdown product of PCE, are presented on [Figure 18](#).

Trans-1,2-Dichloroethylene. Trans-1,2-DCE was detected at eight locations, with concentrations ranging from 0.2 to 53 µg/L. The result from one location, PZ11, exceeded the California MCL of 10 µg/L at a concentration of 53 µg/L. None of the results exceeded the federal MCL of 100 µg/L. [Figure 16](#) presents concentrations of trans-1,2-DCE detected at piezometers where results have equaled or exceeded an MCL in at least one sampling event from 2010 to 2015.

Trichloroethylene. TCE was detected at 24 locations, 17 of which exceeded the California and federal MCLs of 5 µg/L. Reported concentrations exceeding the MCLs ranged from 0.2 J µg/L to 140 µg/L. The concentrations of TCE that exceeded the MCLs were predominantly located along the eastern RFS Site property boundary. TCE concentrations reported between 2010 and 2015 are presented in [Figure 18](#). [Appendix C](#) presents concentration-time graphs for piezometers where TCE results have equaled or exceeded an MCL in at least one sampling event from 2010 to 2015.

Vinyl Chloride. Vinyl chloride was detected at four locations (B163, B185, MFA, and PZ11) with concentrations ranging from 0.3 J to 17 µg/L. Vinyl chloride was detected at concentrations exceeding the California MCL of 0.5 µg/L at two locations: B163 (1 µg/L) and PZ11 (17 µg/L). [Figure 16](#) presents concentrations of vinyl chloride detected at piezometers where results have equaled or exceeded an MCL in at least one sampling event from 2010 to 2015.

6.2 SEMIVOLATILE ORGANIC COMPOUNDS AND POLYCYCLIC AROMATIC HYDROCARBONS

Groundwater samples from ten piezometers were submitted for analysis of SVOCs by EPA Method 8270, and PAHs by EPA Method 8270-SIM (selective ion monitoring) to obtain a lower QL and MDL ([Table 1](#)); one duplicate sample was also collected. 1,4-Dioxane was detected at five locations, with concentrations ranging from 0.2 to 1.6 µg/L; there is no MCL for 1,4-dioxane. No other SVOCs were detected. The results for 1,4-dioxane are presented in [Table 8](#).

6.3 METALS

Groundwater samples from 24 piezometers were submitted for analysis of dissolved metals by EPA Methods 6010B, 6020A, and 7470A ([Table 1](#)); four duplicate samples were also collected. All samples were field filtered. Metals were detected in all samples submitted for analysis, with the exception of silver which was not detected. A summary of all detected metals is presented in [Table 9](#). Of the metals detected, three metals —cadmium, mercury, and nickel— exceeded an MCL; results for these metals are discussed below.

Cadmium. Cadmium was detected at six sampling locations at concentrations ranging from 0.16 to 5.8 µg/L, with the sample at location B163 exceeding the California and federal MCL of 5 µg/L.

Mercury. Mercury was detected at six sampling locations, with concentrations ranging from 0.022 to 4.8 µg/L. The sample collected from location B195 exceeded the California and federal MCL of 2 µg/L, with a concentration of 4.8 µg/L. [Appendix C](#) presents a concentration-time graph for mercury in piezometer B195, in which dissolved mercury results exceed the MCLs.

Nickel. Nickel was detected at 22 sampling locations at concentrations ranging from 0.25 to 300 µg/L, with the two values at locations B163 (210 µg/L) and PZ11 (300 µg/L) exceeding the California MCL of 100 µg/L. There is no federal MCL for nickel. Piezometer PZ11 is located near the eastern property boundary where Campus Bay has recently performed pilot studies of substrate injections for VOC degradation. The elevated concentrations of metals at this location may be due to the reducing conditions in the soil created by the pilot study.

7.0 DATA COMPARISON WITH PREVIOUS SAMPLING EVENTS

The Final Phase I November 2010 through April 2012 Groundwater Sampling Results Technical Memorandum (Tetra Tech 2012), the 2013 and 2014 Groundwater Sampling Results Technical Memoranda (Tetra Tech 2013b, 2014b) evaluated and described chemical trends observed during the first six rounds of sampling. The data collected in April 2015 were consistent with previous rounds of data in that analytes were detected at similar concentrations in the same geographic areas. A summary of the chemical concentrations is presented below.

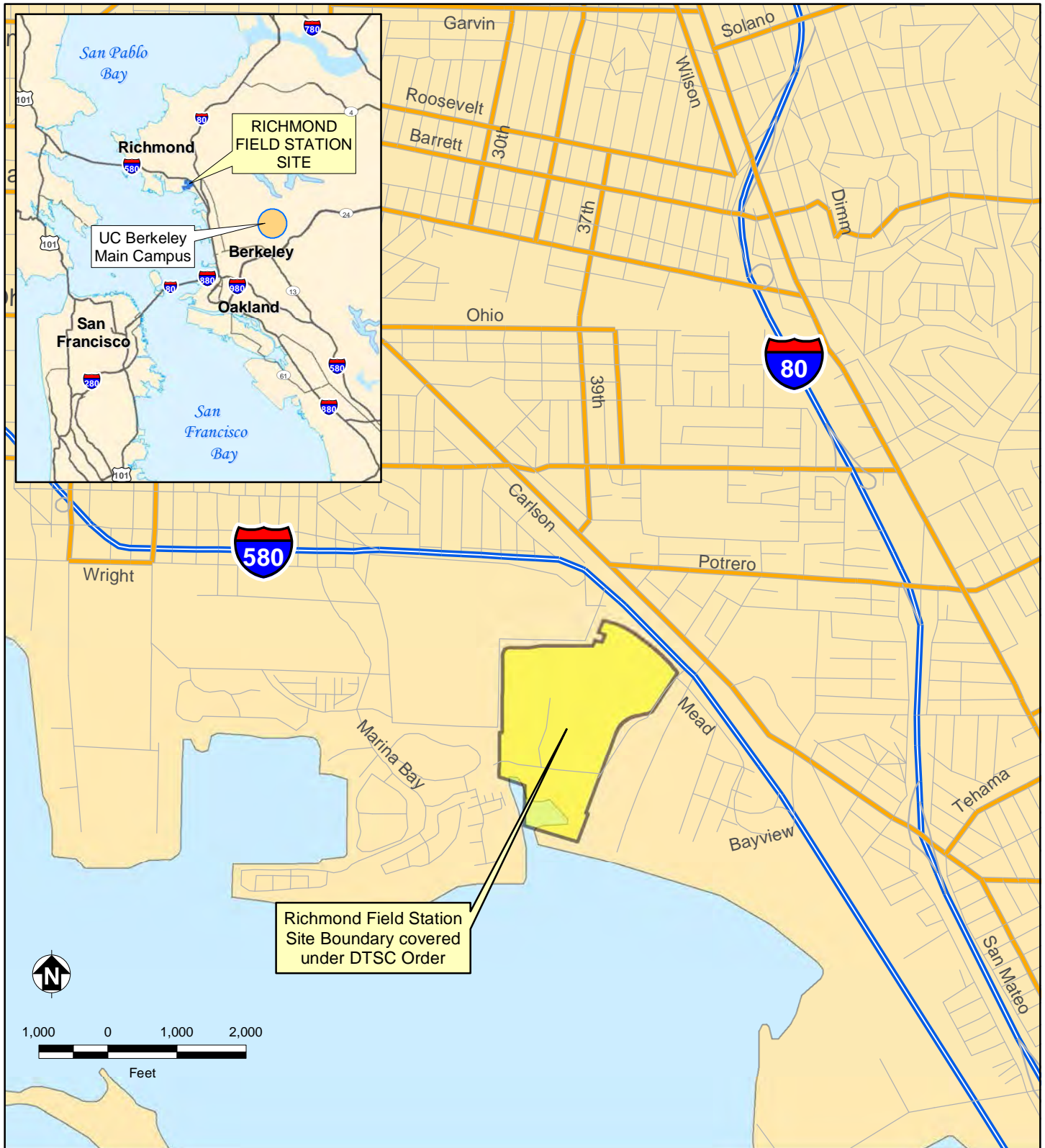
- VOCs were detected at similar concentrations and in the same general areas as in previous rounds of data collection. Most VOCs detected at concentrations that exceed the California or federal MCLs were detected along the eastern property boundary, notably at locations PZ11 and B163. Carbon tetrachloride was consistently detected at concentrations exceeding the MCL at location CTP on the northwestern portion of the site.
- SVOCs and PAHs have not historically been detected frequently across the site. This latest round of sampling was consistent with previous data collected; only one compound (1,4-dioxane) was detected and no concentrations exceeded an MCL.
- Metals were detected at similar concentrations and in the same general areas as in previously collected rounds of data. The MCLs for metals were exceeded at three sample locations (B163 for cadmium and nickel, B195 for mercury, and PZ11 for nickel). Elevated concentrations of metals at piezometers PZ11 may be due to the reducing conditions in the soil created by the pilot study.

Groundwater elevations will be monitored in October 2015 and April 2016, and samples will be collected for chemical analysis in April 2016. Sampling locations will be determined based on discussions with DTSC prior to the April 2015 sampling event.

8.0 REFERENCES

- Tetra Tech EM Inc. (Tetra Tech EM Inc. 1996-2012; Currently Tetra Tech, Inc. [Tetra Tech]). 2008. Final Current Conditions Report, University of California, Berkeley, Richmond Field Station, Richmond, California. November 21.
- Tetra Tech. 2010. Final Phase I Groundwater Sampling, Field Sampling Workplan, University of California, Berkeley, Richmond Field Station, Richmond, California. June 2.
- Tetra Tech. 2011. Final Phase I Groundwater Sampling Results, Technical Memorandum, University of California, Berkeley, Richmond Field Station, Richmond, California. August 22.
- Tetra Tech. 2012. Final Phase I November 2010 through April 2012 Groundwater Sampling Results Technical Memorandum, University of California, Berkeley, Richmond Field Station, Richmond, California. December 12.
- Tetra Tech. 2013a. Final Site Characterization Report. Proposed Richmond Bay Campus, Research, Education, and Support Area and Groundwater within the Richmond Field Station Site. May 28.
- Tetra Tech. 2013b. Final 2013 Groundwater Sampling Results Technical Memorandum, University of California, Berkeley, Richmond Field Station, Richmond, California. October 10.
- Tetra Tech. 2014a. Final Removal Action Workplan. Proposed Richmond Bay Campus, Research, Education, and Support Area and Groundwater within the Richmond Field Station Site. July 18.
- Tetra Tech. 2014b. Final 2014 Groundwater Sampling Results Technical Memorandum, University of California, Berkeley, Richmond Field Station, Richmond, California. November 24.
- Tetra Tech. 2015. Draft Phase IV Sampling Results Technical Memorandum, Richmond Field Station Site, Berkeley Global Campus at Richmond Bay, University of California, Berkeley. June 5.
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- EPA. 2008. USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review.” Document Number EPA-540-R-08-01. June.
- EPA. 2010. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review.” Document Number EPA-540-R-10-011. January.

FIGURES



Richmond Field Station
Site Boundary covered
under DTSC Order



Richmond Field Station Site
University of California, Berkeley

FIGURE 1
SITE LOCATION MAP

2015 Groundwater Sampling Results



Notes:
DTSC Department of Toxic Substances Control.



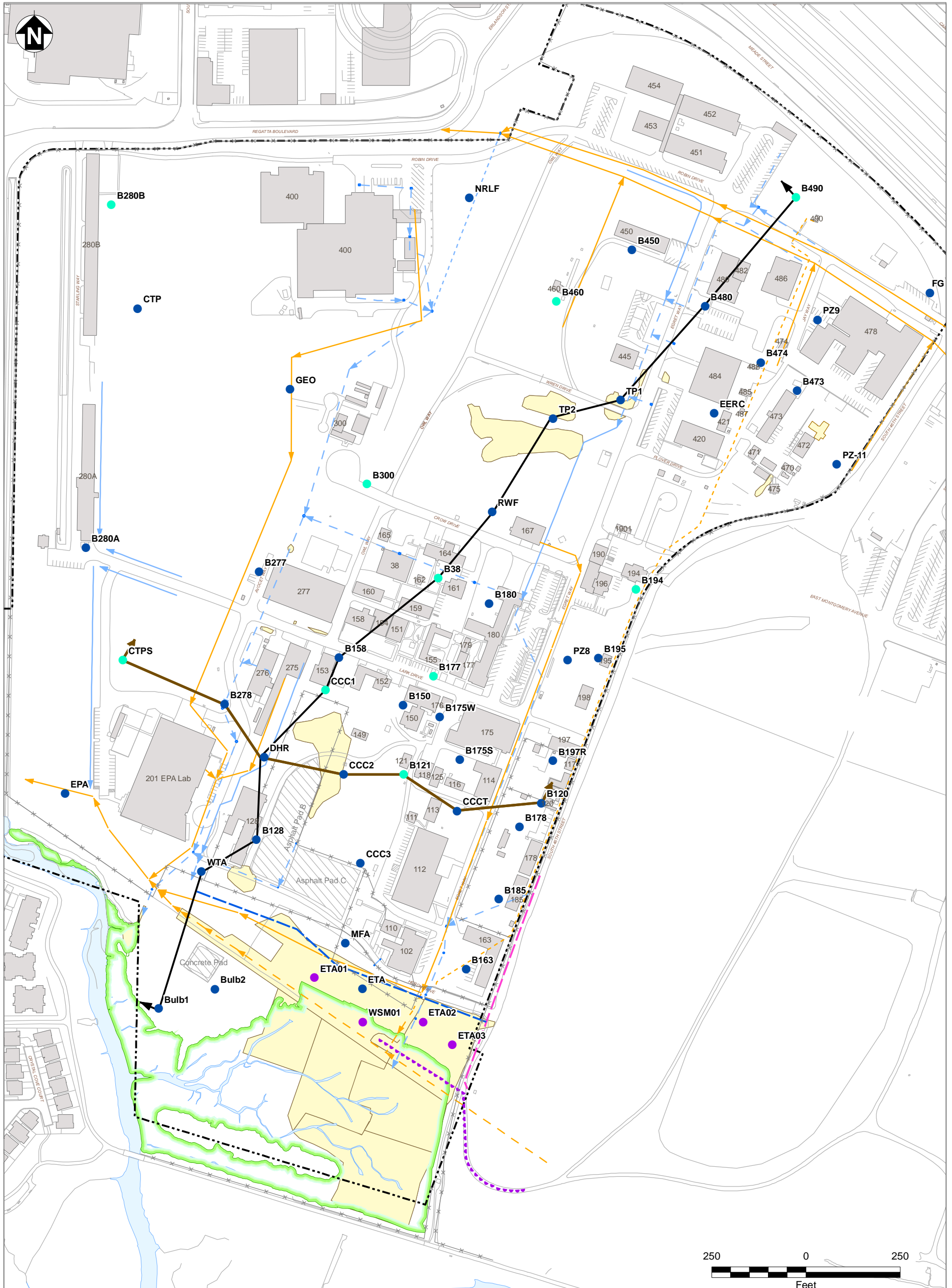
- Bay Trail
 - Meeker Slough
 - Western Stege Marsh
 - Transition Area (Including Bulb)
 - Upland
- Notes:
- EBRPD East Bay Regional Parks District
 - EERC Earthquake Engineering Research Center
 - EPA Environmental Protection Agency
 - NRLF Northern Regional Library Facility
 - RFS Richmond Field Station
- Richmond Field Station Site Boundary



**Richmond Field Station Site
University of California, Berkeley**

**FIGURE 2
SITE MAP**

2015 Groundwater Sampling Results



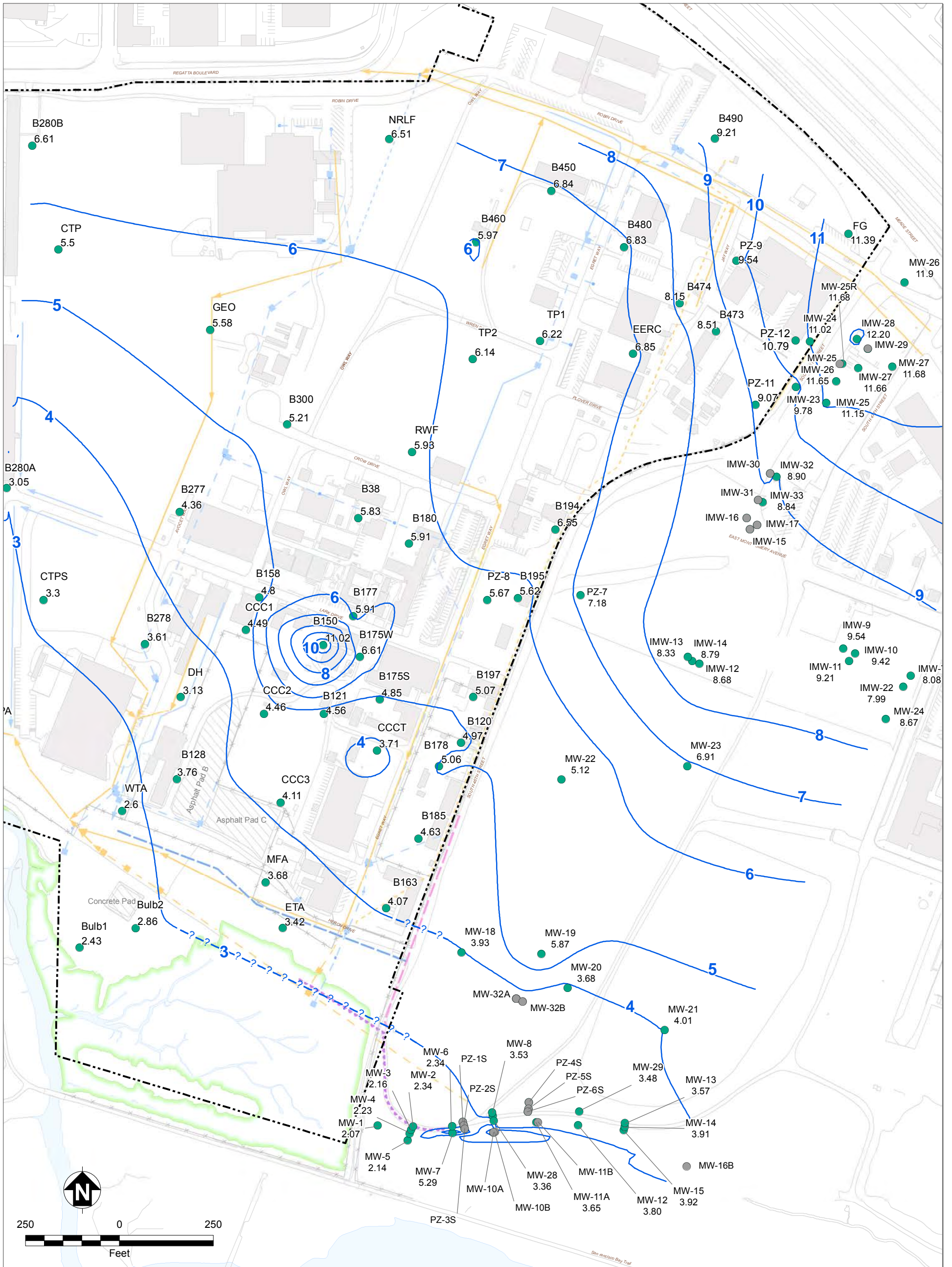
<ul style="list-style-type: none"> Existing Buildings Asphalt/Concrete Pads Remediated Areas Surface Water Marsh Boundary Richmond Field Station Site Boundary Roads and Other Landscape Features Fenceline A-A' Cross-Section, see Figure 14 B-B' Cross-Section, see Figure 15 	<ul style="list-style-type: none"> Biologically Active Permeable Barrier Wall Former Seawall (Approximate) Slurry Wall Storm Drain Lines: Open Swale Underground Culvert Underground Culvert, Abandoned (Grouted at Manholes) Sanitary Sewer Lines: Existing Sewer Line Removed Sewer Line Abandoned Sewer Line 	<ul style="list-style-type: none"> Piezometer Sampled in April 2015¹ Piezometer Not Sampled in April 2015 BAPB Area Piezometer Installed in January 2015²
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Note:
 1. Piezometers DHR and B197R replaced piezometers DH and B197, which were abandoned in 2013.
 2. Piezometers ETA01, ETA02, ETA03, and WSM01 were not sampled as part of the 2015 groundwater sampling effort, however, water level measurements were collected on April 1, 2015 as part of the water level sampling event.

Richmond Field Station Site
University of California, Berkeley

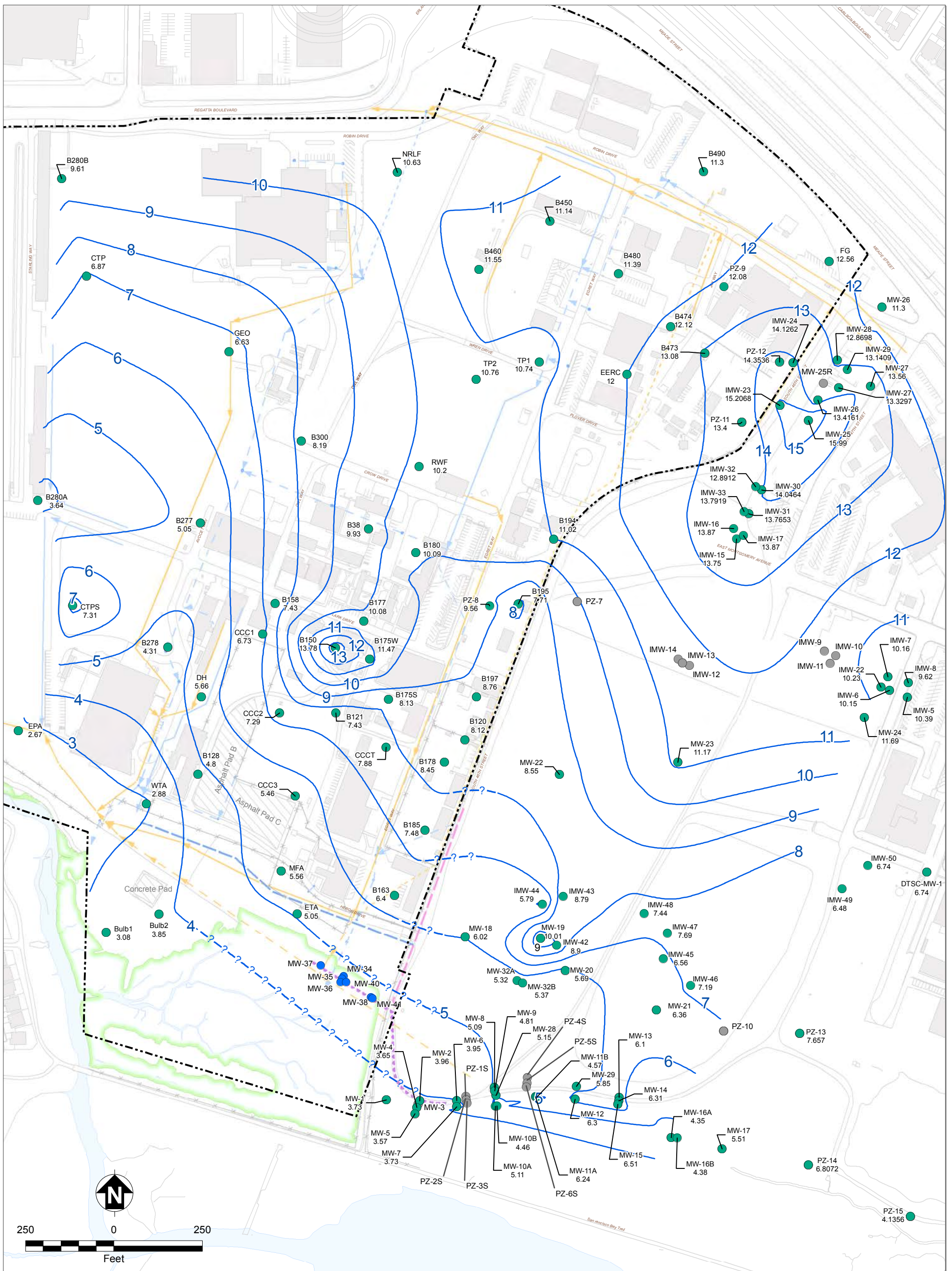
FIGURE 3
GROUNDWATER
SAMPLING LOCATIONS

2015 Groundwater Sampling Results



Richmond Field Station Site
University of California, Berkeley

FIGURE 4
SHALLOW GROUNDWATER
ELEVATION CONTOURS,
NOVEMBER 1, 2010
 2015 Groundwater Sampling Results



- Piezometer Groundwater Elevation Measured in April 2011
- Piezometer Groundwater Elevation Not Measured in April 2011
- BAPB Piezometers on RFS Property Not Measured in April 2011
- April 2011 Groundwater Contours
- - - Contour Estimated due to Proximity to BAPB Wall, Slurry Wall, or Marsh
- Existing Building
- ▨ Asphalt/Concrete Pad
- Surface Water
- Marsh Boundary
- - - Richmond Field Station Site Boundary
- Roads and Other Landscape Features
- - - Fenceline
- Biologically Active Permeable Barrier Wall
- Former Seawall (Approximate)

- Slurry Wall
- Storm Drain Lines:**
- Open Swale
- Underground Culvert
- - - Underground Culvert, Abandoned (Grouted at Manholes)
- Sanitary Sewer Lines:**
- Existing Sewer Line
- Removed Sewer Line
- - - Abandoned Sewer Line

Note:
 All data points surveyed to NGVD29.
 Mean sea level = NGVD29 elevation (in feet) - 0.58 feet NGVD
 and mean sea level datum representative of Stege Marsh is
 derived from NOAA Richmond Inner Harbor tide gauge.

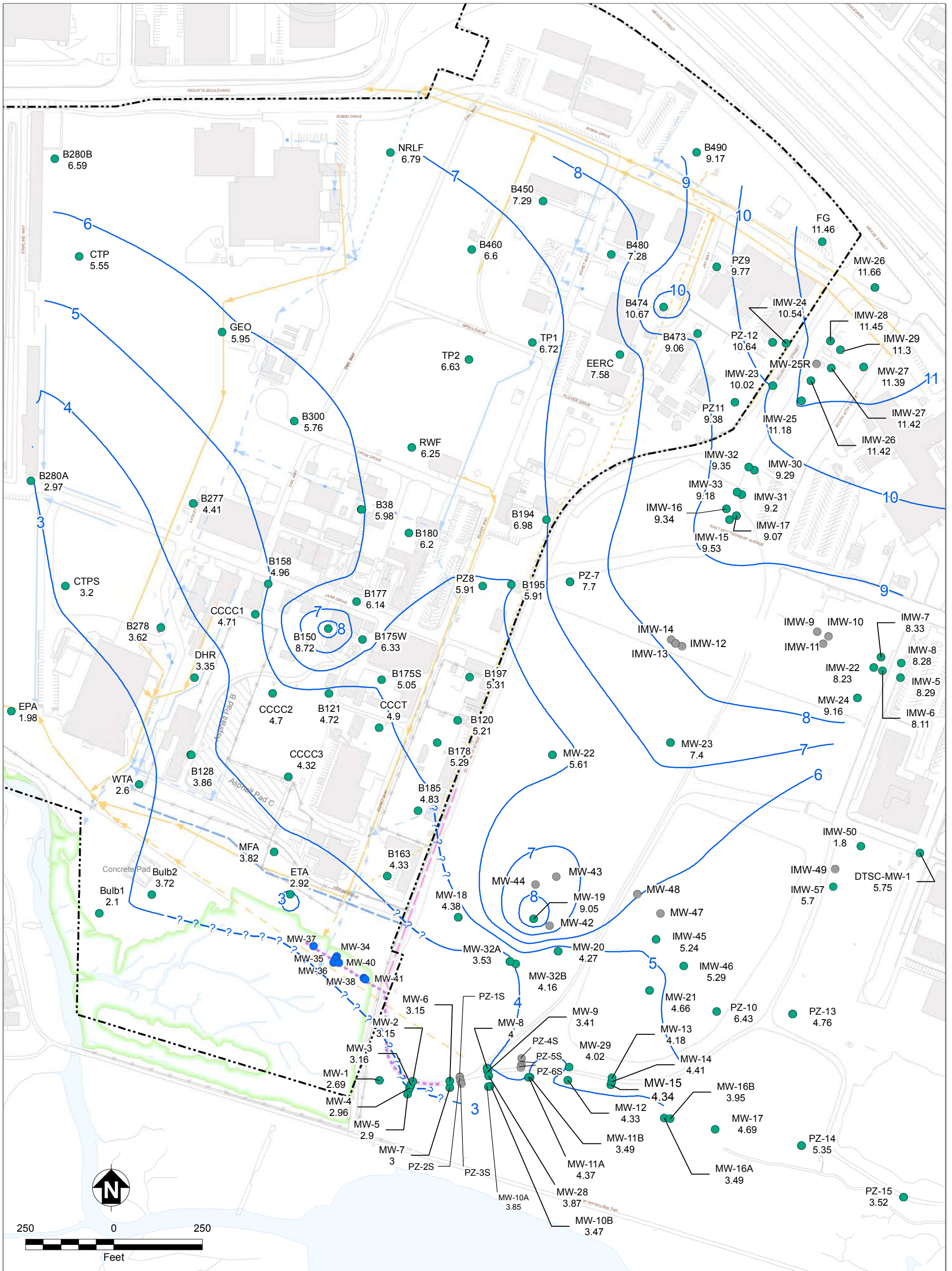
— Piezometer ID
 ● MW-10A
 5.27
 ● Groundwater Elevation (FT NGVD29)



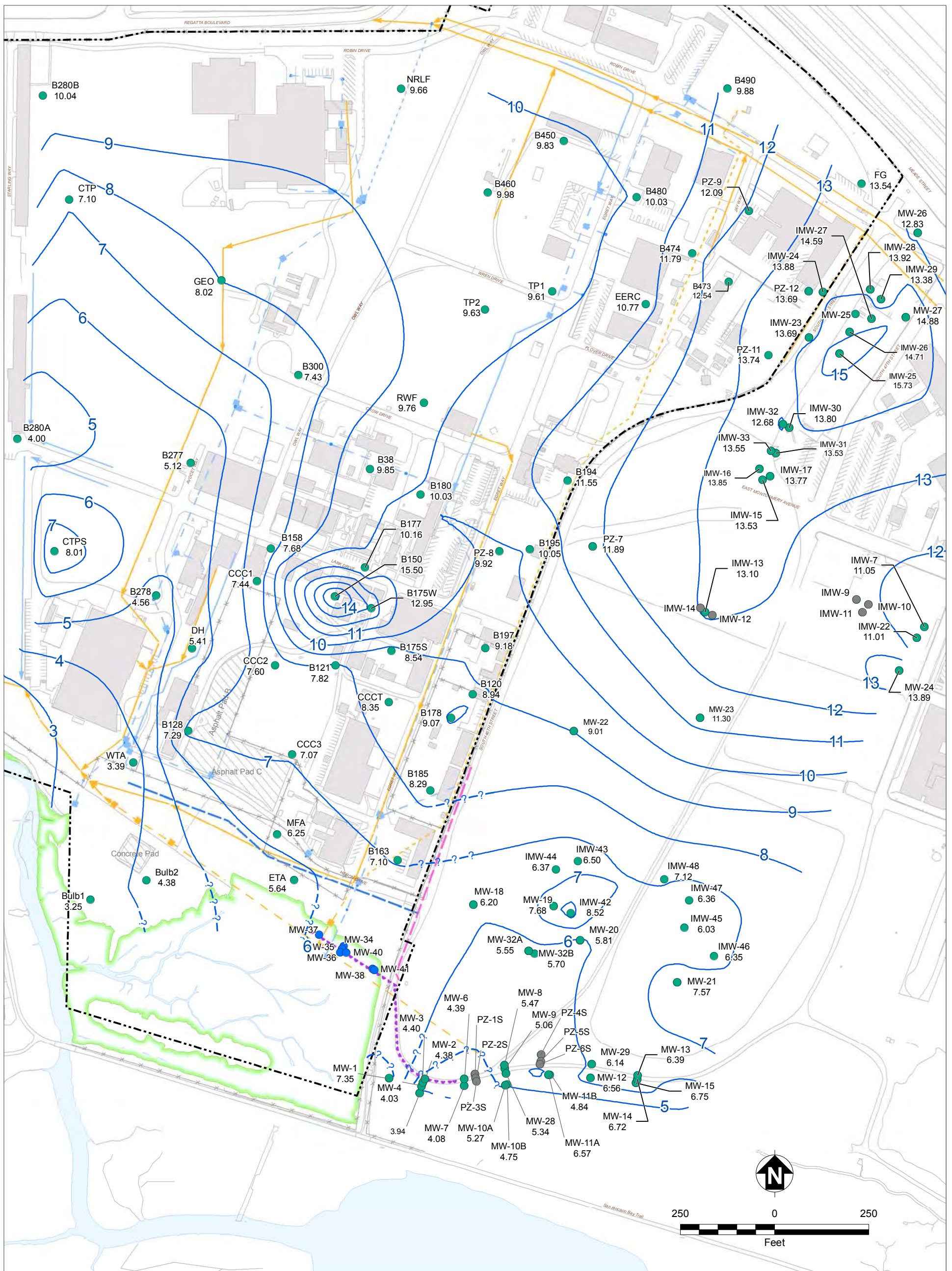
Richmond Field Station Site
 University of California, Berkeley

**FIGURE 5
 SHALLOW GROUNDWATER
 ELEVATION CONTOURS,
 APRIL 11, 2011**

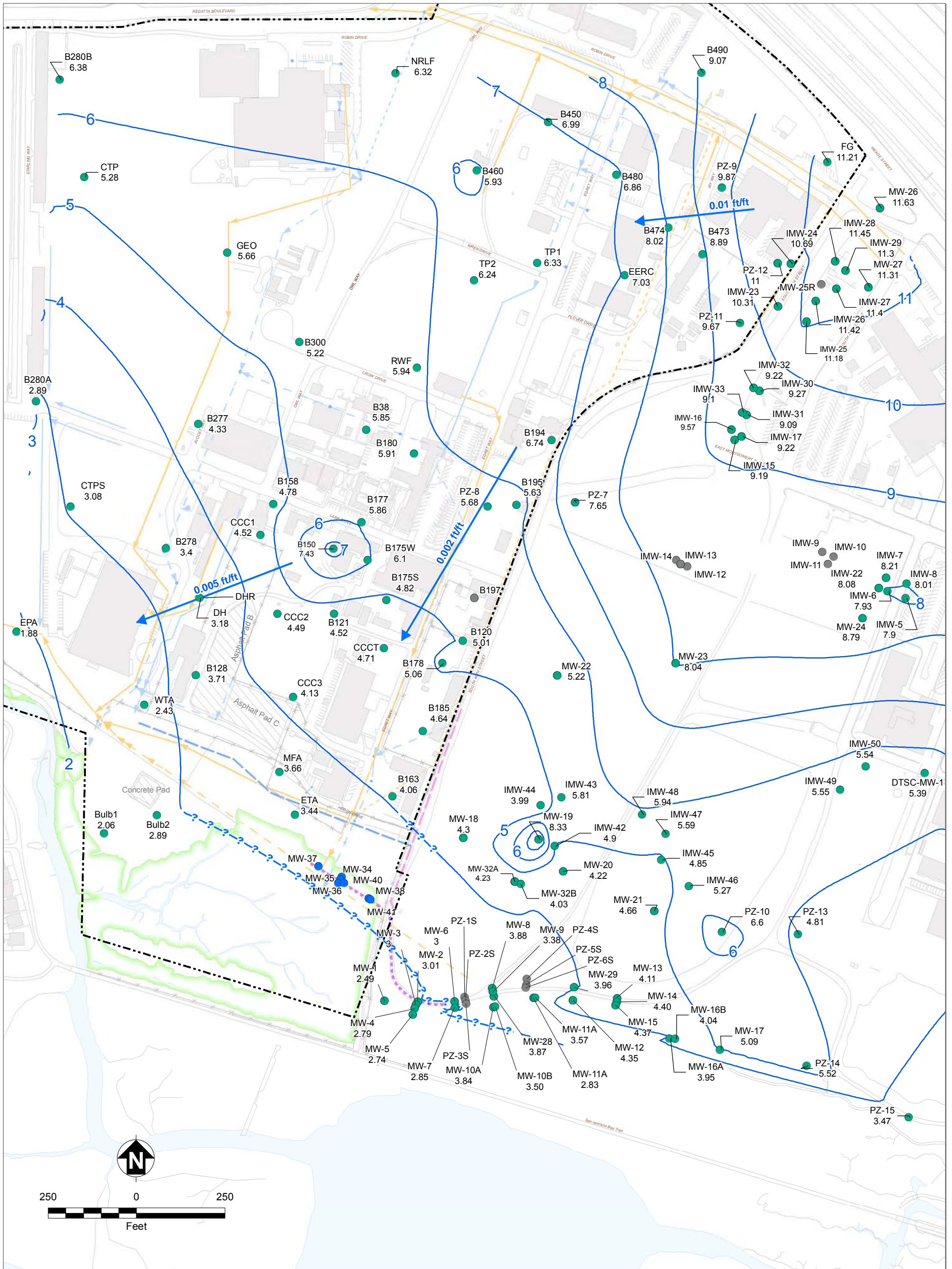
2015 Groundwater Sampling Results



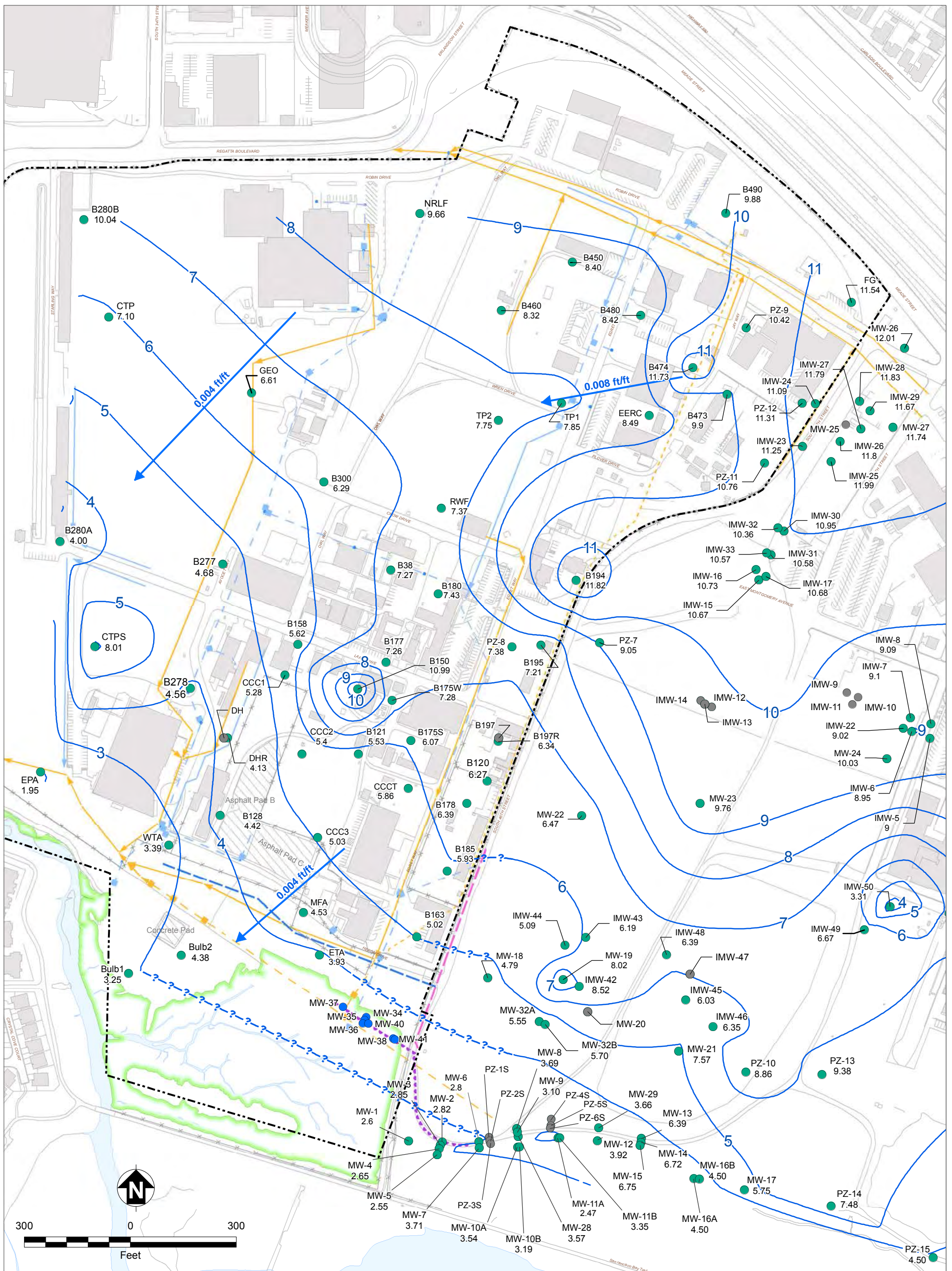
<ul style="list-style-type: none"> ● Piezometer Groundwater Elevation Measured in October 2011 ● Piezometer Groundwater Elevation Not Measured in October 2011 ● BAPB Piezometers on RFS Property Not Measured in October 2011 — October 2011 Groundwater Contours -? Contour Estimated due to Proximity to BAPB Wall, Slurry Wall, or Marsh Existing Building Asphalt/Concrete Pad Surface Water Marsh Boundary Richmond Field Station Site Boundary Roads and Other Landscape Features Fenceline BAPB Wall Former Seawall (Approximate) 	<ul style="list-style-type: none"> — Slurry Wall Storm Drain Lines: — Open Swale — Underground Culvert — Underground Culvert, Abandoned (Grouted at Manholes) Sanitary Sewer Lines: — Existing Sewer Line — Removed Sewer Line — Abandoned Sewer Line 	<p>Note: All data points surveyed to NGVD29. Mean sea level = NGVD29 elevation (in feet) - 0.58 feet NGVD and mean sea level datum representative of Stege Marsh is derived from NOAA Richmond Inner Harbor tide gauge.</p>	<p>Piezometer ID</p> <p>MW-10A 5.27</p> <p>Groundwater Elevation (FT NGVD29)</p>	<p>Richmond Field Station Site University of California, Berkeley</p> <p>FIGURE 6 SHALLOW GROUNDWATER ELEVATION CONTOURS, OCTOBER 3, 2011</p> <p>2015 Groundwater Sampling Results</p>
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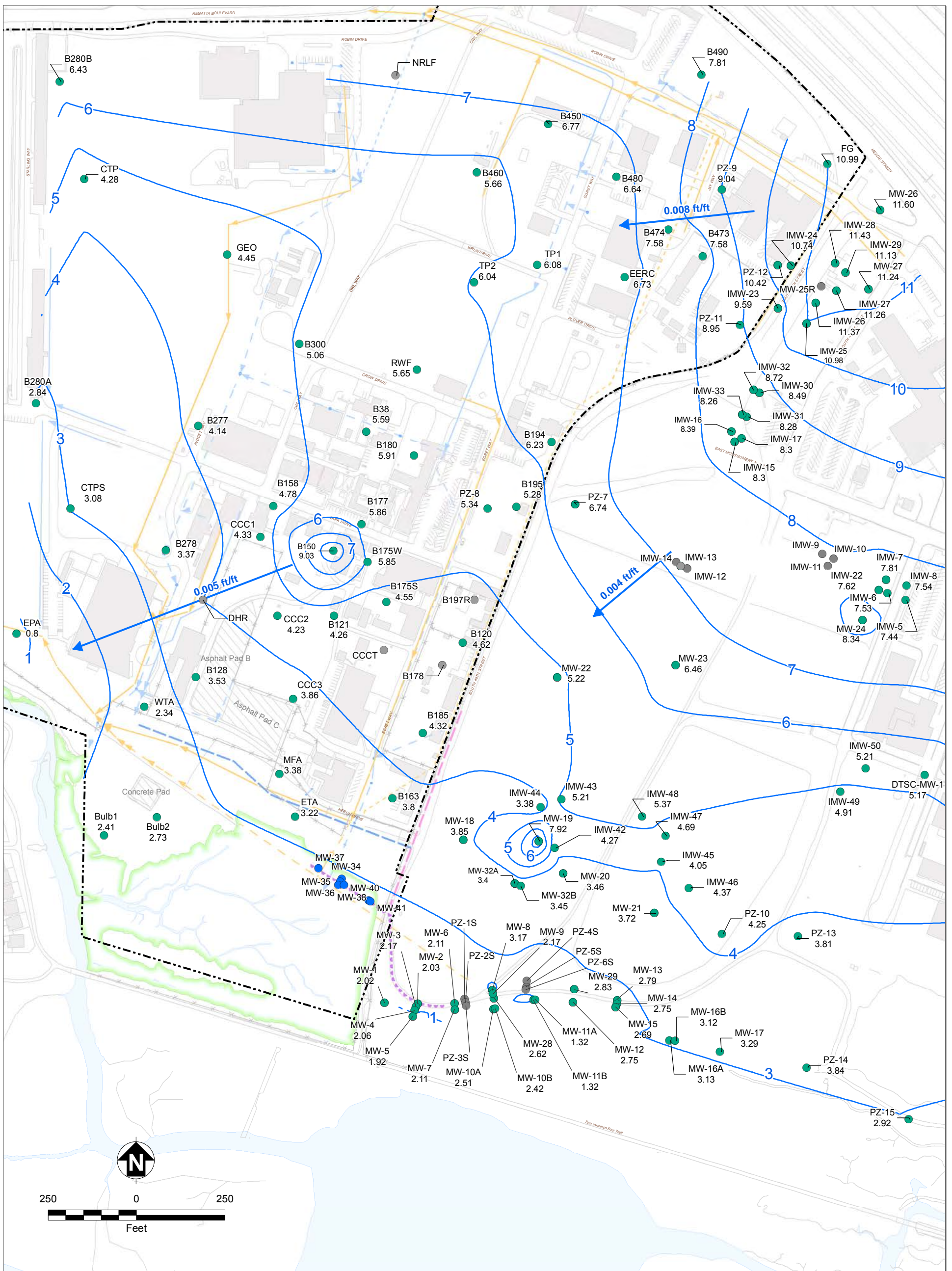
<ul style="list-style-type: none"> ● Piezometer Groundwater Elevation Measured in April 2012 ● Piezometer Groundwater Elevation Not Measured in April 2012 ● BAPB Piezometers on RFS Property Not Measured in April 2012 — April 2012 Groundwater Contour -?- Contour Estimated due to Proximity to BAPB Wall, Slurry Wall, or Marsh Existing Building Asphalt/Concrete Pad Surface Water Marsh Boundary Richmond Field Station Site Boundary Roads and Other Landscape Features Fenceline BAPB Wall 	<ul style="list-style-type: none"> — Former Seawall (Approximate) — Slurry Wall Storm Drain Lines: — Open Swale — Underground Culvert — Underground Culvert, Abandoned (Grouted at Manholes) Sanitary Sewer Lines: — Existing Sewer Line — Removed Sewer Line — Abandoned Sewer Line 	<p>Note: All data points surveyed to NGVD29. Mean sea level = NGVD29 elevation (in feet) - 0.58 feet NGVD and mean sea level datum representative of Stege Marsh is derived from NOAA Richmond Inner Harbor tide gauge.</p>	<p>Piezometer ID MW-10A 5.27</p> <p>Groundwater Elevation (FT NGVD29)</p>	<p>250 0 250 Feet</p> <p>TETRA TECH</p> <p>Richmond Field Station Site University of California, Berkeley</p> <p>FIGURE 7 SHALLOW GROUNDWATER ELEVATION CONTOURS, APRIL 2, 2012</p> <p>2015 Groundwater Sampling Results</p>
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<ul style="list-style-type: none"> ● Piezometer Groundwater Elevation Measured in October 2012 ● Piezometer Groundwater Elevation Not Measured in October 2012 ● BAPB Piezometers on RFS Property Not Measured in October 2012 — October 2012 Groundwater Contours -? Contour Estimated due to Proximity to BAPB Wall, Slurry Wall, or Marsh → Estimated Horizontal Groundwater Gradient Direction (Value) Existing Building Asphalt/Concrete Pad Surface Water Marsh Boundary Richmond Field Station Site Boundary Roads and Other Landscape Features Fenceline BAPB Wall 	<ul style="list-style-type: none"> — Former Seawall (Approximate) — Slurry Wall Storm Drain Lines: → Open Swale → Underground Culvert — — — — — Underground Culvert, Abandoned (Grouted at Manholes) Sanitary Sewer Lines: → Existing Sewer Line → Removed Sewer Line → Abandoned Sewer Line 	<p>Note: All data points surveyed to NGVD29. Mean sea level = NGVD29 elevation (in feet) - 0.58 feet NGVD and mean sea level datum representative of Stege Marsh is derived from NOAA Richmond Inner Harbor tide gauge.</p>	<p>Piezometer ID MW-10A 5.27</p> <p>Groundwater Elevation (FT NGVD29)</p>	<p>TETRA TECH</p> <p>Richmond Field Station Site University of California, Berkeley</p> <p>FIGURE 8 SHALLOW GROUNDWATER ELEVATION CONTOURS, OCTOBER 1, 2012</p> <p>2015 Groundwater Sampling Results</p>
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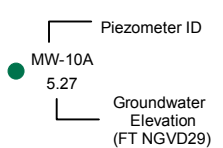
<ul style="list-style-type: none"> ● Piezometer Groundwater Elevation Measured in April 2013 ● Piezometer Groundwater Elevation Not Measured in April 2013 ● BAPB Piezometers on RFS Property Not Measured in April 2013 — April 2013 Groundwater Contour — Contour Estimated due to Proximity to BAPB Wall, Slurry Wall, or Marsh → Estimated Horizontal Groundwater Gradient Direction (Value) Existing Building Asphalt/Concrete Pad Surface Water Marsh Boundary Richmond Field Station Site Boundary Roads and Other Landscape Features Fenceline BAPB Wall 	<ul style="list-style-type: none"> — Former Seawall (Approximate) — Slurry Wall Storm Drain Lines: — Open Swale — Underground Culvert — Underground Culvert, Abandoned (Grouted at Manholes) Sanitary Sewer Lines: — Existing Sewer Line — Removed Sewer Line — Abandoned Sewer Line 	<p>Note: All data points surveyed to NGVD29. Mean sea level = NGVD29 elevation (in feet) - 0.58 feet NGVD and mean sea level datum representative of Stege Marsh is derived from NOAA Richmond Inner Harbor tide gauge.</p>	<p>Piezometer ID MW-10A 5.27</p> <p>Groundwater Elevation (FT NGVD29)</p>	<p>Richmond Field Station Site University of California, Berkeley</p> <p>FIGURE 9 SHALLOW GROUNDWATER ELEVATION CONTOURS, APRIL 1, 2013</p> <p>2015 Groundwater Sampling Results</p>
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- Piezometer Groundwater Elevation Measured in October 2013
- Piezometer Groundwater Elevation Not Measured in October 2013
- BAPB Piezometers on RFS Property Not Measured in October 2013
- Estimated Horizontal Groundwater Gradient Direction (Value)
- ▭ Existing Building
- ▭ Asphalt/Concrete Pad
- ▭ Surface Water
- ▭ Marsh Boundary
- Richmond Field Station Site Boundary
- Roads and Other Landscape Features
- Fenceline
- BAPB Wall
- Former Seawall (Approximate)
- Slurry Wall

- Storm Drain Lines:**
- Open Swale
- Underground Culvert
- Underground Culvert, Abandoned (Grouted at Manholes)
- Sanitary Sewer Lines:**
- Existing Sewer Line
- Removed Sewer Line
- Abandoned Sewer Line

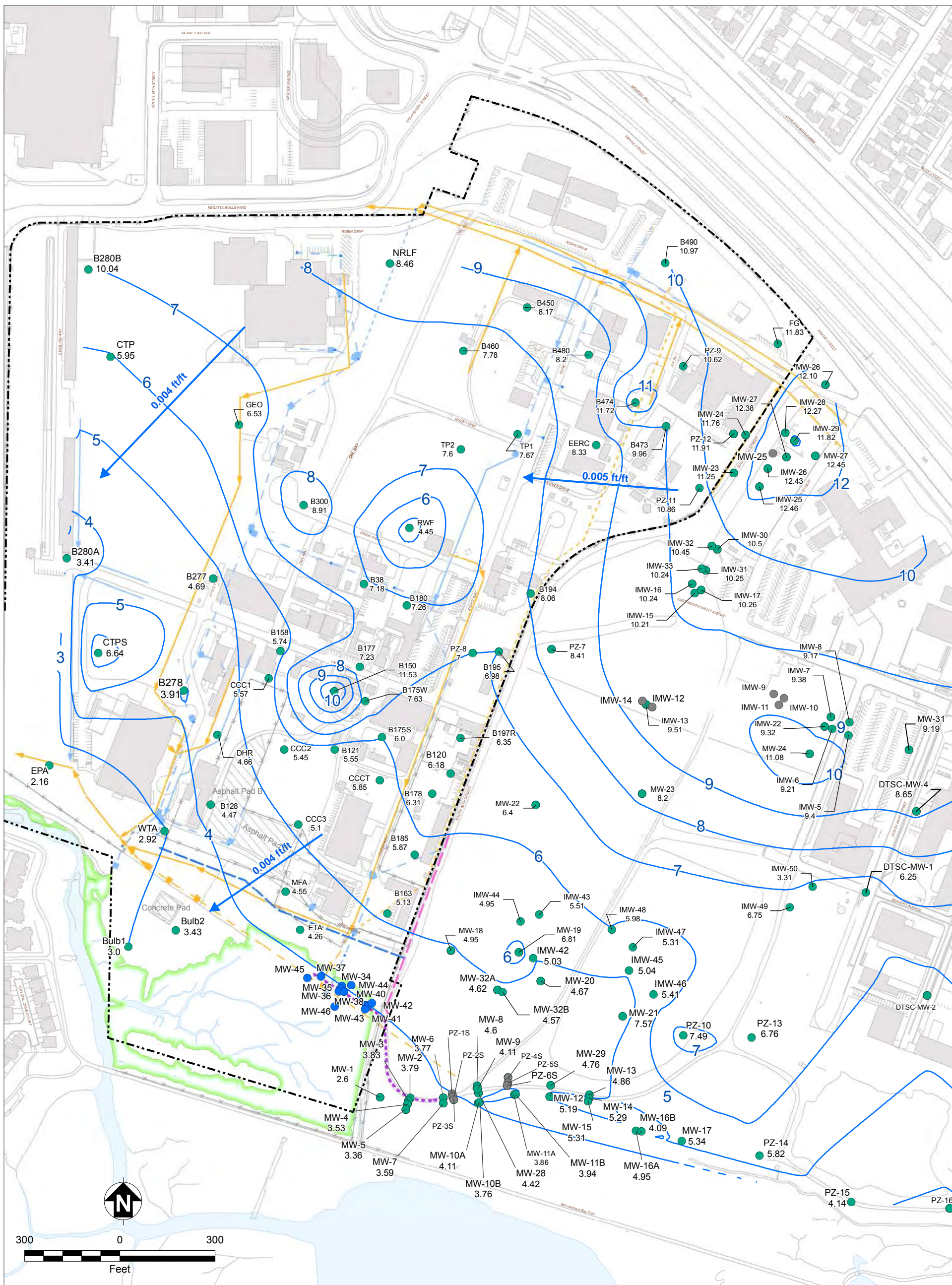
Note:
 All data points surveyed to NGVD29.
 Mean sea level = NGVD29 elevation (in feet) - 0.58 feet NGVD
 and mean sea level datum representative of Stege Marsh is
 derived from NOAA Richmond Inner Harbor tide gauge.



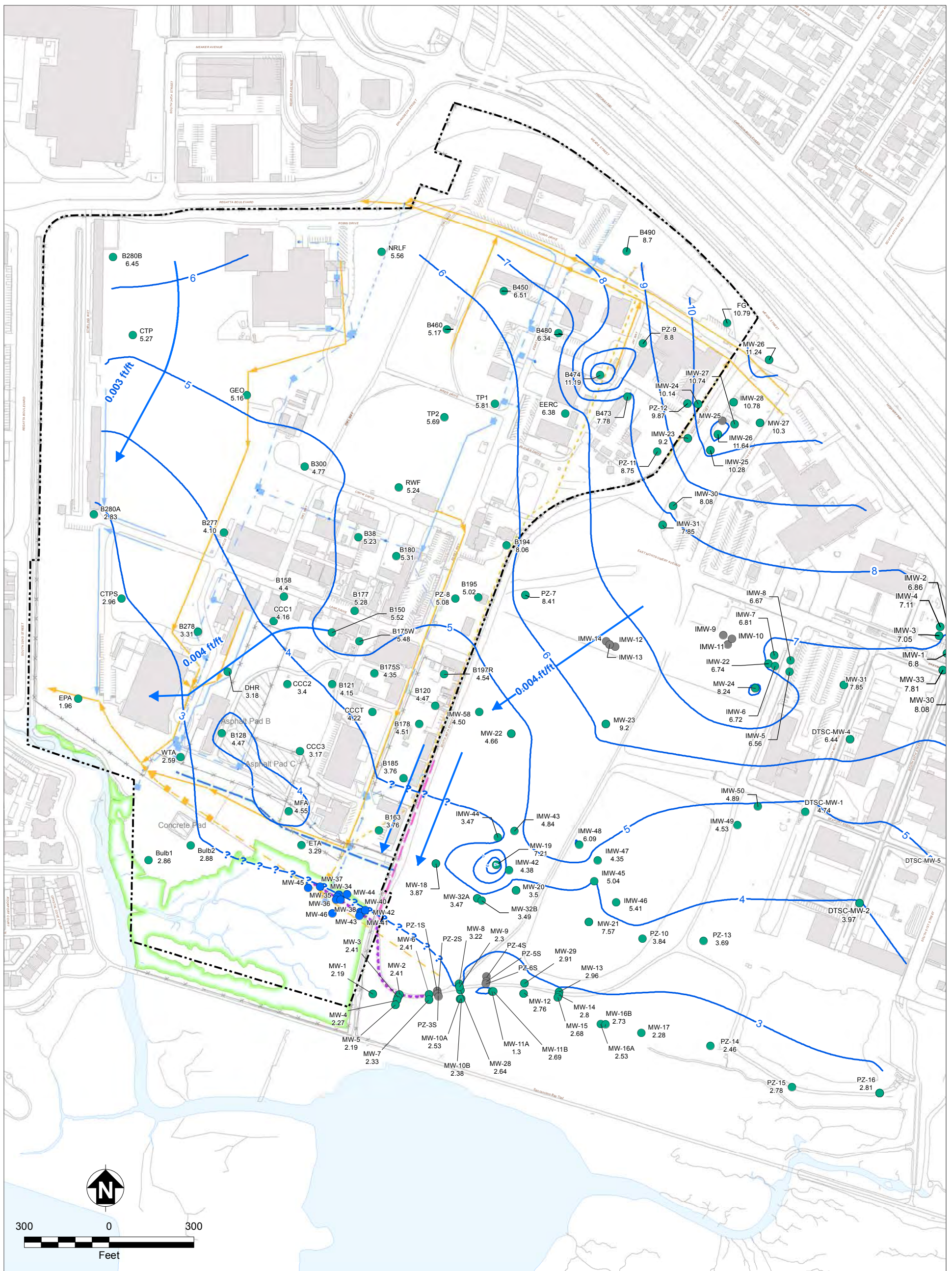
Richmond Field Station Site
University of California, Berkeley

FIGURE 10
SHALLOW GROUNDWATER
ELEVATION CONTOURS,
OCTOBER 7, 2013

2015 Groundwater Sampling Results



<ul style="list-style-type: none"> ● Piezometer Groundwater Elevation Measured in March 2014 ● Piezometer Groundwater Elevation Not Measured in March 2014 ● BAPB Piezometers on RFS Property Not Measured in March 2014 — 1 — April 2014 Groundwater Contour → Estimated Horizontal Groundwater Gradient Direction (Value) Existing Building Asphalt/Concrete Pad Surface Water Marsh Boundary Richmond Field Station Site Boundary Roads and Other Landscape Features Fenceline BAPB Wall 	<ul style="list-style-type: none"> — Former Seawall (Approximate) Slurry Wall Storm Drain Lines: Open Swale Underground Culvert Underground Culvert, Abandoned (Grouted at Manholes) Sanitary Sewer Lines: Existing Sewer Line Removed Sewer Line Abandoned Sewer Line 	<p>Note: All data points surveyed to NGVD29. Mean sea level = NGVD29 elevation (in feet) - 0.58 feet NGVD and mean sea level datum representative of Stege Marsh is derived from NOAA Richmond Inner Harbor tide gauge.</p>	<p>Piezometer ID</p> <p>MW-10A 5.27</p> <p>Groundwater Elevation (FT NGVD29)</p>	<p>Richmond Field Station Site University of California, Berkeley</p> <p>FIGURE 11 SHALLOW GROUNDWATER ELEVATION CONTOURS, MARCH 28, 2014</p> <p>2015 Groundwater Sampling Results</p>
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- Piezometer Groundwater Elevation Measured in October 2014
- Piezometer Groundwater Elevation Not Measured in October 2014
- BAPB Piezometers on RFS Property Not Measured in October 2014
- Estimated October 2014 Groundwater Contour
- Contour Estimated due to Proximity to BAPB Wall, Slurry Wall, or Marsh
- Estimated Horizontal Groundwater Gradient Direction (Value)
- Existing Building
- Asphalt/Concrete Pad
- Surface Water
- Marsh Boundary
- Richmond Field Station Site Boundary
- Roads and Other Landscape Features
- Fenceline
- BAPB Wall

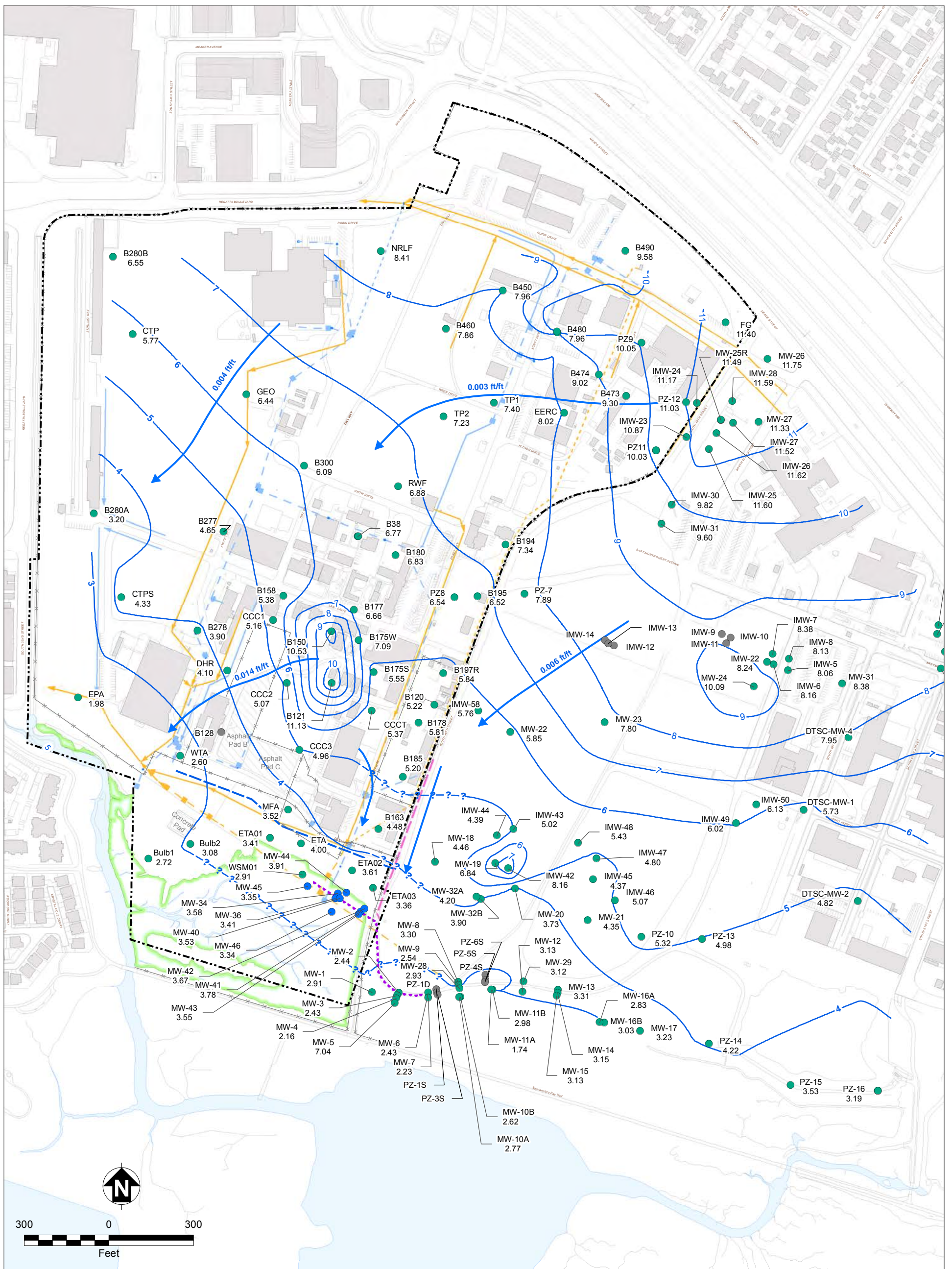
- Former Seawall (Approximate)
- Slurry Wall
- Storm Drain Lines:
 - Open Swale
 - Underground Culvert
 - Underground Culvert, Abandoned (Grouted at Manholes)
- Sanitary Sewer Lines:
 - Existing Sewer Line
 - Removed Sewer Line
 - Abandoned Sewer Line

Note:
 All data points surveyed to NGVD29.
 Mean sea level = NGVD29 elevation (in feet) - 0.58 feet NGVD
 and mean sea level datum representative of Stege Marsh is
 derived from NOAA Richmond Inner Harbor tide gauge.
 Contours do not include data from Phase IV piezometers
 completed in January 2015.



Richmond Field Station Site
University of California, Berkeley

FIGURE 12
SHALLOW GROUNDWATER
ELEVATION CONTOURS,
OCTOBER 1, 2014
 2015 Groundwater Sampling Results



- Piezometer Groundwater Elevation Measured in April 2015
 - Piezometer Groundwater Elevation Not Measured in April 2015
 - BAPB Piezometers on RFS Property Measured in April 2015
- ESTIMATE**
- HORZ GW GRADIENT
 - PROXIMITY TO BAPB WALL
 - Estimated Horizontal Groundwater Gradient Direction (Value)
 - Existing Building
 - Asphalt/Concrete Pad
 - Surface Water
 - Marsh Boundary
 - Richmond Field Station Site Boundary
 - Roads and Other Landscape Features
 - Fenceline

- BAPB Wall
 - Former Seawall (Approximate)
 - Slurry Wall
- Storm Drain Lines:**
- Open Swale
 - Underground Culvert
 - Underground Culvert, Abandoned (Grouted at Manholes)
- Sanitary Sewer Lines:**
- Existing Sewer Line
 - Removed Sewer Line
 - Abandoned Sewer Line

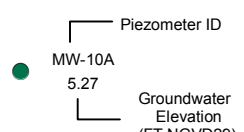
Note:
 All data points surveyed to NGVD29.
 Mean sea level = NGVD29 elevation (in feet) - 0.58 feet and mean sea level datum representative of Stege Marsh is derived from NOAA Richmond Inner Harbor tide gauge.



Richmond Field Station Site
University of California, Berkeley

FIGURE 13
SHALLOW GROUNDWATER
ELEVATION CONTOURS,
APRIL 1, 2015

2015 Groundwater Sampling Results



Elevation
(feet mean
sea level)

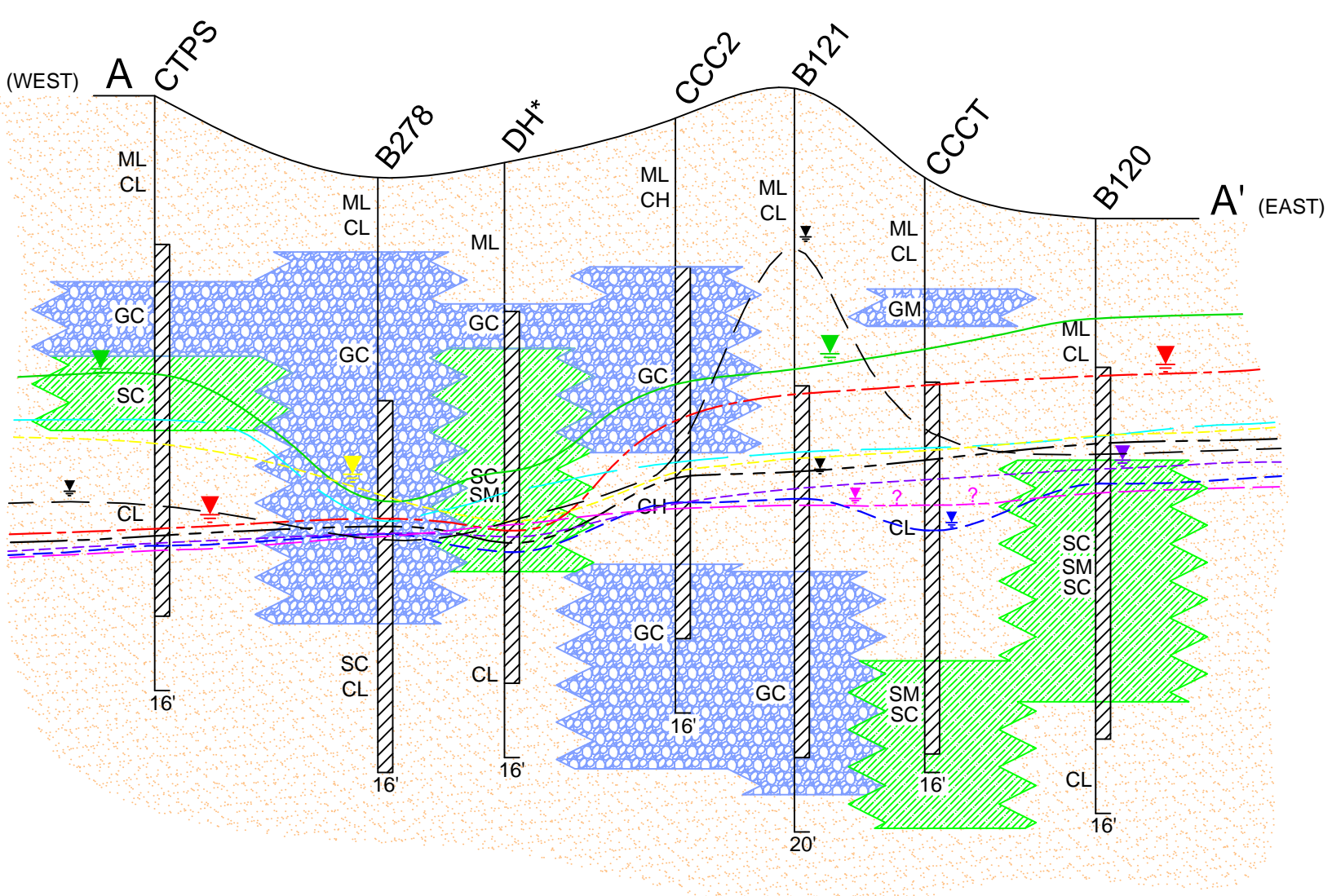
15

10

5

0

-5



- Silt / Clay
- Clayey Gravel
- Clayey / Silty Sand

- Well Screen Interval

? Water level not measured at well because of blockage by root accumulation.

* Piezometer DH was abandoned in 2013 and replaced with piezometer DHR, located 5 feet away from the original location.

- Estimated Groundwater Table (November 2010)
- Estimated Groundwater Table (April 2011)
- Estimated Groundwater Table (October 2011)
- Estimated Groundwater Table (April 2012)
- Estimated Groundwater Table (October 2012)
- Estimated Groundwater Table (April 2013)
- Estimated Groundwater Table (October 2013)
- Estimated Groundwater Table (March 2014)
- Estimated Groundwater Table (April 2015)

Unified Soil Classification System

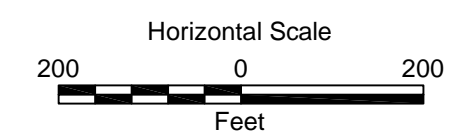
GM	Silty Gravel, Gravel-Sand-Silt Mix
GC	Clayey Gravel, Gravel-Sand-Clay Mix
SW	Well-graded Sand, Gravelly Sand
SP	Poorly-Graded Sand, Gravelly Sand
SM	Silty Sand, Sand-Silt Mix
SC	Clayey-Sand, Sand-Clay Mix
ML	Inorganic Silt, Silty or Clayey Fine Sand
CL	Inorganic Clay of Low - Mod Plasticity
MH	Inorganic Silt, Silty Soil, Elastic Silt
CH	Inorganic Clay of High Plasticity

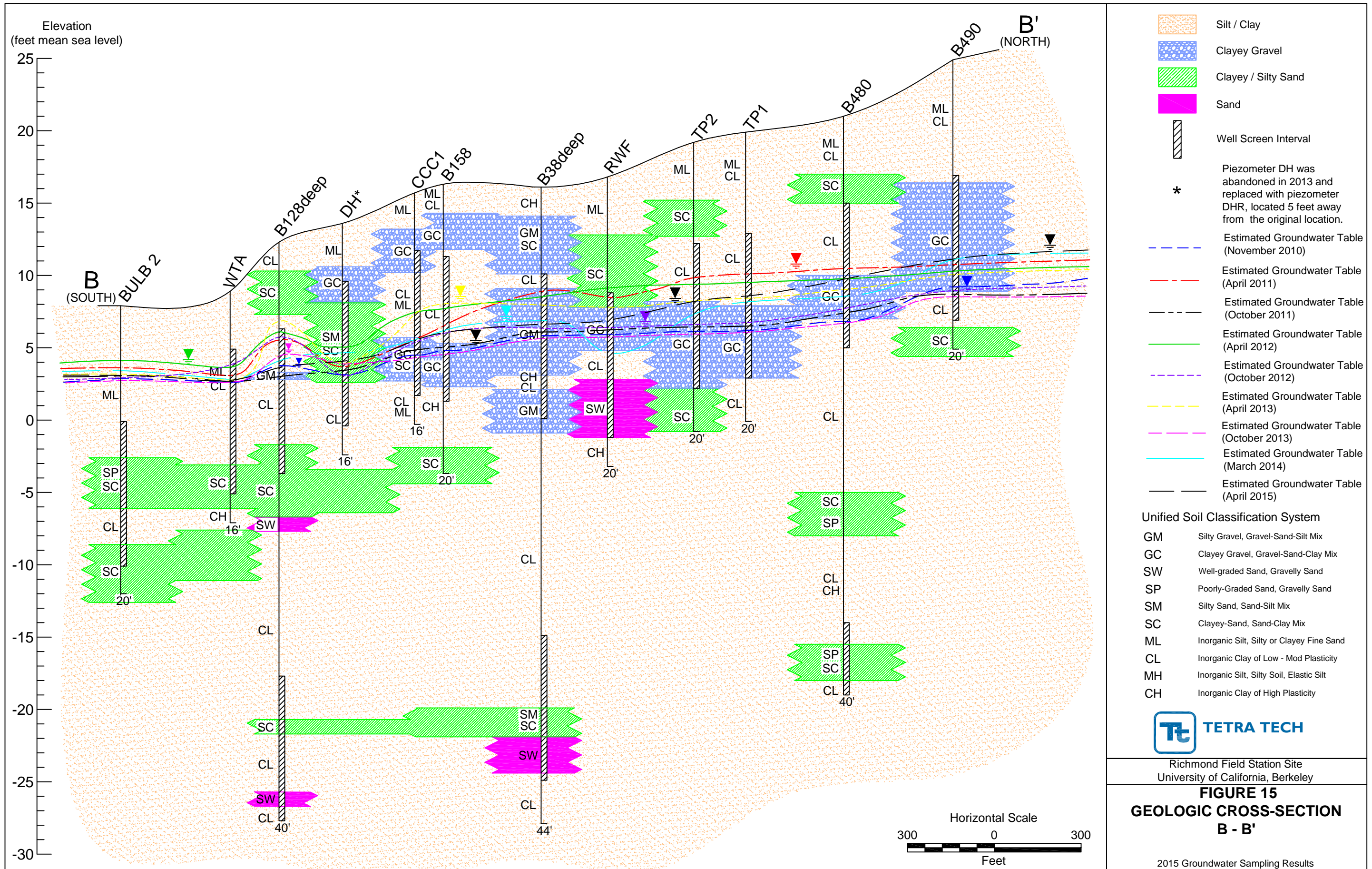


Richmond Field Station Site
University of California, Berkeley

FIGURE 14
GEOLOGIC CROSS-SECTION
A - A'

2015 Groundwater Sampling Results





- Silt / Clay
- Clayey Gravel
- Clayey / Silty Sand
- Sand
- Well Screen Interval

- * Piezometer DH was abandoned in 2013 and replaced with piezometer DHR, located 5 feet away from the original location.
- Estimated Groundwater Table (November 2010)
- Estimated Groundwater Table (April 2011)
- Estimated Groundwater Table (October 2011)
- Estimated Groundwater Table (April 2012)
- Estimated Groundwater Table (October 2012)
- Estimated Groundwater Table (April 2013)
- Estimated Groundwater Table (October 2013)
- Estimated Groundwater Table (March 2014)
- Estimated Groundwater Table (April 2015)

Unified Soil Classification System

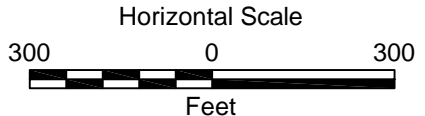
GM	Silty Gravel, Gravel-Sand-Silt Mix
GC	Clayey Gravel, Gravel-Sand-Clay Mix
SW	Well-graded Sand, Gravelly Sand
SP	Poorly-Graded Sand, Gravelly Sand
SM	Silty Sand, Sand-Silt Mix
SC	Clayey-Sand, Sand-Clay Mix
ML	Inorganic Silt, Silty or Clayey Fine Sand
CL	Inorganic Clay of Low - Mod Plasticity
MH	Inorganic Silt, Silty Soil, Elastic Silt
CH	Inorganic Clay of High Plasticity

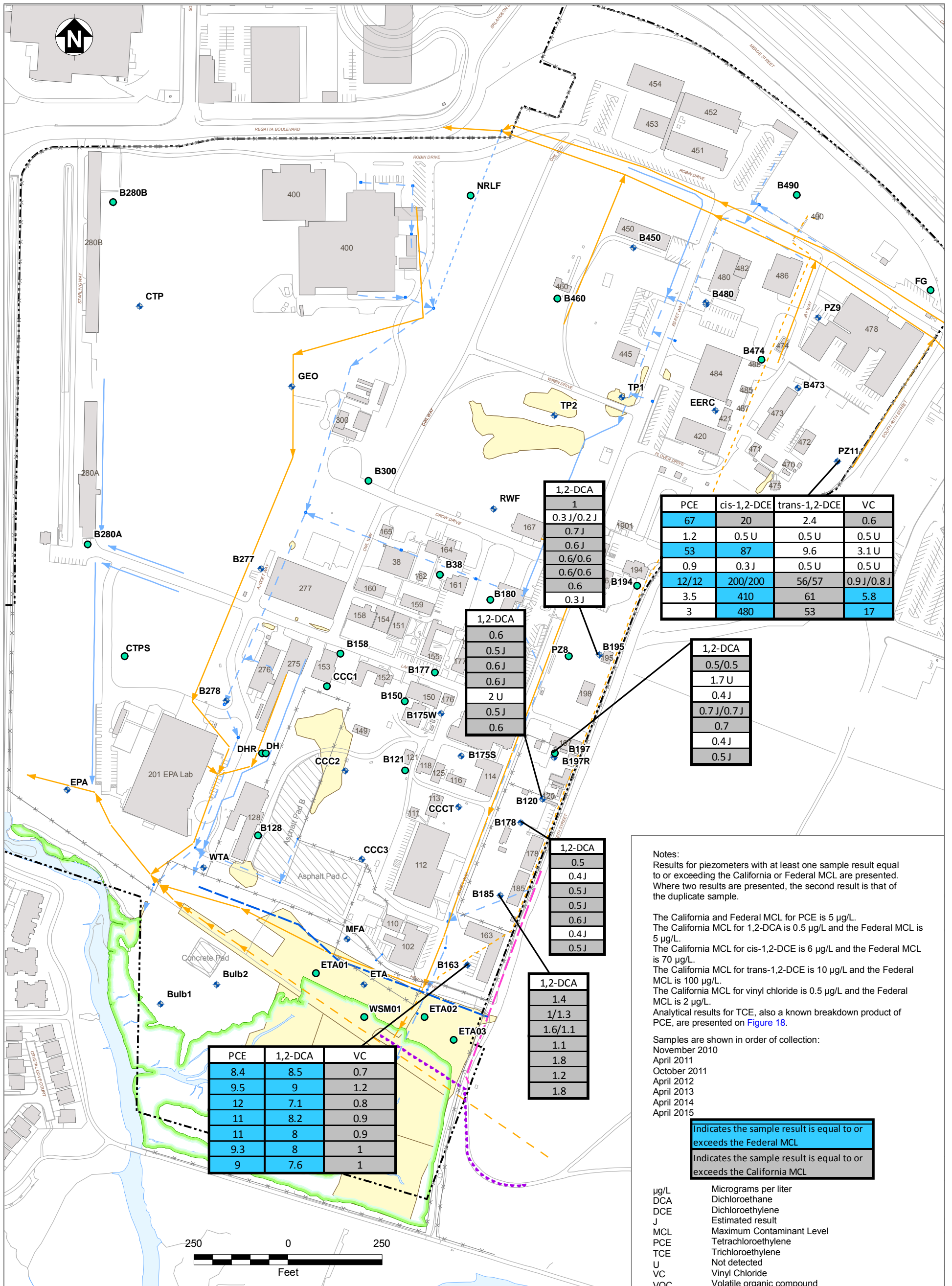


Richmond Field Station Site
University of California, Berkeley

FIGURE 15
GEOLOGIC CROSS-SECTION
B - B'

2015 Groundwater Sampling Results





PCE	1,2-DCA	VC
8.4	8.5	0.7
9.5	9	1.2
12	7.1	0.8
11	8.2	0.9
11	8	0.9
9.3	8	1
9	7.6	1

1,2-DCA
1
0.3 J/0.2 J
0.7 J
0.6 J
0.6/0.6
0.6/0.6
0.6
0.3 J

1,2-DCA
0.6
0.5 J
0.6 J
0.6 J
2 U
0.5 J
0.6

1,2-DCA
0.5
0.4 J
0.5 J
0.5 J
0.6 J
0.4 J
0.5 J

1,2-DCA
1.4
1/1.3
1.6/1.1
1.1
1.8
1.2
1.8

PCE	cis-1,2-DCE	trans-1,2-DCE	VC
67	20	2.4	0.6
1.2	0.5 U	0.5 U	0.5 U
53	87	9.6	3.1 U
0.9	0.3 J	0.5 U	0.5 U
12/12	200/200	56/57	0.9 J/0.8 J
3.5	410	61	5.8
3	480	53	17

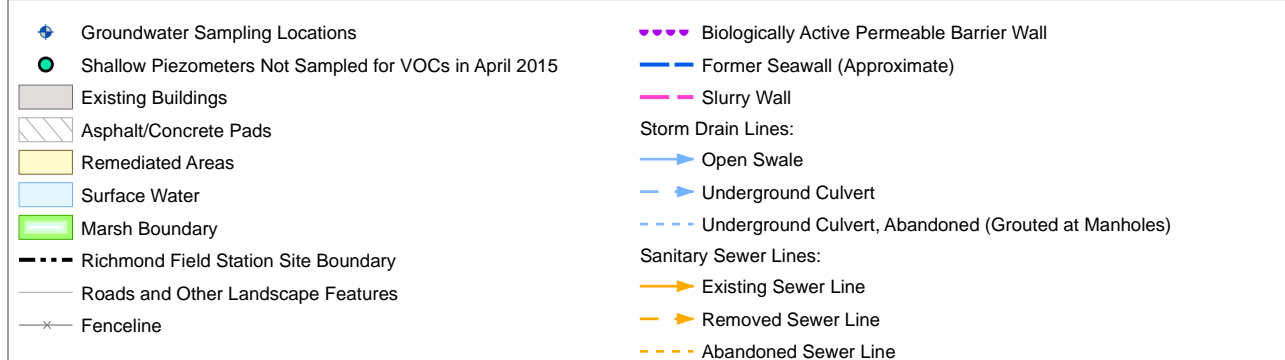
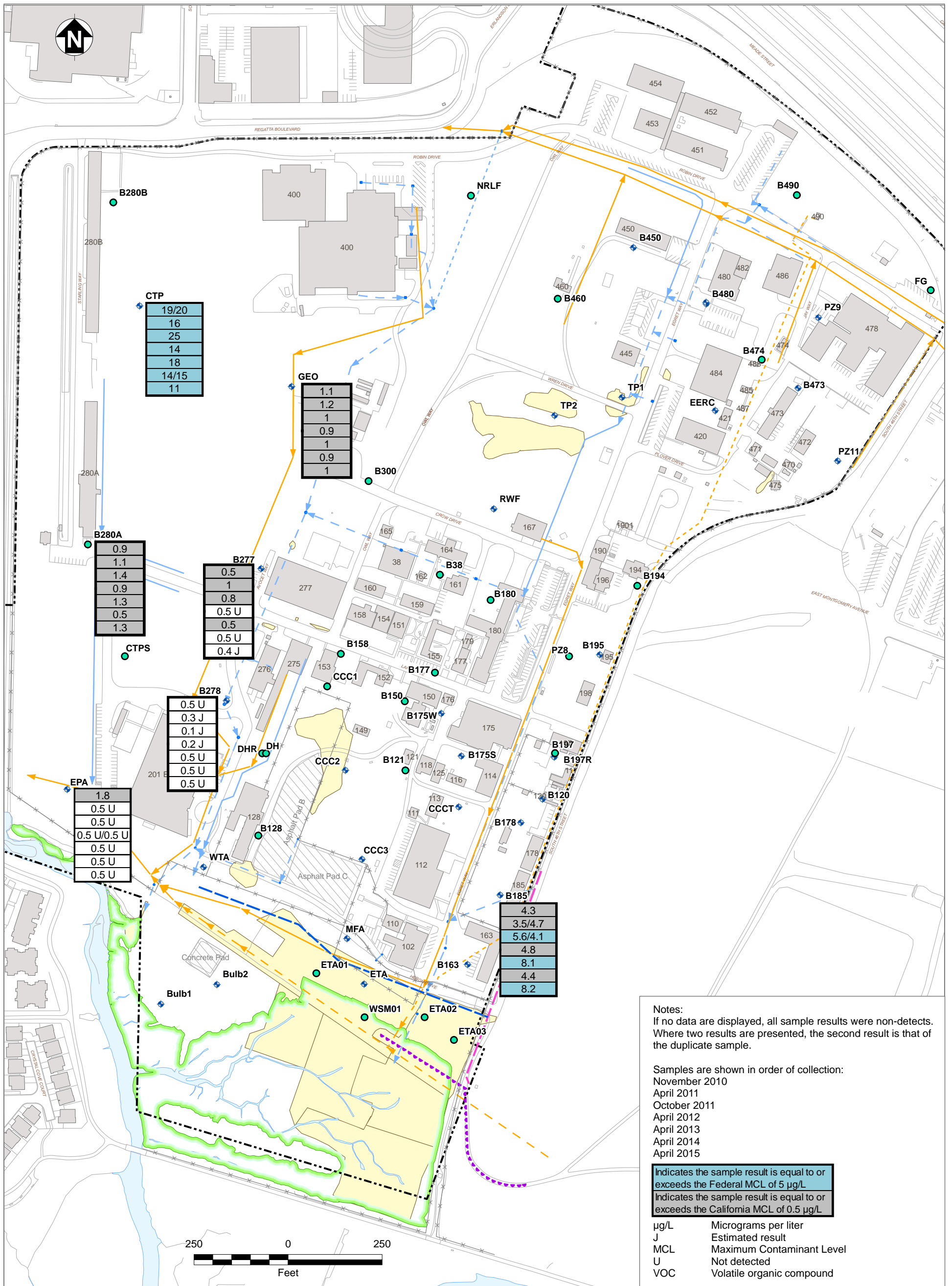
1,2-DCA
0.5/0.5
1.7 U
0.4 J
0.7 J/0.7 J
0.7
0.4 J
0.5 J



Richmond Field Station Site
 University of California, Berkeley

FIGURE 16
PCE AND BREAKDOWN PRODUCTS

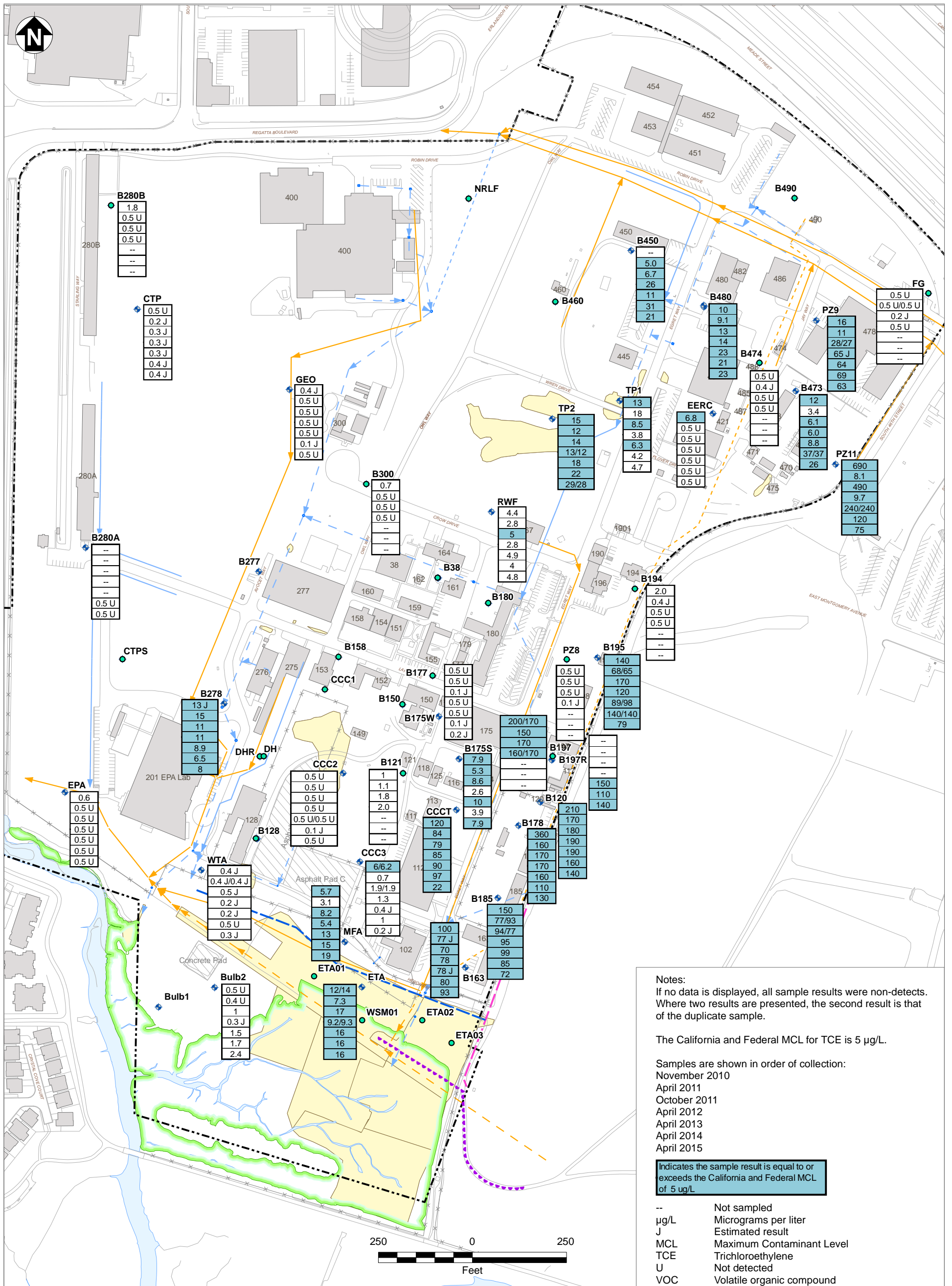
2015 Groundwater Sampling Results



Richmond Field Station Site
 University of California, Berkeley

FIGURE 17
CARBON TETRACHLORIDE
GROUNDWATER CONCENTRATIONS

2015 Groundwater Sampling Results



- ◆ Groundwater Sampling Locations
- Shallow Piezometers Not Sampled for VOCs in April 2015
- Existing Buildings
- Asphalt/Concrete Pads
- Remediated Areas
- Surface Water
- Marsh Boundary
- Richmond Field Station Site Boundary
- Roads and Other Landscape Features
- Fenceline
- Biologically Active Permeable Barrier Wall
- Former Seawall (Approximate)
- Slurry Wall
- Storm Drain Lines:
 - Open Swale
 - Underground Culvert
 - Underground Culvert, Abandoned (Grouted at Manholes)
- Sanitary Sewer Lines:
 - Existing Sewer Line
 - Removed Sewer Line
 - Abandoned Sewer Line



Richmond Field Station Site
 University of California, Berkeley

FIGURE 18
TCE GROUNDWATER
CONCENTRATIONS

2015 Groundwater Sampling Results

TABLES

Table 1: Groundwater Sampling Registry
 2015 Groundwater Sampling Results, Technical Memorandum
 University of California, Berkeley, Richmond Field Station Site

Sample Information				Analysis			
Point Location ID	Sample ID	Sample Date	Depth (feet bgs)	VOCs (EPA Method 8260B)	SVOCs (EPA Method 8270C)	PAH (EPA Method 8270-SIM)	Dissolved Metals (EPA Method 6020A/7470A series)
B120	20150410B120	4/10/2015	4-14	X			
B128	20150413B128, 20150413B128D	4/13/2015	6-16		X	X	X
B150	20150415B150, 20150415B150D	4/15/2015	5.5-15.5				X
B158	20150416B158	4/16/2015	5-15				X
B163	20150414B163	4/14/2015	7-17	X	X	X	X
B175S	20150415B175S	4/15/2015	5-15	X			X
B175W	20150415B175W	4/15/2015	5-15	X			
B178	20150410B178	4/10/2015	4.5-14.5	X			X
B180	20150414B180	4/17/2015	6-16		X	X	
B185	20150410B185	4/10/2015	4-14	X			
B195	20150414B195	4/14/2015	6-16	X			X
B197R	20150414B197R	4/14/2015	4-14	X			X
B277	20150416B277	4/16/2015	7-17	X			
B278	20150417B278	4/17/2015	6-16	X			
B280A	20150417B280A	4/17/2015	4-14	X	X	X	
B450	20150414B450	4/14/2015	6-16	X			X
B473	20150416B473	4/16/2015	7-17	X			
B474	20150416B474	4/16/2015	6-16				X
B480	20150417B480	4/17/2015	6-16	X			X
Bulb1	20150413BULB1, 20150413BULB1D	4/13/2015	8-18	X			X
Bulb2	20150413BULB2	4/13/2015	9-19	X	X	X	X
CCC2	20150415CCC2	4/15/2015	4-14	X	X	X	X
CCC3	20150415CCC3	4/15/2015	4-14	X			X
CCCT	20150415CCCT	4/15/2015	5.5-15.5	X			
CTP	20150417CTP	4/17/2015	7-17	X	X	X	X
DHR	20150413DHR	4/13/2015	3.5-13.5				X
EERC	20150416EERC	4/16/2015	7-17	X			X
EPA	20150417EPA	4/17/2015	4-14	X	X	X	
ETA	20150413ETA	4/13/2015	3.5-13.5	X			X
FG	20150416FG	4/16/2015	6-16				X
GEO	20150416GEO	4/16/2015	6.5-16.5	X			
MFA	20150413MFA	4/13/2015	3.5-13.5	X	X	X	
NRLF	20150416NRLF	4/16/2015	9-19				X
PZ11	20150416PZ11	4/16/2015	9-19	X			X
PZ8	20150414PZ8, 20150414PZ8D	4/14/2015	8-21				X
PZ9	20150416PZ9	4/16/2015	9-20	X			
RWF	20150414RWF	4/14/2015	8-18	X			
TP1	20150410TP1	4/10/2015	7-17	X			X
TP2	20150410TP2, 20150410TP2D	4/10/2015	6-16	X			
WTA	20150413WTA	4/13/2015	4-14	X	X	X	

Notes:

bgs	Below ground surface	NS	Not sampled
EPA	U.S. Environmental Protection Agency	PAH	Polycyclic aromatic hydrocarbons
HCl	Hydrochloric acid	SVOC	Semivolatile organic compounds
HNO3	Nitric Acid	VOA	Volatile organic analysis
ID	Identification	VOC	Volatile organic compounds
ml	Milliliters		

Table 2: Groundwater Elevation Data

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
B120	11/1/10	11.72	6.75	4.97
B120	2/10/11	11.72	4.96	6.76
B120	4/11/11	11.72	3.60	8.12
B120	10/3/11	11.72	6.51	5.21
B120	4/2/12	11.72	2.78	8.94
B120	10/1/12	11.72	6.71	5.01
B120	4/1/13	11.72	5.45	6.27
B120	10/7/13	11.72	7.10	4.62
B120	3/28/14	11.72	5.54	6.18
B120	10/1/14	11.72	7.25	4.47
B120	4/1/15	11.72	6.50	5.22
B121	11/1/10	14.77	10.21	4.56
B121	2/10/11	14.77	8.83	5.94
B121	4/11/11	14.77	7.34	7.43
B121	10/3/11	14.77	10.05	4.72
B121	4/2/12	14.77	6.95	7.82
B121	10/1/12	14.77	10.25	4.52
B121	4/1/13	14.77	9.24	5.53
B121	10/7/13	14.77	10.51	4.26
B121	3/28/14	14.77	9.22	5.55
B121	10/1/14	14.77	10.62	4.15
B121	4/1/15	14.77	3.64	11.13
B128	11/1/10	11.62	7.86	3.76
B128	2/10/11	11.62	6.95	4.67
B128	4/11/11	11.62	6.82	4.80
B128	10/3/11	11.62	7.76	3.86
B128	4/2/12	11.62	4.33	7.29
B128	10/1/12	11.62	7.91	3.71
B128	4/2/13	11.62	7.20	4.42
B128	10/7/13	11.62	8.09	3.53
B128	3/28/14	11.62	7.15	4.47
B128deep	11/1/10	12.15	8.82	3.33
B128deep	2/10/11	12.15	7.33	4.82
B128deep	4/11/11	12.15	6.71	5.44
B128deep	10/3/11	12.15	8.56	3.59
B128deep	4/2/12	12.15	6.12	6.03
B128deep	10/1/12	12.15	8.35	3.80
B128deep	4/2/13	12.15	6.68	5.47
B128deep	10/7/13	12.15	7.47	4.68

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
B128deep	3/28/14	12.15	7.61	4.54
B128deep	10/1/14	12.15	7.63	4.52
B128deep	4/1/15	12.15	8.17	3.98
B150	11/1/10	17.24	6.22	11.02
B150	2/10/11	17.24	6.04	11.20
B150	4/11/11	17.24	3.46	13.78
B150	10/3/11	17.24	8.52	8.72
B150	4/2/12	17.24	1.74	15.50
B150	10/1/12	17.24	9.81	7.43
B150	4/1/13	17.24	6.25	10.99
B150	10/7/13	17.24	8.21	9.03
B150	3/28/14	17.24	5.71	11.53
B150	10/1/14	17.24	11.72	5.52
B150	4/1/15	17.24	6.71	10.53
B158	11/1/10	15.88	11.08	4.80
B158	2/10/11	15.88	9.81	6.07
B158	4/11/11	15.88	8.45	7.43
B158	10/3/11	15.88	10.92	4.96
B158	4/2/12	15.88	8.20	7.68
B158	10/1/12	15.88	11.10	4.78
B158	4/1/13	15.88	10.26	5.62
B158	10/7/13	15.88	11.32	4.56
B158	3/28/14	15.88	10.14	5.74
B158	10/1/14	15.88	11.48	4.40
B158	4/1/15	15.88	10.50	5.38
B163	11/1/10	10.37	6.30	4.07
B163	2/10/11	10.37	5.07	5.30
B163	4/11/11	10.37	3.97	6.40
B163	10/3/11	10.37	6.04	4.33
B163	4/2/12	10.37	3.27	7.10
B163	10/1/12	10.37	6.31	4.06
B163	4/1/13	10.37	5.35	5.02
B163	10/7/13	10.37	6.57	3.80
B163	3/28/14	10.37	5.24	5.13
B163	10/1/14	10.37	6.61	3.76
B163	4/1/15	10.37	5.89	4.48
B175S	11/1/10	15.16	10.31	4.85
B175S	2/10/11	15.16	8.71	6.45
B175S	4/11/11	15.16	7.03	8.13

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
B175S	10/3/11	15.16	10.11	5.05
B175S	4/2/12	15.16	6.62	8.54
B175S	10/1/12	15.16	10.34	4.82
B175S	4/1/13	15.16	9.09	6.07
B175S	10/7/13	15.16	10.61	4.55
B175S	3/28/14	15.16	9.16	6.00
B175S	10/1/14	15.16	10.81	4.35
B175S	4/1/15	15.16	9.61	5.55
B175W	11/1/10	16.57	9.96	6.61
B175W	2/10/11	16.57	8.20	8.37
B175W	4/11/11	16.57	5.10	11.47
B175W	10/3/11	16.57	10.24	6.33
B175W	4/2/12	16.57	3.62	12.95
B175W	10/1/12	16.57	10.47	6.10
B175W	4/1/13	16.57	9.29	7.28
B175W	10/7/13	16.57	10.72	5.85
B175W	3/28/14	16.57	8.94	7.63
B175W	10/1/14	16.57	11.09	5.48
B175W	4/1/15	16.57	9.48	7.09
B177	11/1/10	17.57	11.66	5.91
B177	2/10/11	17.57	9.69	7.88
B177	4/11/11	17.57	7.49	10.08
B177	10/3/11	17.57	11.43	6.14
B177	4/2/12	17.57	7.41	10.16
B177	10/1/12	17.57	11.71	5.86
B177	4/1/13	17.57	10.31	7.26
B177	10/7/13	17.57	11.98	5.59
B177	3/28/14	17.57	10.34	7.23
B177	10/1/14	17.57	12.29	5.28
B177	4/1/15	17.57	10.91	6.66
B178	11/1/10	10.67	5.61	5.06
B178	2/10/11	10.67	3.94	6.73
B178	4/11/11	10.67	2.22	8.45
B178	10/3/11	10.67	5.38	5.29
B178	4/2/12	10.67	1.60	9.07
B178	10/1/12	10.67	5.61	5.06
B178	4/1/13	10.67	4.28	6.39
B178	10/7/13	10.67	NA	NA
B178	3/28/14	10.67	4.36	6.31

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
B178	10/1/14	10.67	6.16	4.51
B178	4/1/15	10.67	4.86	5.81
B180	11/1/10	15.02	9.11	5.91
B180	2/10/11	15.02	7.03	7.99
B180	4/11/11	15.02	4.93	10.09
B180	10/3/11	15.02	8.82	6.20
B180	4/2/12	15.02	4.99	10.03
B180	10/1/12	15.02	9.11	5.91
B180	4/1/13	15.02	7.59	7.43
B180	10/7/13	15.02	9.38	5.64
B180	3/28/14	15.02	7.76	7.26
B180	10/1/14	15.02	9.71	5.31
B180	4/1/15	15.02	8.19	6.83
B185	11/1/10	10.01	5.38	4.63
B185	2/10/11	10.01	3.90	6.11
B185	4/11/11	10.01	2.53	7.48
B185	10/3/11	10.01	5.18	4.83
B185	4/2/12	10.01	1.72	8.29
B185	10/1/12	10.01	5.37	4.64
B185	4/1/13	10.01	4.08	5.93
B185	10/7/13	10.01	5.69	4.32
B185	3/28/14	10.01	4.14	5.87
B185	10/1/14	10.01	5.76	4.25
B185	4/1/15	10.01	4.81	5.20
B194	11/1/10	18.30	11.75	6.55
B194	2/10/11	18.30	9.19	9.11
B194	4/11/11	18.30	7.28	11.02
B194	10/3/11	18.30	11.32	6.98
B194	4/2/12	18.30	6.75	11.55
B194	10/1/12	18.30	11.56	6.74
B194	4/1/13	18.30	6.48	11.82
B194	10/7/13	18.30	12.07	6.23
B194	3/28/14	18.30	10.24	8.06
B194	10/6/14	18.30	12.48	5.82
B194	4/1/15	18.30	10.96	7.34
B195	11/1/10	14.28	8.66	5.62
B195	2/10/11	14.28	6.50	7.78
B195	4/11/11	14.28	6.57	7.71
B195	10/3/11	14.28	8.37	5.91

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
B195	4/2/12	14.28	4.23	10.05
B195	10/1/12	14.28	8.65	5.63
B195	4/1/13	14.28	7.07	7.21
B195	10/7/13	14.28	9.00	5.28
B195	3/28/14	14.28	7.30	6.98
B195	10/1/14	14.28	9.26	5.02
B195	4/1/15	14.28	7.76	6.52
B197	11/1/10	13.01	7.94	5.07
B197	2/10/11	13.01	6.16	6.85
B197	4/11/11	13.01	4.25	8.76
B197	10/3/11	13.01	7.70	5.31
B197	4/2/12	13.01	3.83	9.18
B197	10/1/12	13.01	NA	NA
B197	10/7/13	13.01	9.47	NA
B197R	4/1/13	13.19	6.85	6.34
B197R	3/28/14	13.19	6.84	6.35
B197R	10/1/14	13.19	8.65	4.54
B197R	4/1/15	13.19	7.35	5.84
B277	11/1/10	14.82	10.46	4.36
B277	2/10/11	14.82	10.10	4.72
B277	4/11/11	14.82	9.77	5.05
B277	10/3/11	14.82	10.41	4.41
B277	4/2/12	14.82	9.70	5.12
B277	10/1/12	14.82	10.49	4.33
B277	4/1/13	14.82	10.14	4.68
B277	10/7/13	14.82	10.68	4.14
B277	3/28/14	14.82	10.13	4.69
B278	11/1/10	12.75	9.14	3.61
B278	2/10/11	12.75	8.90	3.85
B278	4/11/11	12.75	8.44	4.31
B278	10/3/11	12.75	9.13	3.62
B278	4/2/12	12.75	8.19	4.56
B278	10/1/12	12.75	9.35	3.40
B278	4/1/13	12.75	8.90	3.85
B278	10/7/13	12.75	9.38	3.37
B278	3/28/14	12.75	8.84	3.91
B278	10/1/14	12.75	9.44	3.31
B278	4/1/15	12.75	8.85	3.90
B280A	11/1/10	14.04	10.99	3.05

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
B280A	2/10/11	14.04	10.84	3.20
B280A	4/11/11	14.04	10.40	3.64
B280A	10/3/11	14.04	11.07	2.97
B280A	4/2/12	14.04	10.04	4.00
B280A	10/1/12	14.04	11.15	2.89
B280A	4/1/13	14.04	10.69	3.35
B280A	10/7/13	14.04	11.20	2.84
B280A	3/28/14	14.04	10.63	3.41
B280A	10/1/14	14.04	11.21	2.83
B280A	4/1/15	14.04	10.84	3.20
B280B	11/1/10	19.59	12.98	6.61
B280B	2/10/11	19.59	12.66	6.93
B280B	4/11/11	19.59	9.98	9.61
B280B	10/3/11	19.59	13.00	6.59
B280B	4/2/12	19.59	9.55	10.04
B280B	10/1/12	19.59	13.21	6.38
B280B	4/1/13	19.59	12.80	6.79
B280B	10/7/13	19.59	13.16	6.43
B280B	3/28/14	19.59	12.64	6.95
B280B	10/1/14	19.59	13.14	6.45
B280B	4/1/15	19.59	13.04	6.55
B300	11/1/10	18.16	12.95	5.21
B300	2/10/11	18.16	11.50	6.66
B300	4/11/11	18.16	9.97	8.19
B300	10/3/11	18.16	12.40	5.76
B300	4/2/12	18.16	10.73	7.43
B300	10/1/12	18.16	12.94	5.22
B300	4/1/13	18.16	11.87	6.29
B300	10/7/13	18.16	13.10	5.06
B300	3/28/14	18.16	9.25	8.91
B300	10/1/14	18.16	13.39	4.77
B300	4/1/15	18.16	12.07	6.09
B38	11/1/10	15.78	9.95	5.83
B38	2/10/11	15.78	7.93	7.85
B38	4/11/11	15.78	5.85	9.93
B38	10/3/11	15.78	9.80	5.98
B38	4/2/12	15.78	5.93	9.85
B38	10/1/12	15.78	9.93	5.85
B38	4/1/13	15.78	8.51	7.27
B38	10/7/13	15.78	10.19	5.59
B38	3/28/14	15.78	8.60	7.18

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
B38	10/1/14	15.78	10.55	5.23
B38	4/1/15	15.78	9.01	6.77
B38deep	11/1/10	15.84	9.81	6.03
B38deep	2/10/11	15.84	8.10	7.74
B38deep	4/11/11	15.84	6.50	9.34
B38deep	10/3/11	15.84	9.66	6.18
B38deep	4/2/12	15.84	6.78	9.06
B38deep	10/1/12	15.84	9.71	6.13
B38deep	4/1/13	15.84	8.57	7.27
B38deep	10/7/13	15.84	10.09	5.75
B38deep	3/28/14	15.84	8.67	7.17
B38deep	10/1/14	15.84	10.22	5.62
B38deep	4/1/15	15.84	8.95	6.89
B450	11/1/10	21.34	14.50	6.84
B450	2/10/11	21.34	12.36	8.98
B450	4/11/11	21.34	10.20	11.14
B450	10/3/11	21.34	14.05	7.29
B450	4/2/12	21.34	11.51	9.83
B450	10/1/12	21.34	14.35	6.99
B450	4/1/13	21.34	12.94	8.40
B450	10/7/13	21.34	14.57	6.77
B450	3/28/14	21.34	13.17	8.17
B450	10/1/14	21.34	14.83	6.51
B450	4/1/15	21.34	13.38	7.96
B460	11/1/10	21.42	15.45	5.97
B460	2/10/11	21.42	12.58	8.84
B460	4/11/11	21.42	9.87	11.55
B460	10/3/11	21.42	14.82	6.60
B460	4/2/12	21.42	11.44	9.98
B460	10/1/12	21.42	15.49	5.93
B460	4/1/13	21.42	13.10	8.32
B460	10/7/13	21.42	15.76	5.66
B460	3/28/14	21.42	13.64	7.78
B460	10/1/14	21.42	16.25	5.17
B460	4/1/15	21.42	13.56	7.86
B473	11/1/10	22.29	13.78	8.51
B473	2/10/11	22.29	11.65	10.64
B473	4/11/11	22.29	9.21	13.08
B473	10/3/11	22.29	13.23	9.06
B473	4/2/12	22.29	9.75	12.54
B473	10/1/12	22.29	13.40	8.89

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
B473	4/1/13	22.29	12.39	9.90
B473	10/7/13	22.29	14.71	7.58
B473	3/28/14	22.29	12.33	9.96
B473	10/1/14	22.29	14.51	7.78
B473	4/1/15	22.29	12.99	9.30
B474	11/1/10	23.67	15.52	8.15
B474	2/10/11	23.67	13.70	9.97
B474	4/11/11	23.67	11.55	12.12
B474	10/3/11	23.67	13.00	10.67
B474	4/2/12	23.67	11.88	11.79
B474	10/1/12	23.67	15.65	8.02
B474	4/1/13	23.67	11.94	11.73
B474	10/7/13	23.67	16.09	7.58
B474	3/28/14	23.67	11.95	11.72
B474	10/6/14	23.67	12.48	11.19
B474	4/1/15	23.67	14.65	9.02
B480	11/1/10	20.84	14.01	6.83
B480	2/10/11	20.84	11.78	9.06
B480	4/11/11	20.84	9.45	11.39
B480	10/3/11	20.84	13.56	7.28
B480	4/2/12	20.84	10.81	10.03
B480	10/1/12	20.84	13.98	6.86
B480	4/1/13	20.84	12.42	8.42
B480	10/7/13	20.84	14.20	6.64
B480	3/28/14	20.84	12.64	8.20
B480	10/1/14	20.84	14.50	6.34
B480	4/1/15	20.84	12.88	7.96
B480deep	11/1/10	21.07	9.55	11.52
B480deep	2/10/11	21.07	8.60	12.47
B480deep	4/11/11	21.07	7.16	13.91
B480deep	10/3/11	21.07	9.54	11.53
B480deep	4/2/12	21.07	7.44	13.63
B480deep	10/1/12	21.07	10.04	11.03
B480deep	4/1/13	21.07	9.06	12.01
B480deep	10/7/13	21.07	10.29	10.78
B480deep	3/28/14	21.07	9.02	12.05
B480deep	10/1/14	21.07	10.51	10.56
B480deep	4/1/15	21.07	9.55	11.52
B490	11/1/10	24.41	15.20	9.21
B490	2/10/11	24.41	14.08	10.33
B490	4/11/11	24.41	13.11	11.30

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
B490	10/3/11	24.41	15.24	9.17
B490	4/2/12	24.41	13.34	11.07
B490	10/1/12	24.41	15.34	9.07
B490	4/1/13	24.41	14.53	9.88
B490	10/7/13	24.41	16.60	7.81
B490	3/28/14	24.41	13.44	10.97
B490	10/1/14	24.41	15.71	8.70
B490	4/1/15	24.41	14.83	9.58
Bulb1	11/1/10	7.19	4.76	2.43
Bulb1	2/10/11	7.19	4.12	3.07
Bulb1	4/11/11	7.19	4.11	3.08
Bulb1	10/3/11	7.19	5.09	2.10
Bulb1	4/2/12	7.19	3.94	3.25
Bulb1	10/1/12	7.19	5.13	2.06
Bulb1	4/2/13	7.19	4.27	2.92
Bulb1	10/7/13	7.19	4.78	2.41
Bulb1	3/28/14	7.19	4.19	3.00
Bulb1	10/1/14	7.19	4.33	2.86
Bulb1	4/1/15	7.19	4.47	2.72
Bulb2	11/1/10	7.46	4.60	2.86
Bulb2	2/10/11	7.46	3.94	3.52
Bulb2	4/11/11	7.46	3.61	3.85
Bulb2	10/3/11	7.46	3.74	3.72
Bulb2	4/2/12	7.46	3.08	4.38
Bulb2	10/1/12	7.46	4.57	2.89
Bulb2	4/2/13	7.46	4.15	3.31
Bulb2	10/7/13	7.46	4.73	2.73
Bulb2	3/28/14	7.46	4.03	3.43
Bulb2	10/1/14	7.46	4.58	2.88
Bulb2	4/1/15	7.46	4.38	3.08
CCC1	11/1/10	15.38	10.89	4.49
CCC1	2/10/11	15.38	7.36	8.02
CCC1	4/11/11	15.38	8.65	6.73
CCC1	10/3/11	15.38	10.67	4.71
CCC1	4/2/12	15.38	7.94	7.44
CCC1	10/1/12	15.38	10.86	4.52
CCC1	4/1/13	15.38	10.10	5.28
CCC1	10/7/13	15.38	11.05	4.33
CCC1	3/28/14	15.38	9.81	5.57
CCC1	10/1/14	15.38	11.22	4.16
CCC1	4/1/15	15.38	10.22	5.16

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
CCC2	11/1/10	14.60	10.14	4.46
CCC2	2/10/11	14.60	8.88	5.72
CCC2	4/11/11	14.60	7.31	7.29
CCC2	10/3/11	14.60	9.90	4.70
CCC2	4/2/12	14.60	7.00	7.60
CCC2	10/1/12	14.60	10.11	4.49
CCC2	4/1/13	14.60	9.20	5.40
CCC2	10/7/13	14.60	10.37	4.23
CCC2	3/28/14	14.60	9.15	5.45
CCC2	10/1/14	14.60	11.20	3.40
CCC2	4/1/15	14.60	9.53	5.07
CCC3	11/1/10	11.67	7.56	4.11
CCC3	2/10/11	11.67	6.33	5.34
CCC3	4/11/11	11.67	6.21	5.46
CCC3	10/3/11	11.67	7.35	4.32
CCC3	4/2/12	11.67	4.60	7.07
CCC3	10/1/12	11.67	7.54	4.13
CCC3	4/1/13	11.67	6.64	5.03
CCC3	10/7/13	11.67	7.81	3.86
CCC3	3/28/14	11.67	6.57	5.10
CCC3	10/1/14	11.67	8.50	3.17
CCC3	4/1/15	11.67	6.71	4.96
CCCT	11/1/10	12.13	8.42	3.71
CCCT	2/10/11	12.13	5.86	6.27
CCCT	4/11/11	12.13	4.25	7.88
CCCT	10/3/11	12.13	7.23	4.90
CCCT	4/2/12	12.13	3.78	8.35
CCCT	10/1/12	12.13	7.42	4.71
CCCT	4/1/13	12.13	6.27	5.86
CCCT	10/7/13	12.13	NA	NA
CCCT	3/28/14	12.13	6.28	5.85
CCCT	10/1/14	12.13	7.91	4.22
CCCT	4/1/15	12.13	6.76	5.37
CTP	11/1/10	17.27	11.77	5.50
CTP	2/10/11	17.27	11.22	6.05
CTP	4/11/11	17.27	10.40	6.87
CTP	10/3/11	17.27	11.72	5.55
CTP	4/2/12	17.27	10.17	7.10
CTP	10/1/12	17.27	11.99	5.28
CTP	4/1/13	17.27	11.40	5.87
CTP	10/7/13	17.27	12.99	4.28

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
CTP	3/28/14	17.27	11.32	5.95
CTP	10/1/14	17.27	12.00	5.27
CTP	4/1/15	17.27	11.50	5.77
CTPdeep	11/1/10	17.67	12.67	5.00
CTPdeep	2/10/11	17.67	11.46	6.21
CTPdeep	4/11/11	17.67	11.68	5.99
CTPdeep	10/3/11	17.67	12.20	5.47
CTPdeep	4/2/12	17.67	10.45	7.22
CTPdeep	10/1/12	17.67	12.33	5.34
CTPdeep	4/1/13	17.67	11.66	6.01
CTPdeep	10/7/13	17.67	12.34	5.33
CTPdeep	3/28/14	17.67	11.59	6.08
CTPdeep	10/1/14	17.67	12.41	5.26
CTPdeep	4/1/15	17.67	11.76	5.91
CTPS	11/1/10	15.25	11.95	3.30
CTPS	2/10/11	15.25	9.61	5.64
CTPS	4/11/11	15.25	7.64	7.61
CTPS	10/3/11	15.25	12.05	3.20
CTPS	4/2/12	15.25	7.24	8.01
CTPS	10/1/12	15.25	12.17	3.08
CTPS	4/1/13	15.25	9.11	6.14
CTPS	10/7/13	15.25	12.21	3.04
CTPS	3/28/14	15.25	8.61	6.64
CTPS	10/1/14	15.25	12.29	2.96
CTPS	4/1/15	15.25	10.92	4.33
DH	11/1/10	13.25	10.12	3.13
DH	2/10/11	13.25	8.88	4.37
DH	4/11/11	13.25	7.59	5.66
DH	10/3/11	13.25	9.90	3.35
DH	4/2/12	13.25	7.84	5.41
DH	10/1/12	13.25	10.07	3.18
DH	10/7/13	13.25	9.25	4.00
DHR	4/1/13	13.54	9.41	4.13
DHR	3/28/14	13.54	8.88	4.66
DHR	10/1/14	13.54	10.36	3.18
DHR	4/1/15	13.54	9.44	4.10
EERC	11/1/10	21.84	14.99	6.85
EERC	2/10/11	21.84	12.64	9.20
EERC	4/11/11	21.84	9.84	12.00
EERC	10/3/11	21.84	14.26	7.58
EERC	4/2/12	21.84	11.07	10.77

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
EERC	10/1/12	21.84	14.81	7.03
EERC	4/1/13	21.84	13.35	8.49
EERC	10/7/13	21.84	15.11	6.73
EERC	3/28/14	21.84	13.51	8.33
EERC	10/1/14	21.84	15.46	6.38
EPA	11/1/10	10.59	8.65	1.94
EPA	2/10/11	10.59	8.56	2.03
EPA	4/11/11	10.59	7.92	2.67
EPA	10/3/11	10.59	8.61	1.98
EPA	4/2/12	10.59	7.94	2.65
EPA	10/1/12	10.59	8.71	1.88
EPA	4/1/13	10.59	8.64	1.95
EPA	10/7/13	10.59	9.79	0.80
EPA	3/28/14	10.59	8.43	2.16
EPA	10/1/14	10.59	8.63	1.96
EPA	4/1/15	10.59	8.61	1.98
ETA	11/1/10	7.54	4.12	3.42
ETA	2/10/11	7.54	3.10	4.44
ETA	4/11/11	7.54	2.49	5.05
ETA	10/3/11	7.54	4.62	2.92
ETA	4/2/12	7.54	1.90	5.64
ETA	10/1/12	7.54	4.10	3.44
ETA	4/2/13	7.54	3.61	3.93
ETA	10/7/13	7.54	4.32	3.22
ETA	3/28/14	7.54	3.28	4.26
ETA	10/1/14	7.54	4.25	3.29
ETA	4/1/15	7.54	3.54	4.00
ETA01	4/1/15	5.93	2.52	3.41
ETA02	4/1/15	9.53	5.92	3.61
ETA03	4/1/15	10.48	7.12	3.36
FG	11/1/10	25.31	13.92	11.39
FG	2/10/11	25.31	13.48	11.83
FG	4/11/11	25.31	12.75	12.56
FG	10/3/11	25.31	13.85	11.46
FG	4/2/12	25.31	11.77	13.54
FG	10/1/12	25.31	14.10	11.21
FG	4/1/13	25.31	13.77	11.54
FG	10/7/13	25.31	14.32	10.99
FG	3/28/14	25.31	13.48	11.83
FG	10/1/14	25.31	14.52	10.79
FG	4/1/15	25.31	13.91	11.40

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
GEO	11/1/10	16.37	10.79	5.58
GEO	2/10/11	16.37	9.04	7.33
GEO	4/2/11	16.37	8.35	8.02
GEO	4/11/11	16.37	9.74	6.63
GEO	10/3/11	16.37	10.42	5.95
GEO	10/1/12	16.37	10.71	5.66
GEO	4/1/13	16.37	9.76	6.61
GEO	10/7/13	16.37	11.92	4.45
GEO	3/28/14	16.37	9.84	6.53
GEO	10/1/14	16.37	11.21	5.16
GEO	4/1/15	16.37	9.93	6.44
MFA	11/1/10	8.23	4.55	3.68
MFA	2/10/11	8.23	3.59	4.64
MFA	4/11/11	8.23	2.67	5.56
MFA	10/3/11	8.23	4.41	3.82
MFA	4/2/12	8.23	1.98	6.25
MFA	10/1/12	8.23	4.57	3.66
MFA	4/2/13	8.23	3.70	4.53
MFA	10/7/13	8.23	4.85	3.38
MFA	3/28/14	8.23	3.68	4.55
MFA	10/1/14	8.23	3.68	4.55
MFA	4/1/15	8.23	4.71	3.52
NRLF	11/1/10	22.62	16.11	6.51
NRLF	2/10/11	22.62	13.45	9.17
NRLF	4/11/11	22.62	11.99	10.63
NRLF	10/3/11	22.62	15.83	6.79
NRLF	4/2/12	22.62	12.96	9.66
NRLF	10/1/12	22.62	16.30	6.32
NRLF	4/1/13	22.62	13.70	8.92
NRLF	10/7/13	22.62	NA	NA
NRLF	3/28/14	22.62	14.16	8.46
NRLF	10/1/14	22.62	17.06	5.56
NRLF	4/1/15	22.62	14.21	8.41
PZ11	11/1/10	21.48	12.41	9.07
PZ11	2/10/11	21.48	NA	NA
PZ11	4/11/11	21.48	8.08	13.40
PZ11	10/3/11	21.48	12.10	9.38
PZ11	4/2/12	21.48	7.74	13.74
PZ11	10/1/12	21.48	11.81	9.67
PZ11	10/7/13	21.48	12.55	8.93
PZ11	3/28/14	21.48	10.80	10.68

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
PZ11	10/1/14	21.48	13.14	8.34
PZ11	4/1/15	21.48	11.45	10.03
PZ8	11/1/10	14.12	8.45	5.67
PZ8	2/10/11	14.12	NA	NA
PZ8	4/11/11	14.12	4.56	9.56
PZ8	10/3/11	14.12	8.21	5.91
PZ8	4/2/12	14.12	4.20	9.92
PZ8	10/1/12	14.12	8.44	5.68
PZ8	4/1/13	14.12	6.74	7.38
PZ8	10/7/13	14.12	8.78	5.34
PZ8	3/28/14	14.12	7.12	7.00
PZ8	10/1/14	14.12	9.04	5.08
PZ8	4/1/15	14.12	7.58	6.54
PZ9	11/1/10	23.29	13.75	9.54
PZ9	2/10/11	23.29	NA	NA
PZ9	4/11/11	23.29	11.21	12.08
PZ9	10/3/11	23.29	13.52	9.77
PZ9	4/2/12	23.29	11.20	12.09
PZ9	10/1/12	23.29	13.42	9.87
PZ9	4/1/13	23.29	12.87	10.42
PZ9	10/7/13	23.29	14.25	9.04
PZ9	3/28/14	23.29	12.67	10.62
PZ9	10/1/14	23.29	14.49	8.80
PZ9	4/1/15	23.29	13.24	10.05
RWF	11/1/10	16.46	10.53	5.93
RWF	2/10/11	16.46	8.42	8.04
RWF	4/11/11	16.46	6.26	10.20
RWF	10/3/11	16.46	10.21	6.25
RWF	4/2/12	16.46	6.70	9.76
RWF	10/1/12	16.46	10.52	5.94
RWF	4/1/13	16.46	9.09	7.37
RWF	10/7/13	16.46	10.81	5.65
RWF	3/28/14	16.46	12.01	4.45
RWF	10/1/14	16.46	11.22	5.24
RWF	4/1/15	16.46	9.58	6.88
TP1	11/1/10	19.33	13.11	6.22
TP1	2/10/11	19.33	10.90	8.43
TP1	4/11/11	19.33	8.59	10.74
TP1	10/3/11	19.33	12.61	6.72
TP1	4/2/12	19.33	9.72	9.61
TP1	10/1/12	19.33	13.00	6.33

Table 2: Groundwater Elevation Data (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Piezometer Name	Sample Date	TOC Elevation (feet NGVD)	Depth to Water (feet below TOC)	Groundwater Elevation (feet NGVD)
TP1	4/1/13	19.33	11.48	7.85
TP1	10/7/13	19.33	13.25	6.08
TP1	3/28/14	19.33	11.66	7.67
TP1	10/1/14	19.33	13.52	5.81
TP1	4/1/15	19.33	11.93	7.40
TP2	11/1/10	18.91	12.77	6.14
TP2	2/10/11	18.91	10.57	8.34
TP2	4/11/11	18.91	8.15	10.76
TP2	10/3/11	18.91	12.28	6.63
TP2	4/2/12	18.91	9.28	9.63
TP2	10/1/12	18.91	12.67	6.24
TP2	4/1/13	18.91	11.16	7.75
TP2	10/7/13	18.91	12.87	6.04
TP2	3/28/14	18.91	11.31	7.60
TP2	10/1/14	18.91	13.22	5.69
TP2	4/1/15	18.91	11.68	7.23
WSM01	4/1/15	7.83	4.92	2.91
WTA	11/1/10	8.61	6.01	2.60
WTA	2/10/11	8.61	5.84	2.77
WTA	4/11/11	8.61	5.73	2.88
WTA	10/3/11	8.61	6.01	2.60
WTA	4/2/12	8.61	5.22	3.39
WTA	10/1/12	8.61	6.18	2.43
WTA	4/2/13	8.61	5.97	2.64
WTA	10/7/13	8.61	6.27	2.34
WTA	3/28/14	8.61	5.69	2.92
WTA	10/1/14	8.61	6.02	2.59
WTA	4/1/15	8.61	6.01	2.60

Notes:

NA Not available
 NGVD National Geodetic Vertical Datum of 1929
 TOC Top of casing

Table 3: Groundwater Sampling Parameters Summary
 2015 Groundwater Sampling Results, Technical Memorandum
 University of California, Berkeley, Richmond Field Station Site

Point Location ID	Date	Temperature (C)		ORP (mV)	Specific Conductance (µmhos/cm)		Turbidity (NTU)	DO (mg/L)	TDS (g/L)	Salinity (ppt)
			pH							
B120	4/10/2015	18.64	6.47	92	2.600	0.0	3.71	1.670	1.3	
B128	4/13/2015	17.92	5.82	-14	0.733	0.8	6.34	0.469	0.4	
B150	4/15/2015	17.73	6.34	140	0.302	0.0	4.72	0.196	0.1	
B158	4/16/2015	20.63	5.65	196	0.200	625.0	2.32	0.109	0.1	
B163	4/14/2015	19.17	5.35	110	3.270	11.9	3.40	2.090	1.7	
B175S	4/15/2015	17.96	6.53	143	0.866	0.0	4.19	0.554	0.4	
B175W	4/15/2015	17.53	6.03	126	0.393	0.0	4.73	0.255	0.2	
B178	4/10/2015	18.95	6.44	-191	2.190	0.0	3.63	1.400	1.1	
B180	4/14/2015	16.91	6.51	149	0.519	0.0	6.63	0.332	0.2	
B185	4/10/2015	16.9	6.23	-15	2.040	0.0	3.59	1.300	1.0	
B195	4/14/2015	17.53	6.21	127	1.120	0.0	2.98	0.714	0.6	
B197R	4/14/2015	17.32	6.26	-235	2.330	0.0	3.37	1.490	1.2	
B277	4/16/2015	20.24	6.89	65	0.600	8.1	3.03	0.417	0.3	
B278	4/12/2015	17.69	5.84	165	2.880	0.5	0.60	1.850	1.5	
B280A	4/17/2015	17.75	6.47	85	0.872	0.0	3.29	0.558	0.4	
B450	4/14/2015	18.59	5.92	195	0.912	0.0	5.38	0.584	0.4	
B473	4/16/2015	20.4	6.15	199	0.536	15.3	3.65	0.343	0.3	
B474	4/16/2015	17.11	6.34	-30	0.306	152.0	3.73	0.208	0.1	
B480	4/17/2015	18.76	5.72	229	0.934	4.5	2.25	0.598	0.5	
BULB1	4/13/2015	18.15	7.58	-241	37.700	2.6	3.43	23.000	23.8	
BULB2	4/13/2015	17.14	6.54	-21	1.850	0.0	4.01	1.180	0.9	
CCC2	4/15/2015	18.21	6.22	140	1.690	87.7	3.91	1.080	0.8	
CCC3	4/15/2015	17.96	6.62	134	0.883	0.0	4.68	0.566	0.4	
CCCT	4/15/2015	14.92	6.48	-196	1.420	21.6	2.54	0.908	0.7	
CTP	4/17/2015	18.69	6.14	94	0.786	1.2	2.82	0.503	0.4	
DHR	4/13/2015	15.81	5.96	-153	9.340	6.9	3.30	5.880	5.2	
EERC	4/16/2015	17.88	5.96	28	4.590	2.8	0.46	2.940	2.4	
EPA	4/17/2015	16.52	6.65	1	1.160	0.0	3.59	0.743	0.6	
ETA	4/13/2015	17.73	6.13	-26	1.940	25.1	3.23	1.240	1.0	
FG	4/16/2015	21.97	5.74	215	0.659	14.2	2.00	0.422	0.3	
GEO	4/16/2015	16.04	6.7	90	0.841	6.8	3.86	0.538	0.4	
MFA	4/13/2015	18.81	6.46	109	1.130	59.0	3.82	0.723	0.6	
NRLF	4/16/2015	18.39	6.29	-83	0.627	2.9	2.62	0.401	0.3	
PZ8	4/14/2015	17.61	6.14	58	0.777	0.0	3.29	0.498	0.4	
PZ9	4/16/2015	20.65	5.85	150	0.811	4.8	0.43	0.519	0.4	

Table 3: Groundwater Sampling Parameters Summary (Continued)

2015 Groundwater Sampling Results, Technical Memorandum
 University of California, Berkeley, Richmond Field Station Site

Point Location ID	Date	Temperature (C)		ORP (mV)	Specific Conductance (µmhos/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)	Salinity (ppt)
			pH						
PZ11	4/16/2015	18.84	6.08	142	2.950	3.4	2.90	1.890	1.5
RWF	4/14/2015	18.18	6.14	159	1.120	30.9	3.30	0.718	0.6
TP1	4/10/2015	20.71	6.29	-182	1.850	0.3	3.54	1.180	1.0
TP2	4/10/2015	17.81	6.07	126	1.040	0.8	3.89	0.667	0.5
WTA	4/16/2015	16.31	6.4	-37	0.598	10.2	3.91	0.385	0.3

Notes:

- Not sampled
- µmhos/cm Micromhms per centimeter
- C Celsius
- DO Dissolved Oxygen
- g/L Grams per liter
- ID Identification
- mg/L Milligrams per liter
- mV Millivolts
- NTU Nephelometric Turbidity Units
- ORP Oxidation reduction potential
- ppt Parts per thousand
- TDS Total dissolved solids

Table 4: Piezometer Completion Summary

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site, Richmond, California

Piezometer Name	Well Installation Date	Total Depth (ft bgs)	Casing Diameter (inches)	Screen Interval (ft bgs)	Development Date	Development Gallons Purged	Round 1 Sampling Date	Round 2 Sampling Date	Round 3 Sampling Date	Round 4 Sampling Date	Round 5 Sampling Date	Round 6 Sampling Date	Round 7 Sampling Date	TOC (a)	Approximate Ground Surface Elevation (a)
B120	8/2/10	14	2.0 PVC	4-14	8/19/10	26	9/9/10	4/15/11	10/4/11	4/3/12	4/2/13	4/1/14	4/10/15	11.72	12.12
B121	8/3/10	18	2.0 PVC	8-18	8/16/10	53	9/8/10	4/13/11	10/4/11	4/4/12	NS	NS	NS	14.77	15.55
B128	8/12/10	16	2.0 PVC	6-16	8/31/10	33	9/23/10	4/18/11	10/4/11	4/2/12	4/5/13	4/10/14	4/13/15	11.62	12.21
B128deep	8/12/10	40	2.0 PVC	30-40	9/1/10	65	10/15/10	--	--	NS	NS	NS	NS	12.15	12.26
B150	8/3/10	15.5	2.0 PVC	5.5-15.5	8/17/10	28	9/8/10	4/13/11	10/5/11	4/4/12	4/2/13	4/1/14	4/15/15	17.24	17.51
B158	8/11/10	15	2.0 PVC	5-15	8/18/10	19	9/8/10	4/15/11	10/5/11	4/6/12	4/8/13	4/2/14	4/16/15	15.88	16.33
B163	7/26/10	17.5	2.0 PVC	7-17	8/16/10	53	9/2/10	4/12/11	10/3/11	4/2/12	4/3/13	4/1/14	4/14/15	10.37	10.60
B175S	8/3/10	15	2.0 PVC	5-15	8/17/10	22	9/3/10	4/13/11	10/4/11	4/4/12	4/2/13	4/1/14	4/15/15	15.16	15.45
B175W	8/3/10	15	2.0 PVC	5-15	8/17/10	32	9/8/10	4/13/11	10/4/11	4/4/12	4/2/13	4/1/14	4/15/15	16.57	17.21
B177	8/11/10	19	2.0 PVC	9-19	8/31/10	32	9/23/10	4/18/11	10/5/11	4/4/12	NS	NS	NS	17.57	17.81
B178	8/2/10	14.5	2.0 PVC	4.5-14.5	8/19/10	32	9/2/10	4/15/11	10/4/11	4/3/12	4/2/13	4/8/14	4/10/15	10.67	11.33
B180	8/11/10	16	2.0 PVC	6-16	8/24/10	24	9/15/10	4/13/11	10/6/11	4/4/12	4/8/13	4/8/14	4/17/15	15.02	15.30
B185	8/2/10	14	2.0 PVC	4-14	8/20/10	31	9/2/10	4/15/11	10/3/11	4/2/12	4/2/13	4/8/14	4/10/15	10.01	10.08
B194	7/30/10	17	2.0 PVC	7-17	8/23/10	34	9/9/10	4/13/11	10/4/11	4/4/12	NS	NS	NS	18.30	18.84
B195	7/30/10	16	2.0 PVC	6-16	8/20/10	29	9/9/10	4/13/11	10/4/11	4/3/12	4/2/13	4/2/14	4/14/15	14.28	14.91
B197	7/30/10	14	2.0 PVC	4-14	8/19/10	25	9/9/10	4/13/11	10/4/11	4/3/12	--	--	--	13.01	13.37
B197R	3/26/13	14	2.0 PVC	3-13	4/1/13	65	--	--	--	--	4/8/13	4/8/14	4/14/15	13.19	13.49
B277	7/29/10	17.5	2.0 PVC	7-17	8/19/10	25	9/15/10	4/18/11	10/5/11	4/3/12	4/4/13	4/2/14	4/16/15	14.82	15.69
B278	7/29/10	16.5	2.0 PVC	6-16	8/18/10	26	9/16/10	4/19/11	10/5/11	4/5/12	4/4/13	4/9/14	4/17/15	12.75	13.17
B280A	7/29/10	14.5	2.0 PVC	4-14	8/19/10	13	9/16/10	4/14/11	10/6/11	4/3/12	4/4/13	4/9/14	4/17/15	14.04	14.21
B280B	8/6/10	16	2.0 PVC	6-16	8/26/10	6	10/1/10	4/14/11	10/6/11	4/3/12	NS	NS	NS	19.59	19.89
B300	7/29/10	17	2.0 PVC	7-17	8/24/10	21	9/9/10	4/15/11	10/6/11	4/9/12	NS	NS	NS	18.16	18.72
B38	8/10/10	17	2.0 PVC	7-17	8/24/10	24	9/15/10	4/19/11	10/6/11	4/4/12	NS	NS	NS	15.78	16.08
B38deep	8/10/10	41	2.0 PVC	31-41	8/24/10	47	10/18/10	--	--	NS	NS	NS	NS	15.84	16.09
B450	8/5/10	16	2.0 PVC	6-16	8/25/10	10	NS	4/19/11	10/10/11	4/6/12	4/3/13	4/3/14	4/14/15	21.34	21.76
B460	8/5/10	18	2.0 PVC	8-18	8/25/10	12	9/15/10	4/20/11	10/7/11	4/6/12	NS	NS	NS	21.42	21.96
B473	8/9/10	17	2.0 PVC	7-17	8/31/10	12.5	9/24/10	4/20/11	10/7/11	4/6/12	4/3/13	4/3/14	4/16/15	22.29	22.50
B474	8/9/10	16	2.0 PVC	6-16	8/27/10	17.5	9/23/10	4/20/11	10/7/11	4/9/12	4/3/13	4/3/14	4/16/15	23.67	21.85
B480	8/5/10	16	2.0 PVC	6-16	8/27/10	10	9/24/10	4/19/11	10/7/11	4/9/12	4/3/13	4/3/14	4/17/15	20.84	21.04
B480deep	8/12/10	40	2.0 PVC	35-40	8/27/10	52	10/15/10	--	--	NS	NS	NS	NS	21.07	21.19
B490	8/6/10	18	2.0 PVC	8-18	8/30/10	27	9/16/10	4/20/11	10/10/11	4/9/12	NS	NS	NS	24.41	24.95
Bulb1	9/29/10	18	2.0 PVC	8-18	10/19/10	30	10/19/10	4/12/11	9/30/11	4/5/12	4/5/13	4/10/14	4/13/15	7.19	7.83
Bulb2	9/29/10	19	2.0 PVC	9-19	10/19/10	35	10/19/10	4/12/11	9/30/11	4/5/12	4/5/13	4/10/14	4/13/15	7.46	7.91
CCC1	7/27/10	14	2.0 PVC	3.5-13.5	8/18/10	11.5	9/8/10	4/14/11	10/5/11	4/10/12	NS	NS	NS	15.38	15.67
CCC2	7/27/10	14	2.0 PVC	4-14	8/16/10	19	9/8/10	4/14/11	10/4/11	4/10/12	4/2/13	4/2/14	4/15/15	14.60	14.75
CCC3	7/27/10	15	2.0 PVC	4-14	8/16/10	27	9/3/10	9/3/10	10/4/11	4/10/12	4/2/13	4/2/14	4/15/15	11.67	12.13
CCCT	8/2/10	15.5	2.0 PVC	5.5-15.5	8/20/10	31	9/3/10	4/18/11	10/3/11	4/4/12	4/2/13	4/8/14	4/15/15	12.13	13.19

Table 4: Piezometer Completion Summary (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site, Richmond, California

Piezometer Name	Well Installation Date	Total Depth (ft bgs)	Casing Diameter (inches)	Screen Interval (ft bgs)	Development Date	Development Gallons Purged	Round 1 Sampling Date	Round 2 Sampling Date	Round 3 Sampling Date	Round 4 Sampling Date	Round 5 Sampling Date	Round 6 Sampling Date	Round 7 Sampling Date	TOC (a)	Approximate Ground Surface Elevation (a)
CTP	7/30/10	17	2.0 PVC	7-17	8/26/10	20	9/30/10	4/14/11	10/6/11	4/3/12	4/4/13	4/3/14		17.27	18.26
CTPdeep	8/12/10	40	2.0 PVC	30-40	8/26/10	47	10/15/10	--	--	NS	NS	NS	NS	17.67	18.16
CTPS	7/28/10	14	2.0 PVC	4-14	8/19/10	7	9/30/2010, 10/1/10, 10/18/10	4/19/11	10/10/11	4/5/12	NS	NS	NS	15.25	15.43
DH	7/27/10	13.5	2.0 PVC	3.5-13.5	8/18/10	13	9/30/10	4/14/11	10/5/11	4/6/12	--	--	--	13.25	13.55
DHR	3/26/13	14	2.0 PVC	3.5-13.5	4/1/13	12	--	--	--	--	4/4/13	4/10/14	4/13/15	13.54	13.80
EERC	8/9/10	17	2.0 PVC	7-17	8/31/10	7.5	10/1/2010, 10/15/10	4/20/11	10/7/11	4/6/12	4/8/13	4/3/14	4/16/15	21.84	22.01
EPA	7/28/10	14	2.0 PVC	4-14	8/19/10	13.5	9/16/10	4/19/11	10/6/11	4/6/12	4/4/13	4/10/14	4/17/15	10.59	11.20
ETA	7/28/10	14	2.0 PVC	3.5-13.5	9/2/10	32	9/24/10	4/12/11	9/30/11	4/10/12	4/5/13	4/8/14	4/13/15	7.54	7.72
ETA01	1/28/15	15	2.0 PVC	5-15	1/30/15	115	--	--	--	--	--	--	2/2/15 (b)	5.93	NR
ETA02	1/28/15	20	2.0 PVC	15-20	1/30/15	75	--	--	--	--	--	--	2/2/15 (b)	9.53	NR
ETA03	1/28/15	20	2.0 PVC	15-20	1/30/15	15	--	--	--	--	--	--	2/2/15 (b)	10.48	NR
FG	8/6/10	16	2.0 PVC	6-16	8/30/10	7	9/23/10	4/19/11	10/10/11	4/9/12	4/3/13	4/9/14	4/16/15	25.31	25.79
GEO	7/26/10	17.5	2.0 PVC	6.5-16.5	9/1/10	20	9/3/10	4/20/11	10/6/11	4/6/12	4/4/13	4/9/14	4/16/15	16.37	16.73
MFA	7/28/10	13.5	2.0 PVC	3.5-13.5	9/2/10	37	9/24/10	4/12/11	10/3/11	4/5/12	4/5/13	4/8/14	4/13/15	8.23	8.51
NRLF	7/26/10	19.5	2.0 PVC	9-19	8/26/10	10	9/16/10	4/20/11	10/6/11	4/9/12	4/3/13	4/9/14	4/16/15	22.62	22.99
PZ11	10/6/09	19	2.0 PVC	9-19	unk	unk	10/15/10	4/20/11	10/10/11	4/5/12	4/5/13	4/9/14	4/16/15	21.48	21.73
PZ8	4/12/07	21	2.0 PVC	8-21	unk	unk	10/1/10	4/18/11	10/4/11	4/3/12	4/8/13	4/8/14	4/14/15	14.12	14.52
PZ9	4/12/07	20	2.0 PVC	9-20	unk	unk	9/24/10	4/20/11	10/7/11	4/6/12	4/3/13	4/9/14	4/16/15	23.29	23.72
RWF	8/4/10	18	2.0 PVC	8-18	8/23/10	30	9/15/10	4/18/11	10/6/11	4/4/12	4/8/13	4/9/14	4/14/15	16.46	16.78
TP1	8/5/10	17	2.0 PVC	7-17	8/23/10	13	9/29/10	4/18/11	10/7/11	4/5/12	4/4/13	4/2/14	4/10/15	19.33	19.91
TP2	8/4/10	16	2.0 PVC	6-16	8/23/10	20	9/29/10	4/18/11	10/7/11	4/9/12	4/4/13	4/2/14	4/10/15	18.91	19.24
WSM01	1/28/15	15	2.0 PVC	5-15	1/30/15	35	--	--	--	--	--	--	2/2/15 (b)	7.83	NR
WTA	7/27/10	14	2.0 PVC	4-14	8/18/10	28	9/30/10	4/14/11	10/5/11	4/5/12	4/5/13	4/10/14	4/13/15	8.61	8.93

- Notes: Total depth of boring assumed to be bottom of screen unless otherwise specified on boring log or well completion form.
- (a) Ground surface elevation and TOC given in feet NGVD29.
 - (b) Piezometer was not sampled during the 2015 sampling event; sampling results for February 2015 samples are presented in the Phase IV Sampling Results Technical Memorandum (Tetra Tech 2015).
 - Piezometer not sampled because piezometer was either abandoned or had not yet been constructed.
 - ft bgs Feet below ground surface
 - NGVD National Geodetic Vertical Datum
 - NR Not recorded; piezometers ETA01, ETA02, and ETA03 are flush mounted, and piezometer WSM01 is elevated from the ground surface.
 - NS Not Sampled
 - PVC Polyvinyl chloride
 - TOC Top of casing
 - unk Unknown

Table 5: State and Federal Water Quality Criteria

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Chemical	Berkeley Global Campus Risk-Based Concentrations (1,2)		MCL (1,3)		
	Commercial Workers via Vapor Intrusion to Indoor Air	Construction Workers in a Construction Trench	California	EPA	Secondary
VOCs					
1,1-Dichloroethene	7,860	257	6	7	
1,2-Dichloroethane	360	2,900	0.5	5	
1,2-Dichloropropane	94	5.71	5	5	
2-Butanone (MEK)	762,000	11,700			
Acetone	43,700,000	82,000			
Benzene	610	440	1	5	
Carbon tetrachloride	2.63	2.68	0.5	5	
Chlorobenzene	14,300	69.8		100	
Chloroform	25.5	4.43			
cis-1,2-Dichloroethene	34,000	270,000	6	70	
Dibromomethane					
tert-Butyl methyl ether (MTBE)	7,200		13		
Tetrachloroethylene	110	22	5	5	
Toluene	45,100	374	150	1,000	
trans-1,2-Dichloroethene	7,600	77.9	10	100	
Trichloroethylene	270	890	5	5	
Vinyl chloride	3.60	300	0.5	2	
SVOCs					
1-Methylnaphthalene		148			
1,4-Dioxane		14,000			2.5
Acenaphthene		3,640			
Bis(2-ethylhexyl)phthalate		294		6	
Fluoranthene		712			
Naphthalene	93.6	3.42			
Pyrene		594			
Metals					
Aluminum			1,000		200
Antimony			6	6	
Arsenic		66.1	10	10	
Barium			1,000	2,000	
Beryllium			4	4	
Boron					
Cadmium		8960	5	5	
Calcium					
Chromium			50	100	
Cobalt					
Copper		359000	1,300	1,300	1,000
Iron					300
Lead			15	15	
Magnesium					
Manganese					50

Table 5: State and Federal Water Quality Criteria (Continued)

2015 Groundwater Sampling Results, Technical Memorandum

University of California, Berkeley, Richmond Field Station Site

Chemical	Berkeley Global Campus Risk-Based Concentrations (1,2)		MCL (1,3)		
	Commercial Workers via Vapor Intrusion to Indoor Air	Construction Workers in a Construction Trench	California	EPA	Secondary
Mercury			2	2	
Molybdenum					
Nickel			100		
Potassium					
Selenium		44800	50	50	
Silver					100
Sodium					
Thallium			2	2	
Vanadium					
Zinc					5,000

Notes:

- (1) All values are presented in µg/L.
- (2) Risk-based concentrations are calculated and presented in Appendix C of the Final SCR (Tetra Tech 2013). Commercial vapor intrusion risk-based concentrations for 1,2-dichloroethane, benzene, cis-1,2-dichloroethene, PCE, TCE, and vinyl chloride are SSGs for an on-site commercial/industrial worker, and for an on-site resident, as established by DTSC for the Campus Bay site (Terraphase 2008, 2012). Commercial vapor intrusion RBCs for 1,2-dichloroethane, benzene, cis-1,2-dichloroethene, PCE, TCE, and vinyl chloride are SSGs for an on-site groundskeeper/maintenance worker, as established by DTSC for the Campus Bay site (Terraphase 2008, 2012).

- (3) MCLs are based on CDPH (2008) and EPA (2009).

µg/L Micrograms per liter
 CDPH California Department of Public Health
 EPA U.S. Environmental Protection Agency
 MCL Maximum contaminant level
 mg/L Milligrams per liter
 PRG Preliminary remediation goal
 RBC Risk-based concentrations
 RDX Cyclotrimethylenetrinitramine
 RSL Regional Screening Level
 SCR Site Characterization Report
 SVOC Semivolatile organic compound
 SWRCB State Water Resources Control Board
 VOC Volatile organic compound

References:

CDPH. 2008. "Maximum Contaminant Levels and Regulatory Dates for Drinking Water U.S EPA vs. California, November 2008."

EPA. 2009. "National Primary Drinking Water Regulations - List of Contaminants and their MCLs." Available on-line at: <<http://water.epa.gov/drink/contaminants/index.cfm#List>>.

Tetra Tech. 2013. Final Site Characterization Report, Proposed Richmond Bay Campus, Research, Education, and Support Area and Groundwater within the Richmond Field Station Site. May 28.

TABLE 6: STATISTICAL SUMMARY OF CHEMICALS DETECTED IN APRIL 20152015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

Analyte	Detection Frequency ^a	Maximum Detected Result	Average Detected Result	Location of Maximum Detected Result	Number of Locations with Detected Results	California MCL ^b	Number of Samples with Results Greater than or Equal to California MCL	Federal MCL ^c	Number of Samples with Results Greater than or Equal to Federal MCL
Metals (µg/L)									
Filtered (Dissolved)									
ALUMINUM	10/28	45 J	18.2	FG	10	1,000	0	NC	0
ANTIMONY	16/28	2	0.358	B175S	14	6	0	6	0
ARSENIC	28/28	9.8	2.87	DHR	24	10	0	10	0
BARIUM	28/28	140	53.7	B480	24	1,000	0	2,000	0
BERYLLIUM	5/28	0.19 J	0.142	B197R	5	4	0	4	0
CADMIUM	8/28	5.8	1.79	B163	7	5	1	5	1
CALCIUM	28/28	710,000	118,000	DHR	24	NC	0	NC	0
CHROMIUM	19/28	26 J	2.58	CCC2	15	50	0	100	0
COBALT	15/28	5.8	1.69	DHR	15	NC	0	NC	0
COPPER	3/28	8.4	3.13	PZ11	3	1,300	0	1,300	0
IRON	19/28	7,200	919	DHR	17	NC	0	NC	0
LEAD	4/28	0.17 J	0.102	ETA	4	15	0	15	0
MAGNESIUM	28/28	930,000	150,000	BULB1	24	NC	0	NC	0
MANGANESE	26/28	25,000	2,780	DHR	23	NC	0	NC	0
MERCURY	6/28	4.8	0.826	B195	6	2	1	2	1
MOLYBDENUM	8/28	14	4.78	B474	7	NC	0	NC	0
NICKEL	26/28	300	23.3	PZ11	22	100	2	NC	0
POTASSIUM	28/28	310,000	23,500	BULB1	24	NC	0	NC	0
SELENIUM	12/28	36	6.36	B150	10	50	0	50	0
SODIUM	28/28	8,100,000	701,000	BULB1	24	NC	0	NC	0
THALLIUM	4/28	0.12 J	0.0728	B175S	4	2	0	2	0
VANADIUM	14/28	7.1	4.16	B158	13	NC	0	NC	0
ZINC	5/28	880	193	PZ11	5	NC	0	NC	0
Volatile Organic Compounds (µg/L)									
1,1-DICHLOROETHENE	9/33	1.6 J	0.600	PZ11	9	6	0	7	0
1,2-DICHLOROETHANE	7/33	7.6	1.64	B163	7	0.5	5	5	1

TABLE 6: STATISTICAL SUMMARY OF CHEMICALS DETECTED IN APRIL 2015 (Continued)2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

Analyte	Detection Frequency ^a	Maximum Detected Result	Average Detected Result	Location of Maximum Detected Result	Number of Locations with Detected Results	California MCL ^b	Number of Samples with Results Greater than or Equal to California MCL	Federal MCL ^c	Number of Samples with Results Greater than or Equal to Federal MCL
Volatile Organic Compounds (µg/L)									
BENZENE	2/33	0.3 J	0.250	B163	2	1	0	5	0
CARBON DISULFIDE	1/33	0.1 J	0.100	TP1	1	NC	0	NC	0
CARBON TETRACHLORIDE	5/33	11	4.38	CTP	5	0.5	4	5	2
CHLOROBENZENE	4/33	6.4	2.10	B163	4	NC	0	100	0
CHLOROFORM	10/33	5.2	1.26	CTP	10	NC	0	NC	0
CIS-1,2-DICHLOROETHENE	18/33	480	28.6	PZ11	17	6	1	70	1
METHYL TERT-BUTYL ETHER	4/33	0.5	0.225	BULB2	4	13	0	NC	0
TETRACHLOROETHENE	17/33	9	1.51	B163	16	5	1	5	1
TRANS-1,2-DICHLOROETHENE	8/33	53	7.16	PZ11	8	10	1	100	0
TRICHLOROETHENE	25/33	140	40.2	B120, B197R	24	5	18	5	18
VINYL CHLORIDE	4/33	17	4.65	PZ11	4	0.5	2	2	1
Semivolatile Organic Compounds (µg/L)									
1,4-DIOXANE	5/11	1.6	0.566	MFA	5	NC	0	NC	0

Notes:

- a Total number of samples includes duplicates.
b California MCLs are from CDPH (2008).
c Federal MCLs are from EPA (2009).
- Not applicable
CDPH California Department of Public Health
EPA U.S. Environmental Protection Agency
J Estimated value
MCL Maximum contaminant level
NC No criteria
µg/L Micrograms per liter

California Department of Public Health (CDPH). 2008. "Maximum Contaminant Levels and regulatory Dates for Drinking Water U.S EPA vs. California, November 2008." Available on-line at: <http://www.cdph.ca.gov/certlic/drinkingwater/Documents/DWdocuments/EPAandCDPH-11-28-2008.pdf>. Updated November 28.

U.S. Environmental Protection Agency (EPA). 2009. "National Primary Drinking Water Regulations - List of Contaminants and their MCLs." Available on-line at: <http://water.epa.gov/drink/contaminants/index.cfm#List>.

Table 7: VOC Detected Results Summary

2015 Groundwater Sampling Results, Technical Memorandum
 University of California, Berkeley, Richmond Field Station Site

Sample ID	1,1-DICHLOROETHENE	1,2-DICHLOROETHANE	BENZENE	CARBON DISULFIDE	CARBON TETRACHLORIDE	CHLOROBENZENE	CHLOROFORM	CIS-1,2-DICHLOROETHENE	METHYL TERT-BUTYL ETHER	TETRACHLOROETHENE	TRANS-1,2-DICHLOROETHENE	TRICHLOROETHENE	VINYL CHLORIDE
California MCLs	6	0.5	1	0.5	0.5	100	6	13	5	10	5	0.5	
Federal MCLs	7	5	5	5	5	70	70	13	5	100	5	2	
20150410B120	0.4 J	0.6	0.5 U	0.5 U	0.5 U	0.1 J	0.2 J	4.5	0.1 J	0.7	0.5 J	140	0.5 U
20150414B163	0.8	7.6	0.3 J	0.5 U	0.5 U	6.4	1.6	4	0.5 U	9	0.6	93	1
20150415B175S	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	7.9	0.5 U
20150415B175W	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.1	0.5 U	0.2 J	0.5 U
20150410B178	0.4 J	0.5 J	1 U	1 U	1 U	1 U	1 U	4.8	1 U	0.4 J	0.4 J	130	1 U
20150410B185	0.4 J	1.8	0.2 J	0.5 U	8.2	1.7	3.7	2	0.2 J	0.6	0.2 J	72	0.3 J
20150414B195	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	2.2	0.5 U	2.2	0.3 J	79	0.5 U
20150414B197R	0.9 J	0.5 J	1 U	1 U	1 U	1 U	1 U	4.4	1 U	1.2	0.4 J	140	1 U
20150416B277	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
20150417B278	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	8	0.5 U
20150417B280A	0.5 U	0.5 U	0.5 U	0.5 U	1.3	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
20150414B450	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.6	0.5 U	21	0.5 U
20150416B473	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.7	0.5 U	0.7	0.5 U	26	0.5 U
20150417B480	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5	0.5 U	23	0.5 U
20150413BULB1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
20150413BULB1D	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
20150413BULB2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6	0.5	0.5 U	0.5 U	2.4	0.5 U
20150415CCC2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.1	0.5 U	0.5 U	0.5 U
20150415CCC3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U
20150415CCCT	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.9	0.5 U	0.5 U	0.5 U	22	0.5 U
20150417CTP	0.5 U	0.5 U	0.5 U	0.5 U	11	0.5 U	5.2	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U
20150416EERC	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
20150417EPA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
20150413ETA	0.4 J	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4	0.1 J	0.5 U	1.9	16	0.5 U
20150416GEO	0.5 U	0.5 U	0.5 U	0.5 U	1	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
20150413MFA	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.3	0.5 U	0.5 U	0.5 U	19	0.3 J
20150416PZ11	1.6 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	480	2.5 U	3	53	75	17
20150416PZ9	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5	0.5 U	0.9	0.5 U	63	0.5 U
20150414RWF	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.8	0.5 U
20150410TP1	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.2 J	0.5 U	4.7	0.5 U
20150410TP2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	0.5 U	0.5	0.5 U	29	0.5 U
20150410TP2D	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	0.5 U	0.5	0.5 U	28	0.5 U
20150413WTA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5	0.5 U	0.5 U	0.3 J	0.5 U

Notes: **Indicates the value equals or exceeds both the California and Federal MCL**
Indicates the value equals or exceeds the California MCL
Indicates the value equals or exceeds one-half of the California or Federal MCL

µg/L Micrograms per liter MCL Maximum contaminant level
 ID Identification U Not detected
 J Estimated value VOC Volatile organic compound

Table 8: SVOC Detected Results Summary

2015 Groundwater Sampling Results, Technical Memorandum
 University of California, Berkeley, Richmond Field Station Site

Sample ID	1,4-Dioxane
Secondary MCL	2.5
20150413B128	1 U
20150413B128D	0.9 U
20150414B163	0.2 J
20150414B180	0.9 U
20150417B280A	0.2 J
20150413BULB2	0.8 J
20150415CCC2	1 U
20150417CTP	1 U
20150417EPA	1 U
20150413MFA	1.6
20150413WTA	0.03 J

Notes:

No California or Federal MCLs are available for SVOCs detected in April 2015.

All results are presented in µg/L.

- µg/L Micrograms per liter
- ID Identification
- J Estimated value
- MCL Maximum contaminant level
- SVOC Semivolatile organic compound

Table 9: Metals Detected Results Summary
 2015 Groundwater Sampling Results, Technical Memorandum
 University of California, Berkeley, Richmond Field Station Site

Sample ID	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CALCIUM	CHROMIUM	COBALT	COPPER	IRON	LEAD	MAGNESIUM	MANGANESE	MERCURY	MOLYBDENUM	NICKEL	POTASSIUM	SELENIUM	SODIUM	THALLIUM	VANADIUM	ZINC
California MCLs	1,000	6	10	1,000	4	5	50	1,300	15	1,300	15	2	100	50	2	2	2	50	2	2	2	2	2
Federal MCLs	6	6	10	2,000	4	5	100	1,300	15	1,300	15	2	100	50	2	2	2	50	2	2	2	2	2
Secondary MCLs	200									1,000	300		50										5,000
20150413B128	50 U	1 U	1.4	68	1 U	1 U	27,000	1.3	1 U	1 U	41 J	1 U	18,000	37	0.2 U	0.46 UJ	10	270 J	0.21 UJ	100,000	1 U	2 UJ	12 U
20150413B128D	50 U	1 U	1.2	72	1 U	0.19 J	27,000	1.2	0.057 J	1 U	42 J	1 U	18,000	35	0.2 U	0.5 UJ	11	210 J	1 U	98,000	1 U	1.8 UJ	12 U
20150415B150	13 UJ	0.74 J	0.7 J	49	1 U	1 U	18,000	4.7	1 U	0.46 UJ	42 J	1 U	14,000	0.16 UJ	0.2 U	0.56 UJ	3.9	170	36	31,000	1 U	3 UJ	12 U
20150415B150D	20 UJ	0.38 J	0.45 J	45	1 U	1 U	16,000	4.3	1 U	0.89 UJ	50 U	0.1 UJ	12,000	0.16 UJ	0.2 U	0.52 UJ	3.3	140	31	27,000	1 U	2.8 UJ	12 U
20150416B158	9 J	1 U	4.7	9.8	1 U	1 U	3,200	1.3	0.074 J	0.32 UJ	50 U	0.092 UJ	2,200	54	0.2 U	0.61 UJ	2.2	170	1 U	49,000	1 U	7.1	12 U
20150414B163	50 U	1 U	1.8	14	1 U	5.8	280,000	0.23 J	5.5	1 U	330	1 U	220,000	20,000	0.053 J	1.1 UJ	210	13,000	0.22 J	200,000	1 U	2.5	6.9 J
20150415B175S	50 U	2	1.2	52	1 U	1 U	52,000	0.77 UJ	1 U	0.33 UJ	19 J	0.088 UJ	42,000	3.7	0.033 J	1.6 UJ	1.4	500	1.2	82,000	0.12 J	3.3 UJ	12 U
20150410B178	9 J	0.21 J	1.7	17	1 U	1 U	170,000	0.26 UJ	0.82 J	1 U	800	1 U	160,000	2,200	0.2 U	1.6	4.2	1,200	1 U	160,000	1 U	1.6 UJ	12 U
20150414B195	50 U	0.14 J	1.3	23	0.17 J	1 U	76,000	0.62 J	1 U	0.69 J	50 U	0.085 J	57,000	0.3 J	4.8	2.6 UJ	1.1	580	0.54 J	89,000	1 U	5	12 U
20150414B197R	30 J	0.16 J	2.3	24	0.19 J	1 U	180,000	1 U	0.35 J	1 U	1,300 J	1 U	170,000	2,700	0.2 U	0.8 UJ	2.2	1,200 J	1.1 J	150,000 J	0.042 J	1.5	12 U
20150414B450	9.8 J	0.18 J	1.6	91	0.14 J	1 U	64,000	1	1 U	0.53 UJ	50 U	1 U	52,000	1.4	0.2 U	1.3 UJ	1.6	1,800	0.46 J	55,000	1 U	3.9	12 U
20150416B474	16 J	0.41 J	3.8	52	1 U	1 U	25,000	1.5	0.55 J	0.9 UJ	220	0.14 UJ	13,000	43	0.022 J	14	5.2	2,100	1 U	20,000	1 U	2.9	12 U
20150417B480	50 U	1 U	2.1	140	1 U	1 U	54,000	1.5	1 U	1 U	50 U	1 U	48,000	0.43 J	0.022 J	0.35 UJ	1.5 UJ	1,000	1 U	93,000	1 U	6.3	12 U
20150413BULB1	50 U	1 U	6.4	100	1 U	0.28 J	220,000	0.5 J	1 U	1 U	240	1 U	920,000	230	0.2 U	3.7	0.61 J	300,000	0.97 UJ	8,100,000	1 U	2 UJ	12 U
20150413BULB1D	16 J	1 U	6.6	99	1 U	0.25 J	210,000	0.25 J	1 U	1 U	240	1 U	930,000	220	0.2 U	3.8	0.25 J	310,000	0.96 UJ	8,100,000	1 U	1.6 UJ	12 U
20150413BULB2	50 U	1 U	3.3	53	1 U	1 U	29,000	1 U	0.72 J	1 U	720	1 U	29,000	390	0.2 U	6.1	1.8	11,000	1 U	310,000	1 U	2.1 UJ	12 U
20150415CCCC2	50 U	1 U	1.6	45	1 U	1 U	65,000	26 J	1 U	0.68 UJ	110 U	1 U	50,000	35	0.2 U	0.93 UJ	5.4	2,100 J	3.7	92,000 J	0.042 J	1.5 UJ	5 U
20150415CCCC3	50 U	0.22 J	2.7	15	1 U	1 U	50,000	1 U	0.15 J	0.63 UJ	50 U	1 U	38,000	47	0.2 U	1.1 UJ	1.8	1,200	1 U	90,000	1 U	4.3	12 U
20150417CTP	50 U	1 U	1.2	80	1 U	2.6	58,000	1.4	0.32 J	1 U	28 J	0.088 UJ	31,000	100	0.2 U	0.6 UJ	1.4 UJ	690	0.26 J	73,000	1 U	4	44
20150413DHR	50 U	1 U	9.8	71	1 U	0.16 J	710,000	0.41 J	5.8	1 U	7,200	1 U	510,000	25,000	0.2 U	0.78 UJ	21	3,400	0.6 UJ	610,000	1 U	1.2 UJ	12 U
20150416EERC	24 J	0.14 J	4.2	30	1 U	1 U	310,000	1 U	5.1	0.49 UJ	960	1 U	250,000	1,800	0.2 U	1 UJ	7.6	1,800	1 U	350,000	1 U	1.2 UJ	12 U
20150413ETA	14 J	0.18 J	5.7	25	0.098 UJ	0.16 J	150,000	0.14 J	2.7	1 U	1,300	0.17 J	120,000	7,100	0.2 U	2.3	3.1	1,300	0.41 UJ	150,000	1 U	1.7 UJ	30
20150416FG	45 J	0.16 J	1.7	31	1 U	1 U	26,000	0.41 J	1 U	0.36 UJ	50 J	0.11 UJ	28,000	3.1	0.2 U	0.45 UJ	2.3	520	1 U	90,000	1 U	3.8	12 U
20150416NRLF	50 U	1 U	4.5	87	1 U	1 U	51,000	1 U	0.33 J	1 U	900	0.085 UJ	25,000	160	0.2 U	0.42 UJ	1.3	970	1 U	55,000	1 U	1.5	6.3 J
20150416PZ11	50 U	0.13 J	1.7	17	1 U	4.9	190,000	1 U	2.6	8.4	29 J	1 U	250,000	8,300	0.2 U	5.6	300	790	1 U	170,000	1 U	5.5	880
20150414PZ8	50 U	0.26 J	1.5	84	0.1 J	1 U	48,000	1	1 U	1 U	50 U	0.076 J	41,000	0.73 J	0.2 U	0.45 UJ	0.96 J	690	0.92 J	64,000	1 U	5	12 U
20150414PZ8D	50 U	0.18 J	1.3	84	1 U	1 U	47,000	1.2	1 U	1 U	50 U	1 U	41,000	0.41 J	0.2 U	0.63 UJ	0.8 J	890	0.67 J	64,000	1 U	5	12 U
20150410TP1	9.1 J	0.23 J	3.8	26	0.11 J	1 U	140,000	0.16 UJ	0.29 J	0.3 J	3,000 J	0.076 J	120,000	3,700	0.026 J	1.1	2.4	1,000 J	0.23 J	160,000 J	0.087 J	1.1 UJ	12 U

Notes:
 Indicates the value equals or exceeds both the California and Federal MCL
 Indicates the value equals or exceeds the California MCL
 Indicates the value equals or exceeds one-half of the California or Federal MCL
 µg/L
 ID
 J
 Micrograms per liter
 Identification
 Estimated value
 MCL
 U
 Maximum Contaminant Level
 Not detected

APPENDIX A
WELL SAMPLING FORMS

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04.10.15/ 1240

Project Site/Subsite: Richmond Field Station

Well ID: B120

Sample ID: 20150410B120

Depth to Water Level: 5.71 ft below PVC cap prior to sampling 5.68 after sampling

Depth to Well Bottom: 13.05 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 5.5 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING											
Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)	
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%				
1	1220	20.48	6.53	146	2.85	80.5	6.88	1.81	1.5	0.5	
2	1224	19.80	6.48	123	2.88	14.9	4.17	1.84	1.5	1.5	
3	1232	18.70	6.46	99	2.75	0.0	3.87	1.74	1.4	3.5	
4	1236	18.64	6.46	95	2.66	0.0	3.76	1.70	1.4	4.5	
5	1240	18.64	6.47	92	2.60	0.0	3.71	1.67	1.3	5.5	
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments Quinn Johnson & Dayra Araya

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 8/13/15 11:40 Project Site/Subsite: Richmond Field Station

Well ID: B128 Sample ID: 20150413B128

Depth to Water Level: 7.35 ft below PVC cap prior to sampling 12.50 after sampling

Depth to Well Bottom: 15.92 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 15.9 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.30 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/cm) (S/cm) mS/cm	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
	<u>Start at 1043</u>									
1	1044	17.96	5.82	157	0.708	3.5	8.50	0.454	0.3	0.3
2	1048	17.90	5.74	160	0.710	5.1	8.49	0.454	0.3	1.5
3	1052	17.91	5.67	170	0.714	0.0	7.94	0.459	0.3	2.7
4	1056	17.83	5.69	173	0.726	0.0	8.04	0.465	0.4	3.9
5	1100	17.81	5.72	170	0.731	0.0	7.92	0.468	0.4	5.1
6	1108	17.84	5.79	142	0.733	0.0	7.43	0.469	0.4	7.5
7	1112	17.84	5.80	96	0.732	1.6	7.92	0.468	0.4	8.7
8	1116	17.83	5.79	57	0.733	2.7	7.04	0.469	0.4	9.9
9	1120	17.85	5.78	18	0.730	0.7	7.00	0.467	0.4	11.1
10	1124	17.87	5.82	8	0.728	0.4	6.88	0.466	0.4	12.3
11	1128	17.90	5.82	-2	0.728	0.2	6.73	0.466	0.4	13.5
12	1132	17.91	5.82	-10	0.730	0.0	6.55	0.467	0.4	14.7
13	1136	17.92	5.82	-14	0.733	0.8	6.34	0.469	0.4	15.9
14	1140									
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) 20150413B128D, 1140

MS/MSD Sample Collected? No ~~Yes~~

Sample Remarks (odors, colors, sediment): clear

Comments Mark Poffy, Dayna Aragon

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/15/15, 1155

Project Site/Subsite: Richmond Field Station

Well ID: B150

Sample ID: 20150415B150

Depth to Water Level: 6.46 ft below PVC cap prior to sampling 6.68 after sampling

Depth to Well Bottom: 18.05 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged _____ Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.2 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1122	17.52	6.83	93	0.305	0.0	5.97	0.198	0.1	1
2	1124	17.28	6.65	106	0.305	0.0	5.36	0.198	0.1	2
3	1128	17.19	6.59	111	0.304	0.0	5.09	0.198	0.1	3
4	1132	17.15	6.41	117	0.304	0.0	4.95	0.197	0.1	4
5	1136	17.30	6.52	121	0.303	0.0	4.69	0.197	0.1	5
6	1140	17.43	6.46	126	0.304	0.0	4.65	0.198	0.1	6
7	1144	17.60	6.40	132	0.301	0.0	4.64	0.196	0.1	7
8	1148	17.77	6.36	136	0.301	0.0	4.68	0.195	0.1	8
9	1152	17.73	6.34	140	0.302	0.0	4.72	0.196	0.1	9
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) 20150415B150D, 1200

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments sampled by Dayna Aragon

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/16/15, 1400

Project Site/Subsite: Richmond Field Station

Well ID: B158

Sample ID: 20150416B158

Depth to Water Level: ~~10.45~~ ^{10.45} ft below PVC cap prior to sampling 10.65 after sampling

Depth to Well Bottom: 14.88 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged _____ Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2-0 15%	+/- 15% 0.2			
1	1311	21.14	5.77	180	0.253	112	5.66	0.165	0.1	1
2	1315	20.51	5.70	159	0.263	72.2	0.53	0.171	0.1	2
3	1319	20.26	5.72	150	0.265	56.6	0.54	0.172	0.1	3
4	1323	20.45	5.70	148	0.265	59.8	0.66	0.172	0.1	4
5	1327	20.40	5.70	149	0.265	59.4	0.97	0.172	0.1	5
6	1331	20.44	5.70	155	0.266	65.5	1.22	0.175	0.1	6
7	1335	20.72	5.70	161	0.262	67.1	1.53	0.170	0.1	7
8	1339	20.63	5.64	177	0.261	68.3	2.50	0.170	0.1	8
9	1343	20.83	5.69	177	0.260	65.4	2.05	0.169	0.1	9
10	1347	20.90	5.68	186	0.258	61.4	2.13	0.168	0.1	10
11	1351	20.96	5.65	192	0.262	64.9	2.23	0.174	0.1	11
12	1355	20.63	5.65	196	0.260	62.5	2.32	0.169	0.1	12
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): slightly cloudy water

Comments Sampled by Dayra Araya

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/14/15 1425

Project Site/Subsite: Richmond Field Station

Well ID: B163

Sample ID: 20150414B163

Depth to Water Level: 5.78 ft below PVC cap prior to sampling 5.80 after sampling

Depth to Well Bottom: 16.58 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 5.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	14:02	20.46	5.48	121	3.29	26.8	5.81	2.10	1.7	0.25
2	14:06	19.89	5.40	108	3.24	25.4	3.87	2.14	1.7	1.25
3	14:10	19.51	5.30	105	3.36	39.4	3.60	2.15	1.8	2.25
4	14:14	19.29	5.36	106	3.30	36.9	3.52	2.11	1.7	3.25
5	14:18	19.23	5.36	106	3.29	18.4	3.47	2.11	1.7	4.25
6	14:22	19.17	5.35	110	3.27	11.9	3.40	2.09	1.7	5.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear no odor

Comments Sampled by M. Daffy and M. Hansen

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/15/15, 1045

Project Site/Subsite: Richmond Field Station

Well ID: B1755

Sample ID: 20150415B1755

Depth to Water Level: 9.55 ft below PVC cap prior to sampling 9.56 after sampling

Depth to Well Bottom: 14.46 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 6 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate _____ Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0 +/- 15%	+/- 0.2			
1	1023	16.81	7.55	120	0.965	94.2	6.32	0.616	0.5	1
2	1027	17.13	6.86	142	0.922	22.2	4.80	0.589	0.5	2
3	1031	17.35	6.76	144	0.897	1.0	4.57	0.573	0.4	3
4	1035	17.63	6.60	144	0.882	0.0	4.37	0.565	0.4	4
5	1039	17.79	6.56	143	0.874	0.0	4.29	0.560	0.4	5
6	1043	17.96	6.53	143	0.866	0.0	4.19	0.554	0.4	6
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments sampled by Deyna Aragon

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/15/15, 1000

Project Site/Subsite: Richmond Field Station

Well ID: B175W

Sample ID: 20150415B175W

Depth to Water Level: 9.36 ft below PVC cap prior to sampling 956 after sampling

Depth to Well Bottom: 14.75 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 5 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0 <u>15%</u>	+/- 15% <u>0.2</u>			
1	0942	16.98	5.71	135	0.463	0.0	3.85	0.298	0.2	1/1
2	0946	17.34	6.06	111	0.393	0.0	5.08	0.255	0.2	1/2
3	0950	17.45	6.04	116	0.389	0.0	4.89	0.253	0.2	1/3
4	0954	17.51	6.04	120	0.396	0.0	4.72	0.254	0.2	1/4
5	0958	17.53	6.03	126	0.393	0.0	4.73	0.255	0.2	1/5
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): slight sulfur odor

Comments sampled by Dayna Aragon & Karl Hans

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04.10.15 / 12:01

Project Site/Subsite: Richmond Field Station

Well ID: B178

Sample ID: 2 20150410B178

Depth to Water Level: 4.54 ft below PVC cap prior to sampling 4.50 after sampling

Depth to Well Bottom: 13.40 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 13 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	11:13	18.16	6.45	-160	2.97	141	4.48	1.90	1.5	1
2	11:17	18.23	6.47	-219	2.75	75.9	4.28	1.76	1.4	2
3	11:21	18.41	6.48	-221	2.65	75.7	4.03	1.70	1.4	3
4	11:25	18.44	6.47	-215	2.52	36.1	3.98	1.62	1.30	4
5	11:29	18.49	6.46	-208	2.44	21.2	3.87	1.56	1.30	5
6	11:37	18.55	6.45	-204	2.37	13.1	3.86	1.52	1.2	7
7	11:41	18.61	6.45	-198	2.32	9.3	3.80	1.49	1.2	8.0
8	11:45	18.77	6.44	-196	2.27	3.6	3.75	1.45	1.2	9
9	11:49	18.89	6.44	-195	2.25	1.9	3.72	1.44	1.2	10
10	11:53	18.88	6.46	-194	2.23	1.2	3.70	1.43	1.1	11
11	11:57	18.89	6.45	-192	2.21	0.0	3.68	1.42	1.1	12
12	12:01	18.95	6.44	-191	2.19	0.0	3.63	1.40	1.1	13
13										
14										
15										
16										
17										
18										
19										
20										

Duplicate Sample Collected? Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? Yes _____

Sample Remarks (odors, colors, sediment): no roots in sample.

Comments used snake to unblock well; roots in purge water.

Quinn Johnson + Dayna Aragon

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 09/14/15, 1135 Project Site/Subsite: Richmond Field Station

Well ID: B180 Sample ID: 20150914 B180

Depth to Water Level: 8.14 ft below PVC cap prior to sampling 8.17 after sampling

Depth to Well Bottom: 16.00 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 3.40 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.20 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1113	17.22	6.52	148	0.579	145	7.30	0.362	0.3	0.20
2	1117	17.01	6.53	143	0.537	15.0	6.77	0.344	0.3	1.00
3	1121	16.91	6.53	144	0.535	8.9	6.75	0.342	0.3	1.80
4	1125	16.93	6.52	147	0.529	4.1	6.64	0.338	0.3	12.60
5	1129	16.91	6.51	149	0.519	0.0	6.63	0.332	0.2	3.40
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes Clear, no odor

Sample Remarks (odors, colors, sediment): Clear, no odor

Comments SUOC, PAH Sampled by M. Duffy and M. Hanson

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/10/15, 1050

Project Site/Subsite: Richmond Field Station

Well ID: B185

Sample ID: 20150410B185

Depth to Water Level: 4.32 ft below PVC cap prior to sampling 4.61 after sampling

Depth to Well Bottom: 13.80 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 19 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	0938	16.84	6.01	247	2.01	9.6	4.38	1.29	1.0	1
2	0942	16.80	6.12	203	2.05	15.1	3.91	1.31	1.0	2
3	0946	16.78	6.12	192	2.05	14.8	3.84	1.31	1.0	3
4	0950	16.76	6.10	188	2.05	10.0	3.77	1.31	1.0	4
5	0954	16.74	6.08	182	2.04	8.2	3.67	1.31	1.0	5
6	0958	16.78	6.08	176	2.04	8.6	3.66	1.31	1.0	6
7	1002	16.81	6.07	175	2.05	4.6	3.66	1.31	1.0	7
8	1006	16.87	6.20	161	2.05	3.4	3.66	1.31	1.0	8
9	1010	16.89	6.20	92	2.07	1.1	3.64	1.32	1.1	9
10	1018	16.92	6.19	66	2.06	0.0	3.63	1.32	1.0	11
11	1022	16.91	6.17	50	2.05	0.0	3.62	1.32	1.0	12
12	1026	16.93	6.19	34	2.05	0.0	3.61	1.31	1.0	13
13	1030	16.95	6.22	18	2.06	0.0	3.61	1.32	1.0	14
14	1034	17.00	6.22	7	2.06	0.0	3.60	1.32	1.0	15
15	1038	16.90	6.22	-2	2.06	0.0	3.60	1.32	1.0	16
16	1042	16.93	6.24	-10	2.04	0.0	3.58	1.32	1.0	17
17	1046	16.91	6.23	-14	2.04	0.0	3.61	1.31	1.0	18
18	1050	16.90	6.23	-15	2.04	0.0	3.59	1.30	1.0	19
19										
20										

Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments Quinn Johnson, Dayna Argen

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04-14-15 / 1050

Project Site/Subsite: Richmond Field Station

Well ID: B195

Sample ID: 20150415B195 10:50

Depth to Water Level: 7.71 ft below PVC cap prior to sampling 7.71 after sampling

Depth to Well Bottom: 16.19 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 4.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	10:37	18.80	6.26	141	1.40	59.8	4.47	0.90	0.7	0.25
2	10:37	18.09	6.24	133	1.26	29.5	3.48	0.796	0.6	1.25
3	10:41	17.78	6.24	128	1.18	7.0	3.21	0.749	0.6	2.25
4	10:45	17.60	6.22	126	1.13	0.0	3.06	0.721	0.6	3.25
5	10:49	17.53	6.21	127	1.12	0.0	2.98	0.714	0.6	4.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear, no odor

Comments Replaced rusted ~~lock~~ well cap

Sampled by M. Duffy and D. Aragon M. Hanson

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/14/15, 920

Project Site/Subsite: Richmond Field Station

Well ID: B197R

Sample ID: 2050414197R

Depth to Water Level: 7.28 ft below PVC cap prior to sampling 7.37 after sampling

Depth to Well Bottom: 13.13 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 5 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 ~~0.25~~ Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m) <small>ms/cm</small>	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Total Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	08:58	16.24	6.03	-66	2.39	30.9	3.69	1.54	1.2	0.25
2	09:02	16.53	6.00	-160	2.38	27.7	4.06	4.452	1.2	1
3	09:06	16.79	6.16	-209	2.38	7.4	3.77	1.52	1.2	2
4	09:10	17.01	6.22	-231	2.37	0	3.47	1.51	1.2	3
5	09:14	17.17	6.26	-234	2.35	0	3.51	1.51	1.2	4
6	09:18	17.32	6.26	-235	2.33	0	3.37	1.49	1.2	5
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19										
20										

Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): Some roots in purge water, clear, sulfur odor

Comments voc's, metals Sampled by M. Duffy and M. Hanson

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/16/15 / 1355

Project Site/Subsite: Richmond Field Station

Well ID: B277

Sample ID: 20150416B277

Depth to Water Level: 10.17 ft below PVC cap prior to sampling _____ after sampling

Depth to Well Bottom: 17.53 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump **Peristaltic Pump**

Well Diameter: 7 inch 4 inch

Total Purged _____ Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m) <i>µS/cm</i>	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1332	21.84 21.32	6.66	83	0.641	18.9	5.38	0.409	0.3	0.25
2	1336	21.22	6.81	78	0.638	12.7	3.99	0.410	0.3	1.25
3	1340	19.76	6.87	70	0.653	15.0	3.29	0.419	0.3	2.25
4	1344	19.73	6.87	69	0.656	13.1	3.27	0.419	0.3	3.25
5	1348	20.06	6.88	67	0.652	12.2	3.10	0.416	0.3	4.25
6	1352	20.24	6.89	65	0.650	8.1	3.03	0.417	0.3	5.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear, no odor

Comments VOCs Analysis, sampled by Mr. Duffy

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/17/15 , 1015

Project Site/Subsite: Richmond Field Station

Well ID: B278

Sample ID: 20150417B278

Depth to Water Level: ~~16.16~~ 8.72 ft below PVC cap prior to sampling 8.84 after sampling

Depth to Well Bottom: ~~8.72~~ 16.16 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: ~~2 inch~~ 4 inch

Total Purged _____ Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0 15%	+/- 15% 0.2			
1	0936	16.71	5.80	214	1.86	6.2	1.11	1.19	0.9	1
2	0940	16.73	5.89	160	1.97	5.0	0.63	1.26	1.0	2
3	0944	16.87	5.91	155	2.11	6.3	0.52	1.36	1.1	3
4	0948	17.13	5.96	151	2.45	4.5	0.51	1.57	1.3	4
5	0952	17.24	5.98	151	2.55	3.6	0.57	1.63	1.3	5
6	0956	17.33	5.99	152	2.63	2.7	0.66	1.69	1.4	6
7	1000	17.48	5.87	159	2.73	1.8	0.62	1.74	1.4	7
8	1004	17.55	5.84	162	2.79	1.7	0.61	1.78	1.4	8
9	1008	17.62	5.84	164 164	2.84	1.4	0.55	1.82	1.5	9
10	1012 1012	17.69	5.84	165	2.88	0.5	0.60	1.85	1.5	10
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12										
13										
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15										
16										
17										
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments sampled by Dymn Aragon

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/17/15, 1035

Project Site/Subsite: Richmond Field Station

Well ID: B280A

Sample ID: 20150417 B280A

Depth to Water Level: 10.83 ft below PVC cap prior to sampling 10.98 after sampling

Depth to Well Bottom: 13.53 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 6.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1008	20.48	6.28	192	0.847	0.0	6.05	0.547	0.4	0.25
2	1012	18.83	6.40	164	0.860	0.0	4.54	0.558	0.4	1.25
3	1016	17.73	6.44	130	0.872	0.0	3.80	0.558	0.4	2.25
4	1020	17.72	6.46	112	0.873	0.0	3.60	0.559	0.4	3.25
5	1024	17.71	6.46	102	0.874	0.0	3.47	0.560	0.4	4.25
6	1028	17.73	6.47	92	0.873	0.0	3.36	0.559	0.4	5.25
7	1032	17.75	6.47	85	0.872	0.0	3.29	0.558	0.4	6.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear, no odor

Comments Sampled by M. Duffy

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/14/15 1255

Project Site/Subsite: Richmond Field Station

Well ID: B450

Sample ID: 20150414 B450

Depth to Water Level: 13.43 ft below PVC cap prior to sampling 13.45 after sampling

Depth to Well Bottom: 15.60 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 5.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1231	19.25	5.71	247	0.896	217	6.49	0.574	0.4	0.25
2	1235	18.75	5.95	217	0.916	75.5	5.26	0.586	0.4	1.25
3	1239	18.64	5.93	203	0.915	10.2	5.02	0.585	0.4	2.25
4	1243	18.60	5.92	200	0.915	0.6	5.23	0.585	0.4	3.25
5	1247	18.60	5.93	197	0.915	0.0	5.45	0.586	0.4	4.25
6	1251	18.59	5.92	195	0.912	0.0	5.38	0.584	0.4	5.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): slightly clear, no odor

Comments VOCS, metals, Sampled by M. Daffy and ~~D. Aragon~~ M. Hanson

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/16/15, 1140

Project Site/Subsite: Richmond Field Station

Well ID: B473

Sample ID: 20150416B473

Depth to Water Level: 12.95 ft below PVC cap prior to sampling 13.79 after sampling

Depth to Well Bottom: 16.99 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged _____ Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate _____ Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0 15%	+/- 15% 0.2			
1	1059	20.39	6.30	181	0.522	29.3	2.75	0.334	0.3	1
2	1103	20.14	6.26	178	0.519	23.4	3.17	0.332	0.2	2
3	1107	19.93	6.22	180	0.513	21.8	4.04	0.328	0.2	3
4	1111	19.90	6.20	184	0.514	18.8	4.27	0.329	0.2	4
5	1115	19.93	6.19	185	0.515	15.7	4.02	0.329	0.2	5
6	1119	20.11	6.18	189	0.517	14.5	3.74	0.331	0.2	6
7	1123	20.24	6.18	191	0.519	12.3	3.56	0.332	0.2	7
8	1127	20.28	6.17	196	0.525	14.5	4.40	0.336	0.3	8
9	1131	20.30	6.15	198	0.533	15.5	3.82	0.341	0.3	9
10	1135	20.32	6.15	198	0.533	15.1	3.75	0.341	0.3	10
11	1139	20.40	6.15	199	0.536	15.3	3.65	0.345	0.3	11
12										
13										
14										
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16										
17										
18										
19										
20										

Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments sampled by Dayna Aragon

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/16/15 1025

Project Site/Subsite: Richmond Field Station

Well ID: B474

Sample ID: 20150416B474

Depth to Water Level: 14.57 ft below PVC cap prior to sampling 18.21 after sampling

Depth to Well Bottom: 19.10 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 13.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m) <i>µS/cm</i>	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	928	17.14	6.18	199	0.355	34.8	5.83	0.229	0.2	0.25
2	932	16.80	6.32	162	0.333	24.5	4.58	0.216	0.2	1.25
3	936	16.54	6.39	156	0.329	16.2	5.14	0.213	0.2	2.25
4	940	16.29	6.42	152	0.325	14.1	5.05	0.211	0.2	3.25
5	944	16.43	6.40	148	0.310	13.0	4.67	0.205	0.1	4.25
6	948	16.37	6.31	121	0.316	12.9	3.79	0.206	0.2	5.25
7	952	16.48	6.32	78	0.319	10.2	3.60	0.207	0.2	6.25
8	956	16.50	6.33	50	0.322	16.3	3.46	0.209	0.2	7.25
9	1000	16.47	6.35	40	0.322	62.1	3.31	0.209	0.2	8.25
10	1004	16.55	6.36	19	0.322	68.9	3.23	0.209	0.2	9.25
11	1008	16.62	6.36	-3	0.322	94.3	3.14	0.209	0.2	10.25
12	1012	16.84	6.35	-22	0.313	284	3.21	0.203	0.1	11.25
13	1016	17.11	6.32	-28	0.308	145	3.80	0.207	0.1	12.25
14	1020	17.11	6.34	-30	0.306	152	3.73	0.208	0.1	13.25
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20										

Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): Clear, no odor, delayed stabilization/well going dry

Comments Metals analysis / Sampled by M. Duffy

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/17/15, 0910

Project Site/Subsite: Richmond Field Station

Well ID: B480

Sample ID: 20158417B480

Depth to Water Level: 12.96 ft below PVC cap prior to sampling ~~8.84~~ 13.52 after sampling

Depth to Well Bottom: 15.90 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged _____ Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate _____ Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/-2.0 15%	+/- 15% 0.2			
1	0849	18.87	5.84	234	0.935	5.2	3.73	0.597	0.5	1
2	0853	18.74	5.80	227	0.928	5.7	2.32	0.594	0.5	2
3	0857	18.76	5.76	228	0.931	7.3	2.26	0.596	0.5	3
4	0901	18.76	5.72	229	0.934	4.5	2.25	0.598	0.5	4
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments sampled by Dayton Aragon

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04-13-15/ 1235 Project Site/Subsite: Richmond Field Station

Well ID: Bulb 1 Sample ID: 20150413Bulb1

Depth to Water Level: 4.40 ft below PVC cap prior to sampling 7.71 after sampling

Depth to Well Bottom: 18.05 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 5.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (µmS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Total Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1212	19.22	7.07	-73	35.8	9.7	6.24	22.0	22.8	0.25
2	1216	18.37	7.54	-210	37.5	3.6	4.09	22.9	23.7	1.25
3	1220	18.10	7.56	-232	37.8	3.9	3.72	23.0	23.8	2.25
4	1224	18.07	7.56	-237	37.8	3.0	3.59	23.0	23.9	3.25
5	1228	18.08	7.58	-241	37.8	2.8	3.47	23.0	23.8	4.25
6	1232	18.15	7.58	-241	37.7	2.6	3.43	23.0 23.0	23.8	5.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) 20150413BULB1D (1240)

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear, no odor

Comments vocs, metals analysis sampled by: M. Duffy, D. Aragon

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/13/15, ~~1220~~ 1320 Project Site/Subsite: Richmond Field Station

Well ID: Bulb 2 Sample ID: 2015 0413 Bulb 2

Depth to Water Level: 4.29 ft below PVC cap prior to sampling 4.48 after sampling

Depth to Well Bottom: 18.44 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 5.75 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m) mS/cm	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1256	19.09	6.69	-31	2.97	20.9	5.17	1.90	1.5	0.25
2	1300	18.03	6.75	-42	2.56	17.3	4.49	1.62	1.3	1.25
3	1304	17.43	6.73	-24	2.33	10.2	4.55	1.48	1.2	2.25
4	1308	17.12	6.64	-18	2.06	4.5	4.25	1.29	1.0	3.25
5	1312	17.14	6.53	-19	1.91	0.9	4.08	1.22	1.0	4.25
6	1318	17.14	6.54	-21	1.85	0.0	4.01	1.18	0.9	5.75
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear, no odor

Comments sampled by: M. Duffy and D. Aragon

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/15/15, 1530

Project Site/Subsite: Richmond Field Station

Well ID: CCC3

Sample ID: 20150415CCC23

Depth to Water Level: 6.95 ft below PVC cap prior to sampling 11.77 after sampling

Depth to Well Bottom: 14.18 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 20 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING										
Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0 15%	+/- 15% 0.2			
1	1406	17.75	6.15	122	0.835	28.9	11.02	0.534	0.4	0.5
2	1410	17.55	6.27	126	0.826	24.0	10.01	0.528	0.4	1
3	1414	17.50	6.33	130	0.830	19.5	9.22	0.532	0.4	1
4	1418	17.53	6.32	134	0.829	18.9	8.61	0.530	0.4	1
5	1422	17.63	6.29	138	0.830	15.0	8.10	0.532	0.4	1
6	1426	17.73	6.24	143	0.835	21.1	7.68	0.534	0.4	1
7	1430	17.74	6.20	147	0.840	10.1	7.23	0.536	0.4	1
8	1441	17.86	5.63	192	0.841	0.0	6.95	0.539	0.4	1
9	1445	17.90	5.84	179	0.841	0.0	6.67	0.538	0.4	1
10	1449	17.95	6.04	169	0.841	0.0	6.45	0.538	0.4	1
11	1453	17.90	6.20	159	0.844	0.0	6.30	0.540	0.4	1
12	1457	17.95	6.33	151	0.845	0.0	6.14	0.541	0.4	1
13	1501	18.01	6.40	148	0.851	0.0	5.99	0.545	0.4	1
14	1505	17.94	5.41	203	0.857	0.0	5.83	0.549	0.4	1
15	1509	17.97	5.71	186	0.862	0.0	5.71	0.552	0.4	1
16	1513	17.99	5.96	171	0.865	0.0	5.53	0.554	0.4	1
17	1517	17.95	6.18	158	0.866	0.0	5.41	0.554	0.4	1
18	1521	17.94	6.37	148	0.873	0.0	5.03	0.559	0.4	1
19	1525	17.95	6.53	139	0.880	0.0	4.84	0.563	0.4	1
20	1529	17.96	6.62	134	0.883	0.0	4.68	0.566	0.4	1

Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments Pumped dry at 1430. Added 2' of tube & started again at 0.225 l/min
Mark Duffy Karl Hans + Dayna Aragon

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/15/15, 1315 Project Site/Subsite: Richmond Field Station

Well ID: CCC2 Sample ID: 20150415CCC2

Depth to Water Level: 7.48 ft below PVC cap prior to sampling 11.12 after sampling

Depth to Well Bottom: 14.17 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 14 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.2 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Total Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0 15	+/- 15% .20			
1	12:26	18.06	6.92	124	1.96	523	8.61	1.26	1.0	1/1
2	12:33	17.55	6.70	129	1.98	360	5.05	1.27	1.0	2/3
3	12:37	17.69	6.62	111	1.97	208	4.76	1.26	1.0	1/4
4	12:41	17.65	6.56	103	1.97	125	4.73	1.26	1.0	1/5
5	12:45	17.79	6.51	104	1.95	56.4	4.36	1.25	1.0	1/6
6	12:49	17.85	6.46	110	1.92	24.4	4.23	1.23	1.0	1/7
7	12:53	17.70	6.42	116	1.92	19.5	4.17	1.22	1.0	1/8
8	12:57	17.70	6.42	118	1.86	13.9	4.28	1.19	0.9	1/9
9	13:01	18.29	6.43	123	1.81	? 14.6?	4.06	1.15	0.9	1/10
10	13:05	18.15	6.38	128	1.80	119	4.02	1.15	0.9	1/11
11	13:09	18.21	6.32	133	1.77	92.4	3.90	1.13	0.9	1/12
12	13:13	18.24	6.26	136	1.74	88.4	3.88	1.11	0.9	1/13
13	13:17	18.21	6.22	140	1.69	87.7	3.91	1.08	0.8	1/14
14										
15										
16										
17										
18										
19										
20										

Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments 13:01 NTU might have been 146, not 14.6
Karl Hans + Dayna Aragon

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/13/15 925

Project Site/Subsite: Richmond Field Station

Well ID: DHR

Sample ID: 20150413DHR

Depth to Water Level: 9.42 ft below PVC cap prior to sampling 10.41 after sampling

Depth to Well Bottom: 13.59 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 8 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/cm) <i>(S/cm)</i>	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	0854	15.96	5.75	-15	9.19	18.2	4.03	5.97	5.1	1
2	0858	15.97	5.94	-108	9.24	3.91	3.91	5.82	5.1	1
3	902	15.81	5.94	-127	9.22	6.2	3.96	5.81	5.1	1
4	906	15.69	5.97	-113	9.26	5.2	4.29	5.83	5.2	1
5	910	15.73	5.96	-110	9.37	8.4	3.65	5.89	5.2	1
6	914	15.76	5.96	-147	9.33	7.1	3.46	5.88	5.2	1
7	918	15.74	5.96	-152	9.33	7.0	3.31	5.85	5.2	1
8	922	15.81	5.96	-153	9.34	6.9	3.30	5.88	5.2	1
9										Total = 8
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11										
12										
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17										
18										
19										
20										

Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear, no odor

Comments done by M. Duffy and D. Aragon

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/15/15, 0915

Project Site/Subsite: Richmond Field Station

Well ID: CCCT

Sample ID: 20150415CCCT

Depth to Water Level: 672 ft below PVC cap prior to sampling 706 after sampling

Depth to Well Bottom: 15.08 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 5 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.2 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	7/-2.0 <u>+15%</u>	+/-15% <u>+2.0</u>			
1	0957	15.31	6.34	-15	1.45	62.1	3.45	0.824	0.7	1
2	0901	14.99	6.49	-169	1.40	5.4	2.31	0.894	0.7	2
3	0905	14.96	6.49	-197	1.40	10.3	2.69	0.897	0.7	3
4	0909	14.73	6.50	-196	1.41	23.7	2.61	0.901	0.7	4
5	0913	14.92	6.48	-196	1.42	21.6	2.54	0.908	0.7	5
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): sulfur odor

Comments sampled by Deyna Aragon - Karl Henry

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/17/15, 1145

Project Site/Subsite: Richmond Field Station

Well ID: CTP

Sample ID: 20150417CTP

Depth to Water Level: 11.53 ft below PVC cap prior to sampling _____ after sampling

Depth to Well Bottom: 17.12 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 11 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15% 0.2			
1	1102	19.98	6.15	221	0.629	4.4	0.78	0.403	0.3	1
2	1106	19.75	6.15	217	0.632	3.6	0.66	0.405	0.3	2
3	1110	19.32	6.18	204	0.638	6.9	0.52	0.408	0.3	3
4	1114	18.83	6.21	184	0.647	4.3	0.44	0.416	0.3	4
5	1118	19.01	6.19	156	0.680	5.5	0.43	0.437	0.3	5
6	1122	18.93	6.13	79	0.750	4.2	1.60	0.480	0.4	6
7	1126	18.88	6.14	92	0.769	3.5	2.48	0.492	0.4	7
8	1130	18.80	6.14	95	0.772	3.9	2.53	0.492	0.4	8
9	1134	18.74	6.15	100	0.780	3.2	2.74	0.499	0.4	9
10	1138	18.75	6.15	96	0.783	1.6	2.82	0.501	0.4	10
11	1142	18.69	6.14	94	0.786	1.2	2.82	0.503	0.4	11
12										
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20										

Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments sampled by Dayton Argen

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/16/15, 0950

Project Site/Subsite: Richmond Field Station

Well ID: EERC

Sample ID: _____

Depth to Water Level: 13.82 ft below PVC cap prior to sampling 16.56 after sampling

Depth to Well Bottom: 16.90 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 9 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure-ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Total Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0 1.5%	+/- 15% ± 0.2			
1	0914	17.34	6.15	242	4.27	2.7	2.52	2.73	2.3	1
2	0918	17.40	6.12	225	4.31	2.4	1.69	2.76	2.3	2
3	0922	17.43	6.09	213	4.37	2.5	1.26	2.80	2.3	3
4	0926	17.64	6.04	173	4.38	2.9	1.22	2.80	2.3	4
5	0930	17.77	6.07	150	4.45	2.9	1.18	2.86	2.4	5
6	0934	17.68	5.95	5	4.69	2.8	0.67	3.00	2.5	6
7	0938	17.64	5.96	22	4.64	2.7	0.52	2.97	2.5	7
8	0942	17.77	5.96	32	4.59	2.7	0.50	2.94	2.4	8
9	0946	17.88	5.96	28	4.59	2.8	0.46	2.94	2.4	9
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments sampled by Dayna Aragon. Quick draw down of water level. well covered w/ wood chips - used metal detector to find placed a cone at location

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/17/15 1 935

Project Site/Subsite: Richmond Field Station

Well ID: EPA

Sample ID: 20150417EPA

Depth to Water Level: 8.61 ft below PVC cap prior to sampling 8.78 after sampling

Depth to Well Bottom: 14.15 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 6.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING										
Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m) (µS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1 2	907	16.17	5.63	165	1.16	72.7	9.36	0.742	0.6	0.25
2	911	16.25	6.18	47	1.15	59.3	5.55	0.736	0.6	1.25
3	915	16.19	6.38	26	1.15	41.2	4.78	0.734	0.6	2.25
4	919	16.31	6.53	11	1.15	7.0	4.15	0.737	0.6	3.25
5	923	16.36	6.59	7	1.15	11.9	3.95	0.739	0.6	4.25
6	927	16.47	6.62	4	1.16	10.2	3.75	0.739	0.6	5.25
7	931	16.52	6.65	1	1.16	8.0	3.59	0.743	0.6	6.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear, no odor

Comments sampled by M. Duffy

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/13/15, 1510

Project Site/Subsite: Richmond Field Station

Well ID: ETA

Sample ID: 20150413ETA

Depth to Water Level: 3.60 ft below PVC cap prior to sampling 4.50 after sampling

Depth to Well Bottom: 13.36 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 7.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/cm) <i>ms/cm</i>	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Total Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1439	22.07	6.55	127	1.90	51.1	6.86	1.22	1.0	0.25
2	1443	18.97	6.39	130	1.96	44.9	4.42	1.26	1.0	1.25
3	1447	18.21	6.35	99	1.99	36.8	3.68	1.28	1.0	2.25
4	1451	17.95	6.30	36	1.99	32.0	3.52	1.27	1.0	3.25
5	1455	17.87	6.26	17	1.98	30.9	3.46	1.27	1.0	4.25
6	1459	17.77	6.21	-13	1.96	29.8	3.35	1.26	1.0	5.25
7	1503	17.71	6.16	-23	1.94	28.8	3.27	1.24	1.0	6.25
8	1507	17.73	6.13	-28	1.94	25.1	3.23	1.24	1.0	7.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear / slight ~~yellowish~~ color some sediment

Comments sampled by M. Duffy and D. Aragon

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/16/15 1245

Project Site/Subsite: Richmond Field Station

Well ID: FG

Sample ID: 20150416FG

Depth to Water Level: 13.78 ft below PVC cap prior to sampling 14.69 after sampling

Depth to Well Bottom: 16.21 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: (2 inch) 4 inch

Total Purged 5 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0 15%	+/- 15% 0.2			
1	1226	21.21	5.84	202	0.644	17.4	6.91	0.412	0.3	1
2	1230	21.63	5.81	209	0.652	16.4	2.43	0.417	0.3	2
3	1234	21.73	5.79	211	0.654	17.5	2.15	0.419	0.3	3
4	1238	21.93	5.76	214	0.656	15.0	2.14	0.420	0.3	4
5	1242	21.97	5.74	215	0.659	14.2	2.00	0.422	0.3	5
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments sampled by Dayra Aragon

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/16/15, 1455

Project Site/Subsite: Richmond Field Station

Well ID: GEO

Sample ID: 20150416GEO

Depth to Water Level: 9.96 ft below PVC cap prior to sampling ~~16.40~~ ^{10.21} after sampling

Depth to Well Bottom: 16.10 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 6.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1429	19.97	6.81	78 78	0.776	0.0	5.55	0.494	0.4	0.25
2	1433	16.51	6.78	67 79	0.847	243	4.43	0.543	0.4	1.25
3	1437	16.26	6.75	63	0.847	168	4.21	0.542	0.4	2.25
4	1441	16.10	6.72	77	0.845	22.1	4.15	0.541	0.4	3.25
5	1445	16.12	6.71	81	0.844	15.7	4.02	0.541	0.4	4.25
6	1449	16.16	6.71	85	0.841	7.0	3.88	0.538	0.4	5.25
7	1453	16.04	6.70	90	0.841	6.8	3.86	0.538	0.4	6.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear, no odor

Comments Sampled by Mr. Duffy

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 07/13/15, 1418

Project Site/Subsite: Richmond Field Station

Well ID: MFA

Sample ID: 2015 0413 MFA

Depth to Water Level: 4.09 ft below PVC cap prior to sampling 4.48 after sampling

Depth to Well Bottom: 13.76 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 5 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0 <u>+15%</u>	± 2.0			
1	1358	21.64	6.61	113	0.958	87.7	9.93	0.619	0.5	1
2	1402	18.71	6.40	124	1.06	69.9	4.27	0.682	0.5	1
3	1406	18.69	6.51	114	1.09	63.2	4.03	0.701	0.5	1
4	1410	18.74	6.48	112	1.12	62.3	3.93	0.717	0.6	1
5	1414	18.81	6.46	109	1.13	59.0	3.82	0.723	0.6	1
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments lots of ants in well head, roots in well
Dayna Aragon, Mark Duffy

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/14/15 10:15

Project Site/Subsite: Richmond Field Station

Well ID: P28

Sample ID: 2015 0414 P28 10:15

Depth to Water Level: 7.54 ft below PVC cap prior to sampling 7.55 after sampling

Depth to Well Bottom: 25.10 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 6 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.2 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	09:41	17.57	6.08	-23	.863	1.7	4.36	.543	0.4	0.2
2	09:45	17.48	6.13	-22	.808	2.1	4.10	.514	0.4	1
3	09:51	17.48	6.14	+5	.785	0.0	3.45	.502	0.4	2
4	09:55	17.52	6.14	+26	.781	0.0	3.34	.500	0.4	3
5	10:00	17.56	6.15	+40	.779	0.0	3.29	.499	0.4	4
6	10:05	17.59	6.14	+49	.778	0.0	3.25	.498	0.4	5
7	10:10	17.61	6.14	+58	.777	0.0	3.29	.498	0.4	6
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) 2015 0414 P28 D(10:20)

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): No odor clear

Comments Metals, Sampled by M. Onfy and M. Hansen

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4/12/15, 1040

Project Site/Subsite: Richmond Field Station

Well ID: PZ8 PZ9

Sample ID: 20150416PZ89

Depth to Water Level: 13.21 ft below PVC cap prior to sampling _____ after sampling

Depth to Well Bottom: 19.54 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged _____ Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate _____ Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0 15%	+/- 15% 0.2			
1	1016	19.45	5.68	167	0.498	5.3	3.28	0.323	0.2	1
2	1020	17.54	5.59	187	0.581	5.8	1.06	0.380	0.3	2
3	1024	19.85	5.67	174	0.725	4.4	0.72	0.461	0.4	3
4	1028	20.33	5.77	151	0.797	5.3	0.50	0.511	0.4	4
5	1032	20.57	5.82	153	0.811	5.3	0.45	0.519	0.4	5
6	1036	20.65	5.85	150	0.811	4.8	0.43	0.519	0.4	6
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments sampled by Dayna Aragon

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/16/15 1020 Project Site/Subsite: Richmond Field Station

Well ID: PZ11 Sample ID: 20150416 PZ11

Depth to Water Level: ~~18.7~~ ^{11.45} ft below PVC cap prior to sampling 11.50 after sampling

Depth to Well Bottom: 18.74 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump **Peristaltic Pump**

Well Diameter: **2 inch** 4 inch

Total Purged 4.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING										
Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m) <small>mS/cm</small>	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1102	20.64	6.03	120	2.78	10.9	6.75	1.79	1.5	0.25
2	1106	18.63	6.07	158	2.92	7.5	3.41	1.87	1.5	1.25
3	1110	18.56	6.08	154	2.94	8.0	3.16	1.88	1.5	2.25
4	1114	18.40	6.08	148	2.95	4.9	3.02	1.89	1.5	3.25
5	1118	18.24	6.08	142	2.95	3.4	2.90	1.89	1.5	4.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments JOL, Metals Analysis Sampled by M. Duffy

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/16/15, 1235

Project Site/Subsite: Richmond Field Station

Well ID: NR LF

Sample ID: 20150416NR LF

Depth to Water Level: 14.12 ft below PVC cap prior to sampling 15.02 after sampling

Depth to Well Bottom: 18.82 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 5.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/cm) mS/cm	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1210	22.78	6.46	38	0.610	42.2	4.64	0.381	0.3	0.25
2	1214	21.37	6.33	24	0.588	18.3	3.03	0.377	0.3	1.25
3	1218	19.45	6.30	-19	0.611	9.9	2.98	0.392	0.3	2.25
4	1222	18.40	6.27	-68	0.626	4.2	2.79	0.401	0.3	3.25
5	1226	18.29	6.27	-76	0.627	2.0	2.72	0.402	0.3	4.25
6	1230	18.39	6.29	-83	0.627	2.9	2.62	0.401	0.3	5.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): Clear, no odor

Comments Metals Analysis, Sampled by M. Duffy

MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/14/15, 1340

Project Site/Subsite: Richmond Field Station

Well ID: RWF

Sample ID: 20150414 RWF

Depth to Water Level: 9.61 ft below PVC cap prior to sampling 9.61 after sampling

Depth to Well Bottom: 17.64 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 4.25 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1320	19.19	6.16	178	1.10	37.4	5.43	0.708	0.5	0.25
2	1324	18.61	6.13	178	1.12	31.9	3.92	0.717	0.6	1.25
3	1328	18.27	6.13	173	1.12	33.0	3.47	0.719	0.6	2.25
4	1332	18.20	6.13	166	1.12	34.0	3.38	0.719	0.6	3.25
5	1336	18.18	6.14	159	1.12	30.9	3.30	0.718	0.6	4.25
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear, no odor

Comments VOCS, sampled by M. Duffy and M. Hanson

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4.10.15 / 1328

Project Site/Subsite: Richmond Field Station

Well ID: TPI

Sample ID: 2015040 20150410TPI

Depth to Water Level: 11.88 ft below PVC cap prior to sampling 11.95 after sampling

Depth to Well Bottom: 16.01 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 7 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING										
Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1303	20.59	6.26	-145	1.89	0.2	4.98	1.21	1.0	1
2	1308	21.52	6.41	-153	1.88	0.8	4.01	1.20	1.0	2
3	1312	20.87	6.24	-152	1.94	0.6	3.98	1.24	1.0	3
4	1316	20.67	6.30	-178	1.97	0.0	3.71	1.26	1.0	4
5	1320	20.63	6.31	-183	1.97	0.4	3.63	1.26	1.0	5
6	1324	20.71	6.30	-182	1.91	0.2	3.61	1.22	1.0	6
7	1328	20.71	6.29	-182	1.85	0.3	3.54	1.18	1.0	7
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments sampled by Quinn Johnson + Dayna Argen

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 4.10.15 / 14

Project Site/Subsite: Richmond Field Station

Well ID: TP2

Sample ID: 20150410TP2

Depth to Water Level: 11.57 ft below PVC cap prior to sampling 11.59 after sampling

Depth to Well Bottom: 17.10 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged 8 Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (S/m)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Total Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	1353	20.11	6.36	116	0.985	29.6	5.89	0.631	0.5	1
2	1357	19.09	6.31	117	1.01	18.6	4.60	0.644	0.5	2
3	1401	18.86	6.21	122	1.01	27.6	4.06	0.648	0.5	3
4	1405	18.80	6.21	120	1.01	17.7	3.90	0.649	0.5	4
5	1409	18.77	6.15	123	1.02	11.2	3.86	0.650	0.5	5
6	1413	17.89	6.13	124	1.04	6.3	3.94	0.664	0.5	6
7	1417	17.82	6.07	126	1.04	2.2	3.88	0.666	0.5	7
8	1421	17.81	6.07	126	1.04	0.8	3.89	0.667	0.5	8
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) 20150410TP2D @ 1425

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): _____

Comments sampled by Quinn Johnson + Dayna Argen

Tetra Tech. Inc.
MONITORING WELL SAMPLING FORM

Date/Time of Sample Collection: 04/13/15 / 1020

Project Site/Subsite: Richmond Field Station

Well ID: WTA

Sample ID: 2015 0413 WTA

Depth to Water Level: 9.76 ft below PVC cap prior to sampling 7.22 after sampling

Depth to Well Bottom: 13.98 ft. below top of casing (PVC cap)

Method of Purging: Bladder Pump Peristaltic Pump

Well Diameter: 2 inch 4 inch

Total Purged _____ Liters (Max 20 L) Purge Rate goal = 0.15 Liters/Min. Actual purge rate 0.25 Liters/Min

PHYSIO-CHEMICAL PARAMETERS DURING PURGING										
Measure - ment Number	Time	Temperature (°C)	pH	ORP (mV)	Specific Conductance (µmS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Total Dissolved Solids (g/L)	Salinity (ppt)	Each Volume/Tota l Purged (L)
Stabilization Criteria		+/- 2.0	+/- 0.2	+/- 10	+/- 3%	+/- 2.0	+/- 15%			
1	940	15.35	6.40	20	0.680	24.4	4.03	0.430	0.3	0.8
2	944	15.42	6.40	22	0.608	19.1	4.56	0.387	0.3	1.6
3	948	15.51	6.40	20	0.581	21.1	4.35	0.371	0.3	2.4
4	952	15.73	6.37	-20	0.566	38.0	4.20	0.362	0.3	3.2
5	956	15.83	6.36	-32	0.551	27.5	4.08	0.352	0.3	4.0
6	1000	15.91	6.35	-35	0.543	24.7	3.95	0.347	0.3	4.8
7	1004	15.99	6.33	-38	0.543	21.3	3.91	0.348	0.3	5.6
8	1008	16.11	6.37	-41	0.557	14.5	3.93	0.358	0.3	6.4
9	1012	16.21	6.39	-41	0.578	14.1	3.99	0.371	0.3	7.2
10	1016	16.31	6.40	-37	0.598	10.2	3.91	0.385	0.3	8.0
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Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____

MS/MSD Sample Collected? No Yes _____

Sample Remarks (odors, colors, sediment): clear, no odor

Comments sampled by M. Duffy and D. Aragon

APPENDIX B
COMPLETE ANALYTICAL RESULTS

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
B120	09/09/2010	33	1 U	2.2	26	0.5 U	100	1 U	170000	1.2	0.4 J	2.2	59 J	2 U	METAL
B120	04/15/2011	75 UJ	1 U	1.6 J	20	1 UJ	NA	2 U	210000	0.34 J	1 U	4.3	16 J	0.43 J	DMETAL
B120	10/04/2011	50 U	2.4	4.2	19	0.23 J	NA	1 U	190000	0.48 J	0.38 J	1.6 U	100 U	1 U	DMETAL
B120	04/03/2012	50 U	1 U	2.6 UJ	25	1 U	NA	0.25 J	160000	0.44 J	1 U	1.6 J	50 U	1 U	DMETAL
B121	09/08/2010	33	1 U	1.8	57	0.5 U	86 J	1 U	49000	1.5	0.31 J	2 U	100 U	2 U	METAL
B121	04/13/2011	50 UJ	0.2 J	1.2	55	1 U	NA	1 U	42000	1.3	0.14 J	0.5 J	50 U	0.31 J	DMETAL
B121	10/04/2011	50 U	1 U	3.2	62	0.22 J	NA	0.44 J	48000	0.88 J	1 U	1.6 U	100 U	1 U	DMETAL
B121	04/04/2012	50 U	0.45 J	0.97 J	59	1 U	NA	1 U	47000	1.1	1 U	2.3 U	15 UJ	1 U	DMETAL
B128	09/23/2010	55	1 U	5.7	23	0.5 U	320	1 U	69000	1.1	0.58	1.3 J	250	2 U	METAL
B128	09/23/2010	41	1 U	3.5	24	0.5 U	280	1 U	64000	1.1	0.28 J	1.6 J	72 J	2 U	METAL
B128	04/18/2011	50 U	0.7 J	0.95 J	41	1 UJ	NA	2 U	27000	1 U	1 U	8.4 J	50 UJ	0.71 J	DMETAL
B128	10/04/2011	50 U	0.62 J	5.8	22	1 U	NA	1 U	30000	1 U	0.47 J	1.6 U	59 UJ	1 U	DMETAL
B128	04/02/2012	9.6 J	0.33 UJ	0.89 UJ	57	1 U	NA	0.94 J	24000	0.54 J	1 U	2.3 U	50 U	1 U	DMETAL
B128	04/05/2013	50 U	1.4	0.77 J	44	1 U	NA	1 U	22000	1 U	0.17 J	2.3 U	31 J	1 U	DMETAL
B128	04/10/2014	50 U	0.76 J	0.8 J	52	1 U	NA	1 U	26000	0.41 J	1 U	3.4 U	71 U	1 U	DMETAL
B128	04/13/2015	50 U	1 U	1.2	72	1 U	NA	0.19 J	27000	1.2	0.057 J	1 U	42 J	1 U	DMETAL
B128	04/13/2015	50 U	1 U	1.4	68	1 U	NA	1 U	27000	1.3	1 U	1 U	41 J	1 U	DMETAL
B150	09/08/2010	14 J	1 U	0.89 J	12	0.5 U	95 J	1 U	27000	1 U	0.5 U	1.6 J	100 U	2 U	METAL
B150	04/13/2011	50 UJ	0.19 J	0.57 J	26	1 U	NA	0.44 J	18000	0.73 J	1 U	4.2 J	50 U	0.46 J	DMETAL
B150	10/05/2011	34 J	0.34 J	0.67 J	20	1 UJ	NA	1 U	21000	0.37 J	1 U	3.4	50 U	0.25 J	DMETAL
B150	10/05/2011	49 J	0.14 J	1 U	14	1 UJ	NA	1 U	19000	0.32 J	1 U	1 U	50 U	1 U	DMETAL
B150	04/04/2012	6.5 J	1 U	0.39 J	35	1 U	NA	1 U	16000	0.98 J	1 U	2.3 U	50 U	1 U	DMETAL
B150	04/04/2012	18 J	1 U	0.5 J	35	0.28 J	NA	0.099 J	16000	0.89 J	1 U	2.3 U	15 UJ	1 U	DMETAL
B150	04/02/2013	50 U	1 U	1 U	44	1 U	NA	1 U	18000	1.6	1 U	9.8	50 U	0.17 J	DMETAL
B150	04/01/2014	50 U	1	0.52 J	39	4.3 U	NA	1.3 U	15000	1.6	1 U	1 U	71 U	1 U	DMETAL
B150	04/15/2015	13 UJ	0.74 J	0.7 J	49	1 U	NA	1 U	18000	4.7	1 U	0.46 UJ	42 J	1 U	DMETAL
B150	04/15/2015	20 UJ	0.38 J	0.45 J	45	1 U	NA	1 U	16000	4.3	1 U	0.89 UJ	50 U	0.1 UJ	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
B158	09/08/2010	590	1 U	6.3	13	0.5 U	64 J	1 U	4200	2.8	0.5 U	1.4 J	500	2 U	METAL
B158	04/15/2011	120 J	0.3 J	4.5	6	1 UJ	NA	2 U	3600	1.3	1 U	6.8	66	0.47 J	DMETAL
B158	10/05/2011	99 J	0.82 J	6.2	4.4 J	1 U	NA	1 U	3200	2	0.22 J	0.94 J	50 UJ	1 U	DMETAL
B158	04/06/2012	21 UJ	1 U	4.9	7.4	0.57 J	NA	0.35 UJ	4000	2.1	1 U	2.3 U	50 U	1 U	DMETAL
B158	04/08/2013	15 J	1 U	4.6	8.5	1 U	NA	1 U	2400	2	1 U	2.3 U	25 J	1 U	DMETAL
B158	04/02/2014	79 J	1 U	4.6	8.9	1 U	NA	1 U	3200	1.9	1 U	3.4 U	65 J	1 U	DMETAL
B158	04/16/2015	9 J	1 U	4.7	9.8	1 U	NA	1 U	3200	1.3	0.074 J	0.32 UJ	50 U	0.092 UJ	DMETAL
B163	09/02/2010	44	1 U	1.6	17	0.5 U	240	5.2	260000	5 U	6	2.5	70 J	2 U	METAL
B163	04/12/2011	50 U	0.18 J	1.3	12	1 U	NA	5.5	230000	0.14 J	4.6	0.35 J	50 U	0.38 J	DMETAL
B163	04/12/2011	58	0.17 J	0.74 J	13	1 U	NA	6.2	240000	0.23 J	4.8	1 U	89 UJ	1 U	METAL
B163	10/03/2011	50 U	0.17 J	4.2	13	1 U	NA	5.2	290000	0.34 UJ	4.6	1.6 U	45 J	1 U	DMETAL
B163	10/03/2011	72	0.18 J	1.2	13 J	1 U	NA	5.9 J	300000	1 U	4.8	1.6 U	91	1 U	METAL
B163	04/02/2012	33 J	0.63 UJ	2.3 UJ	12	1 U	NA	6.2	240000	1 U	4.2	2.3 U	71	1 U	DMETAL
B163	04/02/2012	500	3.5	1.3	14 J	0.8 J	NA	7	240000	0.92 J	5	2.3 U	570	1 U	METAL
B163	04/03/2013	13 J	0.38 UJ	1.8	12 J	1 U	NA	5.2	220000	1	4.7	2.3 U	5000 U	1 U	DMETAL
B163	04/01/2014	50 U	3.3	1.3	14	4.3 U	NA	5.4	270000	1 U	4.9	1 U	71 U	1 U	DMETAL
B163	04/14/2015	50 U	1 U	1.8	14	1 U	NA	5.8	280000	0.23 J	5.5	1 U	330	1 U	DMETAL
B175S	09/03/2010	17 J	1 U	1.6	56	0.5 U	97 J	1 U	53000	0.81 J	0.36 J	1.4 J	100 U	2 U	METAL
B175S	04/13/2011	50 U	1 U	0.69 J	33	1 U	NA	0.43 J	38000	0.8 J	1 U	1 UJ	50 U	0.4 J	DMETAL
B175S	10/04/2011	50 U	0.12 J	7	55	1 U	NA	1 U	46000	1.4	1 U	1.6 U	100 U	1 U	DMETAL
B175S	04/04/2012	50 U	0.36 J	1.5	43	1 U	NA	1 U	42000	0.29 J	1 U	2.3 U	50 U	1 U	DMETAL
B175S	04/02/2013	7.3 J	1 U	0.81 J	57	1 U	NA	1 U	55000	0.48 J	1 U	2.3 U	50 U	1 U	DMETAL
B175S	04/01/2014	50 U	1 U	1.1	62	4.3 U	NA	1.3 U	63000	0.77 J	1 U	1 U	71 U	1 U	DMETAL
B175S	04/15/2015	50 U	2	1.2	52	1 U	NA	1 U	52000	0.77 UJ	1 U	0.33 UJ	19 J	0.088 UJ	DMETAL
B175W	09/08/2010	99	1 U	1.7	26	0.5 U	130	1 U	17000	1.3	0.5 U	1 J	120	2 U	METAL
B175W	04/13/2011	50 U	0.18 J	2.1	11	1 U	NA	0.26 J	15000	0.43 J	1 U	4.7 J	50 U	0.54 J	DMETAL
B175W	10/04/2011	50 U	1 U	3	21	0.32 J	NA	1 U	18000	3.9	0.33 J	1.6 U	3400	1 U	DMETAL
B175W	04/04/2012	130	1 U	1.1	11 J	0.36 J	NA	1 U	12000	0.63 J	1 U	2.3 U	63 UJ	1 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
B177	09/23/2010	22	1 U	1.1	32	0.5 U	77 J	1 U	12000	0.91 J	0.5 U	1.7 J	100 U	2 U	METAL
B177	04/18/2011	9.9 J	0.41 J	0.48 J	63	1 UJ	NA	2 U	15000	0.55 J	1 U	2.6 J	50 UJ	0.41 J	DMETAL
B177	10/05/2011	50 UJ	1 U	0.83 J	37 J	1 UJ	NA	1 U	13000	0.61 J	1 U	1 U	50 UJ	1 U	DMETAL
B177	04/04/2012	9.2 J	1 U	0.49 J	71	1 U	NA	1 U	19000	1 U	1 U	2.3 U	50 U	1 U	DMETAL
B178	09/02/2010	20 U	1 U	1.8	25	0.5 U	130	1 U	170000	1 U	0.87	2.2	100 U	2 U	METAL
B178	04/15/2011	75 UJ	1.1 U	1.6 J	20	3.2 UJ	NA	2 U	170000	1.3 U	0.44 J	2.7	89 U	1.9 U	DMETAL
B178	10/04/2011	50 U	4.1	9.1	23	0.34 J	NA	1 U	170000	1 U	1 U	1.6 U	100 U	1 U	DMETAL
B178	04/03/2012	20 J	0.21 UJ	3.2 UJ	25 J	1 U	NA	0.51 J	150000	1 U	0.29 J	2.3 U	180 U	1 U	DMETAL
B178	04/02/2013	50 U	1 U	0.87 J	22	0.18 J	NA	1 U	150000	0.31 J	2.3	2.3 U	280	1 U	DMETAL
B178	04/08/2014	50 U	2.6	4.9	23	1 U	NA	1 U	180000	1 U	1.5	3.4 U	1100 J	1 U	DMETAL
B178	04/10/2015	9 J	0.21 J	1.7	17	1 U	NA	1 U	170000	0.26 UJ	0.82 J	1 U	800	1 U	DMETAL
B180	09/15/2010	380	1 U	3.8	22	0.5 U	74 J	1 U	5600	2.9	0.5	3.6	400	2 U	METAL
B180	04/13/2011	50 UJ	0.22 J	2.9	6.5	1 U	NA	0.46 J	5500	2.9	1 U	36 J	50 U	2.7	DMETAL
B180	10/06/2011	58	0.34 UJ	3.2	17	1 U	NA	1 U	4900 J	3.1	1 U	1 U	50 U	1 U	DMETAL
B180	10/06/2011	50 U	0.63 UJ	3.6	16	1 U	NA	1 U	5200 J	3	1 U	1 U	50 U	1 U	DMETAL
B180	04/04/2012	50 U	0.31 J	3.6	6.4	1 U	NA	1 U	4900	1.2	1 U	2.3 U	50 U	1 U	DMETAL
B185	09/02/2010	10 J	1 U	1.7	15	0.5 U	120	1 U	160000	0.57 J	0.63	1.6 J	100 U	2 U	METAL
B185	04/15/2011	75 UJ	1.1 U	1.1 J	13	3.2 UJ	NA	2 U	150000	0.39 J	1 U	6.4	16 J	1.9 U	DMETAL
B185	04/15/2011	75 UJ	1.1 U	0.8 J	14	3.2 UJ	NA	2 U	160000	0.22 J	0.18 J	4.3	34 J	1.9 U	DMETAL
B185	10/03/2011	50 U	1 U	3	14	1 U	NA	0.25 J	170000	0.74 UJ	0.14 J	1.9 J	50 U	1 U	DMETAL
B185	10/03/2011	50 U	0.13 J	2.7	14	1 U	NA	0.14 J	170000	0.75 UJ	0.18 J	1.6 U	500 U	1 U	DMETAL
B185	04/02/2012	14 J	0.18 UJ	2 UJ	19	1 U	NA	0.48 J	150000	0.44 J	1 U	2.3 U	71	1 U	DMETAL
B194	09/09/2010	64	1 U	2.6	55	0.5 U	160	1 U	55000	0.97 J	0.42 J	1.7 J	84 J	2 U	METAL
B194	04/13/2011	50 U	0.19 J	1.8	100	1 U	NA	1.2	51000	0.99 J	1 U	1.5 J	50 U	0.41 J	DMETAL
B194	10/04/2011	50 U	0.21 J	2.7	110	0.11 J	NA	1 U	52000	0.99 J	0.11 J	1.6 U	100 U	1 U	DMETAL
B194	04/04/2012	50 U	0.23 J	0.87 J	95	1 U	NA	1 U	48000	0.65 J	1 U	2.3 U	50 U	1 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
B195	09/09/2010	53	1 U	2	34	0.5 U	110	1 U	150000	0.73 J	0.45 J	1.8 J	73 J	2 U	METAL
B195	04/13/2011	64	0.19 J	0.77 J	20	1 U	NA	0.28 J	55000	0.8 J	0.13 J	1 U	50 UJ	1 U	METAL
B195	04/13/2011	50 U	0.21 J	1.5	18	1 U	NA	0.28 J	51000	0.78 J	1 U	75 J	50 U	4.6	DMETAL
B195	04/13/2011	68	0.17 J	1.6 J	20	1 U	NA	0.27 J	55000	0.82 J	1 U	1 U	50 UJ	1 U	METAL
B195	04/13/2011	50 U	0.2 J	1.3	17	1 U	NA	0.21 J	49000	0.62 J	1 U	7.5 J	50 U	0.83 J	DMETAL
B195	10/04/2011	50 U	0.72 J	2.9	47	0.2 J	NA	0.4 J	160000	1.2	0.19 J	1.6 U	100 U	1 U	DMETAL
B195	10/04/2011	44 J	1 U	1.4	52	1 U	NA	1 U	180000	1 U	1 U	1.6 U	41 J	1 U	METAL
B195	04/03/2012	50 U	1 U	1.3 UJ	19	1 U	NA	0.16 J	68000	1.2	1 U	1.6 J	50 U	1 U	DMETAL
B195	04/03/2012	7.9 J	1 U	1.4 UJ	16	1 U	NA	1 U	61000	0.68 J	0.1 J	2.3 U	180 U	1 U	METAL
B195	04/02/2013	12 J	8.1	2.2	35	1 U	NA	1 U	97000	0.66 J	1 U	0.8 J	19 UJ	1 U	DMETAL
B195	04/02/2013	11 J	0.64 J	0.97 J	32	1 U	NA	1 U	95000	0.46 J	1 U	5.4	50 U	1 U	DMETAL
B195	04/02/2014	17 J	1 U	1.2	21	1 U	NA	1 U	110000	0.62 J	1 U	1.5 J	45 J	0.11 J	DMETAL
B195	04/02/2014	14 J	1.2	1.3	20	1 U	NA	1 U	110000	0.61 J	1 U	3.4 U	53 J	0.1 J	DMETAL
B195	04/14/2015	50 U	0.14 J	1.3	23	0.17 J	NA	1 U	76000	0.62 J	1 U	0.69 J	50 U	0.085 J	DMETAL
B197	09/09/2010	17 J	1 U	1.8	26	0.5 U	98 J	1 U	140000	1.1	0.3 J	1.7 J	100 U	2 U	METAL
B197	09/09/2010	20 U	1 U	1.8	25	0.5 U	93 J	1 U	140000	1.2	0.29 J	1.6 J	100 U	2 U	METAL
B197	04/13/2011	50 U	0.17 J	2	28	1 U	NA	1 U	160000	1 U	1.6	1 UJ	50 U	0.31 J	DMETAL
B197	10/04/2011	50 U	0.42 J	4.5	22	0.11 J	NA	0.24 J	140000	0.97 J	0.81 J	1.6 U	1300	1 U	DMETAL
B197	04/03/2012	50 U	1 U	10	35	1 U	NA	1 U	180000	1 U	1	1.2 J	980	1 U	DMETAL
B197	04/03/2012	50 U	1 U	9	33	1 U	NA	1 U	180000	1 U	0.97 J	1.3 J	920	1 U	DMETAL
B197R	04/08/2013	22 J	1 U	1.8	20	1 U	NA	1 U	150000	0.79 J	1 U	0.81 J	17 J	0.29 J	DMETAL
B197R	04/08/2014	50 U	0.82 J	10	61	1 U	NA	1 U	220000	1 U	1.3	3.4 U	2500 J	1 U	DMETAL
B197R	04/14/2015	30 J	0.16 J	2.3	24	0.19 J	NA	1 U	180000	1 U	0.35 J	1 U	1300 J	1 U	DMETAL
B277	09/15/2010	35	1 U	1.9	34	0.5 U	110	1 U	54000	1.8	0.5 U	2 U	100 U	2 U	METAL
B277	04/18/2011	50 U	1 U	2.2	73	1 UJ	NA	2 U	57000	1.8	1 U	3.3 J	50 UJ	0.54 J	DMETAL
B277	10/05/2011	50 U	0.13 J	0.52 J	61	1 UJ	NA	1 U	54000	0.31 J	1 U	1 U	50 U	1 U	DMETAL
B277	04/03/2012	50 U	0.32 UJ	1.9 UJ	61	1 U	NA	0.34 J	56000	1.5	1 U	2.3 U	50 U	1 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
B278	09/16/2010	23 J	1 U	2	56	0.5 U	140	1 U	280000	1.6	0.57	1.8 J	100 U	2 U	METAL
B278	04/19/2011	50 U	0.78 J	1.5 J	59	1 U	NA	2 U	230000	1.4	1 U	1.1 J	89 UJ	0.94 J	DMETAL
B278	10/05/2011	50 U	1 U	1 U	51	1 U	NA	1 U	260000	0.49 J	1 U	1 U	50 U	1 U	DMETAL
B278	04/05/2012	50 U	1 U	2	62	1 U	NA	1 U	270000	1.4	1 U	2.3 U	50 U	1 U	DMETAL
B280A	09/16/2010	20 U	1 U	1.4	66	0.5 U	94 J	1 U	68000	0.93 J	0.5 U	1.1 J	100 U	2 U	METAL
B280A	04/14/2011	75 U	1.1 U	1 J	84	1 UJ	NA	2 U	50000	0.25 J	1 U	1.9 J	24 J	1.9 U	DMETAL
B280A	10/06/2011	50 U	0.42 UJ	0.55 J	110	1 U	NA	0.33 J	57000 J	0.54 J	1 U	0.52 J	120	1 U	DMETAL
B280A	04/03/2012	50 U	1 U	1.7	110	1 U	NA	1 U	64000	0.53 J	1 U	2.3 U	50 U	1 U	DMETAL
B280B	10/01/2010	19 J	1 U	3.4	8	0.5 U	280	1 U	51000	1.5	0.5 U	2 U	100 U	2 U	METAL
B280B	04/14/2011	50 U	1.1 U	1.7 J	6.4	1 UJ	NA	2 U	53000	2.1	1 U	5.8	23 J	1.9 U	DMETAL
B280B	10/06/2011	50 U	0.33 UJ	2.8	6.5	1 U	NA	1 U	52000 J	1 U	1 U	1 U	50 U	1 U	DMETAL
B280B	04/03/2012	11 J	0.2 UJ	3.3 UJ	5.2	1 U	NA	1 U	55000	1.3	1 U	0.87 J	50 U	1 U	DMETAL
B300	09/09/2010	23	1 U	2	90	0.5 U	150	1 U	150000	1.7	0.48 J	1.3 J	100 U	2 U	METAL
B300	04/15/2011	50 UJ	1 U	1.4 J	250	1 UJ	NA	2 U	280000	1 U	8.9	6	1200	0.5 J	DMETAL
B300	10/06/2011	2000 U	5 UJ	26 U	23	20 U	NA	20 U	18000 J	20 U	20 U	21 U	2000 U	20 U	DMETAL
B300	04/09/2012	50 U	1 U	2.3	150	1 U	NA	0.11 J	210000	1 U	2.1	2.3 U	4600	1 U	DMETAL
B38	09/15/2010	44	1 U	1.2	50	0.5 U	150	1 U	31000	2.3	0.5 U	3.3	72 J	2 U	METAL
B38	04/19/2011	50 U	0.22 J	1 J	47	1 U	NA	2 U	24000	0.93 J	1 U	2.2	89 U	0.57 J	DMETAL
B38	04/19/2011	50 U	0.3 J	1.3 J	51	1 U	NA	2 U	26000	1.3	1 U	65	89 U	3.6	DMETAL
B38	10/06/2011	50 U	0.33 UJ	1.5	40	1 U	NA	0.32 J	14000 J	0.14 J	1 U	1 U	150	1 U	DMETAL
B38	04/04/2012	14 J	1 U	0.99 J	37	1 U	NA	1 U	18000	0.6 J	1 U	2 J	19 UJ	1 U	DMETAL

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
B450	04/19/2011	50 U	2.6	1.7 J	50	0.4 J	NA	2 U	59000	1 J	1 U	1.8 J	89 U	0.43 J	DMETAL
B450	04/19/2011	110	1.2	2.3	53	1 U	NA	2 U	65000	2	1 U	2.2 U	180	1.9 U	METAL
B450	10/10/2011	50 U	1.1	1	71	1 U	NA	0.21 J	36000	0.85 J	1 U	1 U	50 U	1 U	DMETAL
B450	04/06/2012	6.8 UJ	3.3	1.8	78	0.38 J	NA	1 U	73000	0.94 J	1 U	1 J	50 U	1 U	DMETAL
B450	04/03/2013	50 U	0.23 UJ	1.3	50	1 U	NA	1 U	46000	0.51 J	1 U	2.3 U	50 U	0.17 J	DMETAL
B450	04/03/2014	50 U	0.19 J	1.5	120	1 U	NA	1 U	80000	0.74 J	1 U	1 U	63 U	1 U	DMETAL
B450	04/14/2015	9.8 J	0.18 J	1.6	91	0.14 J	NA	1 U	64000	1	1 U	0.53 UJ	50 U	1 U	DMETAL
B460	09/15/2010	160	1 U	3.2	13	0.5 U	82 J	1 U	31000	0.53 J	1.2	1.9 J	280	2 U	METAL
B460	04/20/2011	75 U	0.38 J	2.4	8.8 J	3.2 U	NA	2 U	43000	1.3 U	1 U	21	89 U	0.96 J	DMETAL
B460	10/07/2011	50 U	0.39 J	3.4	8.4	1 U	NA	0.31 J	40000	0.38 J	0.46 J	1 U	210	1 U	DMETAL
B460	04/06/2012	8.5 UJ	0.18 J	2.7	5.4	1 U	NA	1 U	30000	0.67 J	1 U	2.3 U	50 U	1 U	DMETAL
B473	09/24/2010	180	1 U	2	64	0.5 U	140	1 U	25000	3.9	0.31 J	4.7	330	2 U	METAL
B473	04/20/2011	75 U	1.1 U	2.2	22 J	3.2 U	NA	2 U	44000	1.6	1 U	9.1	89 UJ	0.8 J	DMETAL
B473	10/07/2011	50 U	0.35 J	1.9	19	1 U	NA	1 U	19000	1.3	1 U	1 U	50 U	1 U	DMETAL
B473	04/06/2012	14 UJ	0.4 J	2.3	12	0.32 J	NA	0.18 UJ	17000	1.4	1 U	0.97 J	50 U	1 U	DMETAL
B474	09/23/2010	450	1 U	9.8	25	0.5 U	200	1 U	24000	1.7	1.6	2	1400	2 U	METAL
B474	04/20/2011	31 J	0.45 J	4.3	7.4	3.2 U	NA	2 U	35000	1.3 U	1 U	4.7	89 UJ	1.9 U	METAL
B474	04/20/2011	75 U	1.1 U	3.9	6.2 J	3.2 U	NA	2 U	35000	1.3 U	1 U	5.1	89 U	1.9 U	DMETAL
B474	10/07/2011	240	1.5	2.8	36	0.69 J	NA	1 U	17000	1.2	1.2	21	990	7.3	METAL
B474	10/07/2011	50 U	1.7	1.6	8.1	1 U	NA	1 U	12000	1.7	1 U	12	240	0.72 J	DMETAL
B474	04/09/2012	50 U	0.49 J	2.7	46	1 U	NA	0.42 J	32000	0.74 J	0.96 J	2.3 U	47 J	1 U	DMETAL
B474	04/09/2012	67	3.1	2.6	34	1 U	NA	0.57 J	28000	0.84 J	0.89 J	6.8	150	0.97 J	METAL
B474	04/03/2013	40 J	2.8	3.4	52	1 U	NA	1 U	21000	1 U	0.59 J	4.4	92	0.16 J	DMETAL
B474	04/03/2014	15 J	1.2	2.2	74	1 U	NA	1 U	34000	1.5	0.56 J	22	40 J	2.2	DMETAL
B474	04/16/2015	16 J	0.41 J	3.8	52	1 U	NA	1 U	25000	1.5	0.55 J	0.9 UJ	220	0.14 UJ	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
B480	09/24/2010	22	1 U	6.5	41	0.5 U	110	1 U	53000	0.68 J	1.5	2 U	420	2 U	METAL
B480	04/19/2011	32 J	1 J	3.1	42	1 U	NA	2 U	51000	1.2 J	1 U	7.8	89 U	0.54 J	DMETAL
B480	10/07/2011	50 U	0.52 J	2.6	39	1 U	NA	0.81 J	34000	0.34 J	0.2 J	0.28 J	50 U	1 U	DMETAL
B480	04/09/2012	50 U	0.23 J	2.8	75	1 U	NA	0.65 J	51000	1.8	1 U	2.3 U	50 U	1 U	DMETAL
B480	04/03/2013	8.1 J	0.41 UJ	2.5	93	1 U	NA	1 U	50000	1.3	1 U	2.3 U	50 U	1 U	DMETAL
B480	04/03/2014	50 U	0.25 J	3	130	1 U	NA	1 U	54000	1.8	0.24 J	3.4 U	63 U	1 U	DMETAL
B480	04/17/2015	50 U	1 U	2.1	140	1 U	NA	1 U	54000	1.5	1 U	1 U	50 U	1 U	DMETAL
B490	09/16/2010	21	1 U	2.2	53	0.5 U	130	1 U	52000	2.6	0.5 U	1.1 J	100 U	2 U	METAL
B490	04/20/2011	75 U	1.1 U	1.6 J	79 J	3.2 U	NA	2 U	52000	4.4	1 U	11	89 U	1.5 J	DMETAL
B490	10/10/2011	50 U	5 U	1.8	90	1 U	NA	1 U	45000	2.7	1 U	5.2 U	50 U	0.37 J	DMETAL
B490	04/09/2012	50 U	2.8	2.4	93	1 U	NA	1 U	46000	3.2	1 U	2.3 U	37 J	1 U	DMETAL
BULB1	10/19/2010	70	10 U	17	230	1 U	1700	10 U	370000	2.1	18	6.6	100	20 U	METAL
BULB1	04/12/2011	140	0.24 J	12 J	140	1 U	NA	0.99 J	420000	0.99 J	4.7 J	1 U	660	0.47 J	METAL
BULB1	04/12/2011	50 UJ	1.4	12	110	1 U	NA	1 U	330000	0.13 J	2.3	14 J	50 UJ	0.91 J	DMETAL
BULB1	09/30/2011	81	0.45 J	9.7	170 J	1 U	NA	1 U	440000	1 U	0.24 J	1.6 U	340 J	13	METAL
BULB1	09/30/2011	50 U	0.31 J	12	150	1 U	NA	0.09 J	380000	1.2 UJ	1.3	1.6 U	50 U	1 U	DMETAL
BULB1	04/05/2012	34 UJ	3.2	9.3	120	0.22 J	NA	0.31 UJ	290000	2.5	0.38 J	2.3 U	380	1 U	METAL
BULB1	04/05/2012	17 J	1.2	9	120	0.25 J	NA	0.2 J	320000	0.49 J	0.52 J	2.3 U	320	1 U	DMETAL
BULB1	04/05/2013	14 J	0.36 J	5.9	110	1 U	NA	0.39 J	310000	0.17 J	1 U	1.3 J	220	1 U	DMETAL
BULB1	04/10/2014	50 U	2.4	8.6	120	1 U	NA	1 U	380000	0.28 J	0.23 J	3.4 U	600	0.12 J	DMETAL
BULB1	04/13/2015	50 U	1 U	6.4	100	1 U	NA	0.28 J	220000	0.5 J	1 U	1 U	240	1 U	DMETAL
BULB1	04/13/2015	16 J	1 U	6.6	99	1 U	NA	0.25 J	210000	0.25 J	1 U	1 U	240	1 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
BULB2	10/19/2010	770	1 U	8.9	540	0.5 U	850	1 U	130000	3	8.1	5.6 J	2800	3.9	METAL
BULB2	04/12/2011	240	1.8	5 J	230	1 U	NA	1.4	75000	1.4	4.3	0.94 J	1500	0.71 J	METAL
BULB2	04/12/2011	50 UJ	2.5	3	55	1 U	NA	0.55 J	19000	0.23 J	1.1	28 J	50 UJ	1.3	DMETAL
BULB2	09/30/2011	50 U	0.13 J	3.8	53	1 U	NA	1 U	31000	1.8 UJ	1.1	1.6 U	1200	0.18 J	DMETAL
BULB2	09/30/2011	220	0.52 J	2.6	66 J	1 U	NA	0.14 J	31000	1 U	1.4	1.6 U	880 J	0.67 J	METAL
BULB2	04/05/2012	17 J	0.21 J	3.1	370 J	1 U	NA	1 U	180000 J	0.56 J	1.8	1.7 J	3100 J	1 U	DMETAL
BULB2	04/05/2012	40 UJ	0.38 J	3.4	370 J	0.21 J	NA	0.54 UJ	180000	0.34 J	1.7	5.2	3100	0.91 J	METAL
BULB2	04/05/2013	12 J	1 U	2	65	1 U	NA	1 U	41000	1 U	1.3	2.3 U	220	1 U	DMETAL
BULB2	04/10/2014	50 U	1 U	2.4	74	4.3 U	NA	1.3 U	43000	0.2 J	1.4	1 U	520	0.14 J	DMETAL
BULB2	04/13/2015	50 U	1 U	3.3	53	1 U	NA	1 U	29000	1 U	0.72 J	1 U	720	1 U	DMETAL
CCC1	09/08/2010	72	1 U	3	6.3	0.5 U	91 J	1 U	27000	0.84 J	0.5 U	1.5 J	88 J	2 U	METAL
CCC1	04/14/2011	75 U	1.2	2.4	6.4	3.2 UJ	NA	2 U	34000	1.9	1 U	4.6	43 J	1.9 U	DMETAL
CCC1	10/05/2011	50 U	1 U	0.45 J	3.2	1 UJ	NA	1 U	37000	1 U	1 U	1 U	50 U	1 U	DMETAL
CCC1	04/10/2012	50 U	1 U	2.5	6.8	1 U	NA	0.27 J	44000	0.34 J	1 U	2.3 U	50 U	1 U	DMETAL
CCC2	09/08/2010	20 U	1 U	2.3	24	0.5 U	140	1 U	48000	32	0.5 U	1.5 J	100 U	2 U	METAL
CCC2	04/14/2011	17 J	1 U	0.96 J	39	1 U	NA	0.66 J	210000	2.3	1 U	1 U	50 UJ	1 U	METAL
CCC2	04/14/2011	75 U	0.51 J	0.85 J	36	3.2 UJ	NA	2 U	210000	2.1	1 U	20	47 J	2.6	DMETAL
CCC2	10/04/2011	50 U	0.54 J	3.6	21	1 U	NA	1 U	65000	13	0.25 J	1.6 U	540	1 U	DMETAL
CCC2	10/04/2011	130	4	1.8	19	1 U	NA	0.13 J	62000	12	1 U	1.6 U	140	0.3 J	METAL
CCC2	04/10/2012	50 U	0.2 J	1.1	29	1 U	NA	0.24 J	96000	9.4	1 U	2.3 U	17 J	1 U	METAL
CCC2	04/10/2012	50 U	1 U	1.2	35	1 U	NA	0.34 J	120000	4.5	1 U	2.3 U	12 J	1 U	DMETAL
CCC2	04/02/2013	50 U	0.29 J	0.9 J	23	1 U	NA	1 U	66000	18	1 U	2.3 U	50 U	1 U	DMETAL
CCC2	04/02/2013	50 U	1 U	0.86 J	21	1 U	NA	1 U	63000	16	1 U	2.3 U	50 U	1 U	DMETAL
CCC2	04/02/2014	50 U	0.51 J	1.3	23	1 U	NA	1 U	59000	28	1 U	3.4 U	63 U	1 U	DMETAL
CCC2	04/15/2015	50 U	1 U	1.6	45	1 U	NA	1 U	65000	26 J	1 U	0.68 UJ	110 U	1 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
CCC3	09/03/2010	390	1 U	5.9	27	0.5 U	190	1 U	68000	2.8	2.1	2.4	550	2 U	METAL
CCC3	09/03/2010	29	1 U	4.6	22	0.5 U	130	1 U	64000	1.1	1.8	1.3 J	91 J	2 U	METAL
CCC3	04/12/2011	50 U	0.19 J	2.9	9.6	1 U	NA	1 U	45000	0.86 J	1 U	12 J	50 U	0.55 J	DMETAL
CCC3	10/04/2011	50 U	0.45 J	6.7	18	1 U	NA	1 U	61000	1 U	0.48 J	1.6 U	100 U	1 U	DMETAL
CCC3	10/04/2011	50 U	0.15 J	2.4	17	1 U	NA	1 U	59000	0.67 J	0.68 J	1.6 U	100 U	1 U	DMETAL
CCC3	04/10/2012	50 U	1 U	4.4	13	1 U	NA	1 U	61000	0.28 J	0.73 J	2.3 U	14 J	1 U	DMETAL
CCC3	04/02/2013	100	1.8	2	13	1 U	NA	1 U	55000	0.46 J	1 U	0.83 J	63	0.35 J	DMETAL
CCC3	04/02/2014	50 U	1 U	2.6	14	1 U	NA	1 U	61000	1 U	0.2 J	3.4 U	32 J	1 U	DMETAL
CCC3	04/15/2015	50 U	0.22 J	2.7	15	1 U	NA	1 U	50000	1 U	0.15 J	0.63 UJ	50 U	1 U	DMETAL
CCCT	09/03/2010	55	1 U	3.9	28	0.5 U	210	1 U	100000	1 U	2	1.8 J	260	2 U	METAL
CCCT	04/18/2011	50 U	0.6 J	1.7 J	24	1 UJ	NA	2 U	100000	1.3 U	1 U	12 J	50 UJ	0.69 J	DMETAL
CCCT	10/03/2011	50 U	0.11 J	3.5	22	1 U	NA	1 U	98000	0.53 UJ	0.44 J	1.6 U	98	1 U	DMETAL
CCCT	04/04/2012	50 U	1.4	2.6	24	1 U	NA	1 U	110000	1 U	0.26 J	2.3 U	70 UJ	1 U	DMETAL
CTP	09/30/2010	23	1 U	2.6	38	0.5 U	120	1 U	50000	1.1	0.54	2 U	150	2 U	METAL
CTP	09/30/2010	17 J	1 U	2.5	39	0.5 U	110	1 U	50000	1.1	0.52	2 U	140	2 U	METAL
CTP	04/14/2011	75 U	1.1 U	1.3 J	55	1 UJ	NA	9.3	50000	0.47 J	0.61 J	5.4	44 J	1.9 U	DMETAL
CTP	10/06/2011	50 U	0.32 UJ	0.81 J	65	1 U	NA	0.52 J	47000 J	0.45 J	1 U	1 U	50 U	1 U	DMETAL
CTP	04/03/2012	50 U	0.27 UJ	2.1 UJ	57	1 U	NA	0.62 J	57000	1	1 U	2.3 U	50 U	1 U	DMETAL
CTP	04/04/2013	50 U	1 U	0.81 J	66	1 U	NA	1	57000	0.34 J	0.22 J	2.3 U	19 UJ	0.12 UJ	DMETAL
CTP	04/03/2014	50 U	0.12 J	0.92 J	85	1 U	NA	2	62000	1.4	0.2 J	3.4 U	25 J	1 U	DMETAL
CTP	04/03/2014	50 U	0.13 J	0.98 J	81	1 U	NA	2.1	61000	1.4	0.23 J	3.4 U	63 U	1 U	DMETAL
CTP	04/17/2015	50 U	1 U	1.2	80	1 U	NA	2.6	58000	1.4	0.32 J	1 U	28 J	0.088 UJ	DMETAL
CTPS	09/30/2010	36	1 U	3.6	82	0.5 U	260	1 U	130000	1.4	1.6	1.8 J	240	2 U	METAL
CTPS	04/19/2011	50 U	0.39 J	0.96 J	13	0.14 J	NA	2 U	47000	1.3 U	1 U	5	89 U	1.1	DMETAL
CTPS	10/07/2011	50 U	0.52 J	1.5	20	1 U	NA	0.82 J	55000	1 U	1 U	1 U	50 U	1 U	DMETAL
CTPS	04/05/2012	50 U	1 U	1.1	17	0.26 J	NA	1 U	36000	0.37 J	1 U	1.2 J	50 U	1 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
DH	09/30/2010	20 U	1 U	3.5	41	0.5 U	320	0.75 J	530000	1 U	1.2	2.8	100 U	2 U	METAL
DH	04/14/2011	75 U	1.1 U	1.3 J	89	1 UJ	NA	1.9 J	590000	0.28 J	0.33 J	3.5	89 U	1.9 U	DMETAL
DH	10/05/2011	50 U	0.18 J	1.6	100	1 UJ	NA	1 U	810000	1 U	2.7	53	50 U	1.3	DMETAL
DH	04/06/2012	34 UJ	0.21 J	18	88	1 U	NA	0.46 UJ	510000	1.5	12	2.3 U	10000	1 U	DMETAL
DHR	04/04/2013	50 U	1 U	2.4	46	1 U	NA	0.43 J	690000	1 U	1.1	17	50 U	1 U	DMETAL
DHR	04/10/2014	50 U	0.32 J	2.6	82	1 U	NA	0.28 J	860000	1 U	3.9	3.4 U	330	1 U	DMETAL
DHR	04/13/2015	50 U	1 U	9.8	71	1 U	NA	0.16 J	710000	0.41 J	5.8	1 U	7200	1 U	DMETAL
EERC	10/01/2010	10 J	1 U	11	39	0.5 U	480	1 U	450000	1 U	11	2.9	840	2 U	METAL
EERC	04/20/2011	75 U	1.1 U	2.9	19 J	3.2 U	NA	2 U	420000	1.3 U	0.54 J	6.2	89 U	1.9 U	DMETAL
EERC	04/20/2011	75 U	0.52 J	1.7 J	22	3.2 U	NA	2 U	460000	1.3 U	0.37 J	0.96 J	89 UJ	1.9 U	METAL
EERC	10/07/2011	50 U	0.56 J	3.1	20	1 U	NA	1 U	350000	1 U	5.1	1 U	32 J	1 U	DMETAL
EERC	10/07/2011	420	0.87 J	5.2	27	0.16 J	NA	0.29 J	350000	0.81 J	5.6	2.4	1000	0.41 J	METAL
EERC	04/06/2012	7 UJ	0.34 J	2.6	23	0.28 J	NA	1 U	330000	0.62 J	1 U	0.86 J	50 U	1 U	DMETAL
EERC	04/06/2012	19 J	2.9	2.4	25	1 U	NA	0.13 J	320000	0.74 J	1 U	0.96 J	36 UJ	1 U	METAL
EERC	04/08/2013	6.5 J	1 U	5.2	26	1 U	NA	1 U	420000	1 U	6.3	2.3 U	380	1 U	DMETAL
EERC	04/03/2014	50 U	0.25 J	4.2	28	1 U	NA	1 U	440000	0.19 J	3.3	3.4 U	980	1 U	DMETAL
EERC	04/16/2015	24 J	0.14 J	4.2	30	1 U	NA	1 U	310000	1 U	5.1	0.49 UJ	960	1 U	DMETAL
EPA	09/16/2010	130	1 U	3.2	50	0.5 U	190	1 U	88000	2.1	0.74	2.7	230	2 U	METAL
EPA	04/19/2011	50 U	0.48 J	1.6 J	42	0.14 J	NA	2 U	120000	1.4	1 U	2.1 J	89 U	0.57 J	DMETAL
EPA	10/06/2011	50 U	0.41 UJ	2.3	38	1 U	NA	0.3 J	89000 J	1 U	1 U	7.5	50 U	1 U	DMETAL
EPA	04/06/2012	50 U	1 U	1.9	45	1 U	NA	1 U	100000	1 U	0.44 J	2.3 U	66 UJ	1 U	DMETAL
EPA	04/06/2012	50 U	1 U	1.8	51	0.44 J	NA	1 U	120000	0.86 J	0.91 J	1.2 J	50 U	1 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
ETA	09/24/2010	1600	1 U	22	39	0.5 U	150	0.93 J	110000	5.8	3.8	22	3300	9.8	METAL
ETA	09/24/2010	630	1 U	13	28	0.5 U	140	1 U	110000	2.6	2.4	8	1800	3.2	METAL
ETA	04/12/2011	50 U	0.26 J	7.4	18	1 U	NA	0.37 J	120000	0.093 J	1.3	2.1 J	120	0.36 J	DMETAL
ETA	04/12/2011	870	0.56 J	17 J	34	1 U	NA	2.4	120000	3.1	2.4	8.3	2100	4.1	METAL
ETA	09/30/2011	50 U	0.38 J	5.3	16	1 U	NA	0.28 J	99000	0.75 UJ	3	1.6 U	380	1 U	DMETAL
ETA	09/30/2011	430	1.3	5.9	21 J	1 U	NA	0.46 J	96000	0.69 J	3.4	2.9	1900 J	2.4	METAL
ETA	04/10/2012	140	0.4 J	5.7	21	0.64 J	NA	0.7 J	120000	0.4 J	2.7	2.9	930	0.94 J	METAL
ETA	04/10/2012	50 U	1 U	5.5	20	1 U	NA	0.45 J	150000	0.23 J	2.4	2.3 U	410	1 U	DMETAL
ETA	04/10/2012	50 U	1 U	5.9	20	1 U	NA	0.73 J	140000	0.23 J	2.2	2.3 U	390	1 U	DMETAL
ETA	04/10/2012	120	0.37 J	5.3	20	1 U	NA	0.47 J	110000	0.35 J	2.7	2.6	880	0.56 J	METAL
ETA	04/05/2013	50 U	1 U	3.3	17 J	1 U	NA	1 U	100000	1 U	2.6	2.3 U	930	1 U	DMETAL
ETA	04/08/2014	56	0.15 J	4.4	24	1 U	NA	1 U	130000	1 U	3.7	3.4 U	1000 J	0.29 J	DMETAL
ETA	04/13/2015	14 J	0.18 J	5.7	25	0.098 UJ	NA	0.16 J	150000	0.14 J	2.7	1 U	1300	0.17 J	DMETAL
EXT	09/30/2011	50 U	0.32 J	0.46 J	55	1 U	NA	1 U	14000	0.72 UJ	1 U	1.6 U	50 U	1 U	DMETAL
EXT	09/30/2011	50 U	1 U	0.32 J	54	1 U	NA	1 U	12000	1 U	1 U	1 U	100	1 U	METAL
FG	09/23/2010	30000	1 U	9.7	190	2.6	120	1.9	120000	50	49	56	34000	33	METAL
FG	04/19/2011	50 U	0.47 J	1.2 J	21	0.25 J	NA	2 U	33000	1.3 U	1 U	24	89 U	2.8	DMETAL
FG	04/19/2011	1500	0.63 J	2.2	33	0.31 J	NA	2 U	34000	3.8	0.98 J	2.5	1600	0.87 J	METAL
FG	04/19/2011	50 U	0.4 J	1.2 J	21	0.14 J	NA	2 U	33000	0.61 J	1 U	35	89 U	2.2	DMETAL
FG	04/19/2011	760	0.58 J	1.7 J	29	0.25 J	NA	2 U	34000	2.2	1.7	2.4	1100	0.72 J	METAL
FG	10/10/2011	75	0.22 J	1 J	29	1 U	NA	0.25 J	50000	0.61 J	1 U	0.71 J	180	0.17 J	METAL
FG	10/10/2011	50 U	0.35 UJ	1.4	23	1 U	NA	0.19 J	48000	1 U	1 U	5.2	50 U	0.2 J	DMETAL
FG	04/09/2012	50 U	1 U	1.4	15 J	1 U	NA	1 U	25000	0.48 J	1 U	2.3 U	35 J	1 U	DMETAL
FG	04/09/2012	150	1 U	1.4	16	1 U	NA	0.11 J	25000	0.73 J	0.24 J	1 J	200	1 U	METAL
FG	04/03/2013	77	6.4	1.1	24	1 U	NA	1 U	28000	1 U	1 U	2.3 U	22 J	1 U	DMETAL
FG	04/09/2014	50 U	2.7	1.3	19	1 U	NA	1 U	18000	0.37 J	0.15 J	2.3 J	58 UJ	1 U	DMETAL
FG	04/16/2015	45 J	0.16 J	1.7	31	1 U	NA	1 U	26000	0.41 J	1 U	0.36 UJ	50 J	0.11 UJ	DMETAL

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
GEO	09/03/2010	12 J	1 U	1.8	56	0.5 U	120	1 U	59000	1.6	0.5 U	1.1 J	100 U	2 U	METAL
GEO	04/20/2011	75 U	1.1 U	1.7 J	88 J	3.2 U	NA	2 U	69000	1.3 U	0.63 J	27	89 UJ	1.7 J	DMETAL
GEO	10/06/2011	50 U	0.27 UJ	2.5	67	1 U	NA	1 U	51000 J	1.7	1 U	1 U	50 U	1 U	DMETAL
GEO	04/06/2012	15 UJ	1 U	1.6	94	0.26 J	NA	0.17 UJ	67000	0.62 J	1 U	2.3 U	50 U	1 U	DMETAL
MFA	09/24/2010	160	1 U	2.3	33	0.5 U	140	1 U	75000	0.65 J	1.1	1.8 J	220	2 U	METAL
MFA	04/12/2011	50 UJ	0.98 J	1.4	28	1 U	NA	1 U	45000	0.28 J	0.81 J	9.5 J	50 U	0.62 J	DMETAL
MFA	10/03/2011	50 U	0.11 J	0.47 J	48	1 U	NA	0.15 J	74000	0.8 UJ	0.71 J	6.2	500 U	1 U	DMETAL
MFA	04/05/2012	50 U	0.79 J	2.3	31	1 U	NA	0.57 J	47000	1 U	0.92 J	1.6 J	5.8 UJ	1 U	DMETAL
MFA	04/08/2014	50 U	0.15 J	1.5	38	1 U	NA	1 U	72000	1 U	0.99 J	3.4 U	45 J	1 U	DMETAL
NRLF	09/16/2010	25	1 U	3.3	13	0.5 U	110	1 U	50000	1 U	0.57	2 U	300	2 U	METAL
NRLF	04/20/2011	75 U	0.41 J	5.2	15 J	3.2 U	NA	2 U	63000	1.3 U	0.86 J	82	150 UJ	4.1	DMETAL
NRLF	10/06/2011	50 U	0.38 UJ	1.4	30	1 U	NA	1 U	34000 J	1 U	1 U	1 U	50 U	1 U	DMETAL
NRLF	04/09/2012	50 U	0.61 J	2.9	58	1 U	NA	1 U	47000	1 U	0.64 J	2.3 U	180	1 U	DMETAL
NRLF	04/03/2013	50 U	1 U	7	60	1 U	NA	1 U	48000	1 U	0.37 J	2.3 U	3100	1 U	DMETAL
NRLF	04/09/2014	50 U	0.21 J	2	81	1 U	NA	1 U	50000	0.2 J	0.34 J	3.4 U	110 UJ	1 U	DMETAL
NRLF	04/16/2015	50 U	1 U	4.5	87	1 U	NA	1 U	51000	1 U	0.33 J	1 U	900	0.085 UJ	DMETAL
OBS6	09/30/2011	33 J	0.21 J	3.6	100	1 U	NA	1 U	40000	1.5 UJ	1 U	1.6 U	50 U	1 U	DMETAL
OBS6	09/30/2011	50 U	1 U	1.7	110	1 U	NA	1 U	37000	0.15 J	1 U	2.7	22 J	2.4	METAL

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
PZ11	10/01/2010	20 U	1 U	2.5	11	0.5 U	77 J	2.7	200000	1 U	1	22	100 U	2 U	METAL
PZ11	04/20/2011	1200	1.1 U	0.67 J	12 J	2.1 J	NA	30	240000	1 J	3.7	1200	89 UJ	2.6	DMETAL
PZ11	04/20/2011	1200	0.56 J	0.82 J	13	1.8 J	NA	35	260000	0.74 J	3.4	1300	95 UJ	0.67 J	METAL
PZ11	10/10/2011	50 U	0.37 UJ	1.6	10	1 U	NA	4.9	230000	1 U	1.2	12	50 U	1 U	DMETAL
PZ11	10/10/2011	50 U	0.17 J	1.4	10	1 U	NA	3.4	230000	1 U	1.3	34	38 J	1 U	METAL
PZ11	04/05/2012	600	1 U	1.1	11	1.1	NA	22	160000	1.9	1.5	800	17 UJ	1 U	DMETAL
PZ11	04/05/2012	740	0.18 J	0.5 J	10	0.98 J	NA	19	130000	68 U	1.4	770	50 U	1 U	METAL
PZ11	04/05/2013	32 J	5.3	1.1	15	1 U	NA	5.9	210000	1 U	3.3	21	83	1 U	DMETAL
PZ11	04/05/2013	34 J	1 U	1.2	14	1 U	NA	6.5	240000	1 U	3.6	23	67	1 U	DMETAL
PZ11	04/09/2014	50 U	0.36 J	1.6	22	1 U	NA	1 U	320000	1 U	5.7	2.7 J	400	1 U	DMETAL
PZ11	04/16/2015	50 U	0.13 J	1.7	17	1 U	NA	4.9	190000	1 U	2.6	8.4	29 J	1 U	DMETAL
PZ8	10/15/2010	68	1 U	1.6	96	0.5 U	97 J	1 U	44000	1.3	0.29 J	1.5 J	110	2 U	METAL
PZ8	04/18/2011	50 U	0.32 J	2	84	1 UJ	NA	2 U	40000	1.1 J	1 U	3.7 J	50 UJ	0.45 J	DMETAL
PZ8	10/04/2011	50 U	0.36 J	7.7	99	1 U	NA	1 U	44000	1.2	1 U	1.6 U	100 U	1 U	DMETAL
PZ8	04/03/2012	50 U	1 U	2.1 UJ	88	1 U	NA	0.48 J	44000	1	1 U	1.6 J	50 U	1 U	DMETAL
PZ8	04/08/2013	15 J	1 U	1.1	84	1 U	NA	1 U	45000	0.89 J	1 U	1.1 J	50 U	1 U	DMETAL
PZ8	04/08/2014	30 J	0.17 J	1.3	95	1 U	NA	1 U	53000	0.97 J	0.24 J	3.4 U	41 J	0.14 J	DMETAL
PZ8	04/14/2015	50 U	0.26 J	1.5	84	0.1 J	NA	1 U	48000	1	1 U	1 U	50 U	0.076 J	DMETAL
PZ8	04/14/2015	50 U	0.18 J	1.3	84	1 U	NA	1 U	47000	1.2	1 U	1 U	50 U	1 U	DMETAL
PZ9	09/24/2010	20 U	1 U	2.7	79	0.5 U	62 J	1 U	36000	1 U	0.29 J	2 U	100 U	2 U	METAL
PZ9	04/20/2011	75 U	1.1 U	1.9	84 J	3.2 U	NA	2 U	37000	1.3 U	0.8 J	5.8	89 UJ	1.9 U	DMETAL
PZ9	10/07/2011	50 U	0.4 J	2.3	67	1 U	NA	1 U	29000	1 U	1 U	1 U	50 U	1 U	DMETAL
PZ9	10/07/2011	50 U	0.45 J	3.2	66	1 U	NA	0.19 J	30000	1 U	0.17 J	1 U	50 U	1 U	DMETAL
PZ9	04/06/2012	26 UJ	0.32 J	3	130 J	1 U	NA	1 U	47000	1 U	1	2.3 U	92 UJ	1 U	DMETAL
RWF	09/15/2010	54	1 U	1.3	120	0.5 U	100	1 U	72000	1.6	0.5 U	1.6 J	83 J	2 U	METAL
RWF	04/18/2011	10 J	0.26 J	0.63 J	79	1 UJ	NA	2 U	72000	0.58 J	1 U	3.7 J	50 UJ	0.49 J	DMETAL
RWF	10/06/2011	50 U	0.43 UJ	1.3	120	1 U	NA	1 U	63000 J	0.78 J	1 U	1 U	50 U	1 U	DMETAL
RWF	04/04/2012	50 U	0.18 J	2.2	150	0.21 J	NA	1.1	71000	0.47 J	0.52 J	1 J	28 UJ	1 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Analysis Group
California MCLs		1000	6	10	1000	4		5		50		1300		15	
Federal MCLs			6	10	2000	4		5		100		1300		15	
TP1	09/29/2010	22	1 U	1.9	29	0.5 U	90 J	1 U	67000	1 U	0.28 J	1.3 J	100 U	2 U	METAL
TP1	04/18/2011	50 U	0.24 J	2.2	42	1 UJ	NA	2 U	160000	1.3 U	1.3	7.8 J	310	0.55 J	DMETAL
TP1	10/07/2011	50 U	0.52 J	1.4	23	1 U	NA	1 U	59000	1 U	0.86 J	1 U	50 U	1 U	DMETAL
TP1	04/05/2012	50 U	1 U	8.4	54	1 U	NA	1 U	180000	1 U	6.5	1.1 J	1200	1 U	DMETAL
TP1	04/04/2013	12 J	1 U	1.5	30	1 U	NA	1 U	100000	1 U	0.22 J	2.3 U	1500	1 U	DMETAL
TP1	04/02/2014	50 U	1 U	11	35	1 U	NA	1 U	160000	0.17 J	2.3	3.4 U	3000	1 U	DMETAL
TP1	04/10/2015	9.1 J	0.23 J	3.8	26	0.11 J	NA	1 U	140000	0.16 UJ	0.29 J	0.3 J	3000 J	0.076 J	DMETAL
TP2	09/29/2010	90	1 U	1.3	110	0.5 U	110	1 U	87000	1.9	0.39 J	2 U	150	2 U	METAL
TP2	04/18/2011	50 U	0.22 J	0.74 J	97	1 UJ	NA	2 U	75000	1.2 J	1 U	2.2 UJ	50 UJ	0.16 J	DMETAL
TP2	10/07/2011	50 U	1	2.4	81	1 U	NA	0.38 J	76000	0.7 J	1 U	1 U	50 U	0.27 J	DMETAL
TP2	04/09/2012	50 U	0.28 J	1.3	89	1 U	NA	0.42 J	77000	1.7	1 U	2.3 U	5.3 J	1 U	DMETAL
TP2	04/09/2012	50 U	1 U	1.9	91	1 U	NA	0.22 J	78000	1.7	1 U	2.3 U	50 U	1 U	DMETAL
WTA	09/30/2010	30	1 U	2.2	36	0.5 U	150	1 U	110000	9.5	0.33 J	2 U	100 U	2 U	METAL
WTA	04/14/2011	75 U	0.51 J	1.3 J	36	3.2 UJ	NA	2 U	99000	6	1 U	11	89 U	1.9 U	DMETAL
WTA	04/14/2011	86	1 U	1.5 J	39	1 U	NA	0.34 J	100000	6	0.17 J	1 U	100 UJ	1 U	METAL
WTA	04/14/2011	75 U	1.1 U	1.6 J	37	3.2 UJ	NA	2 U	93000	6.1	1 U	3	89 U	1.9 U	DMETAL
WTA	04/14/2011	66	1 U	1.7 J	39	1 U	NA	0.47 J	110000	6.1	0.16 J	1 U	80 UJ	1 U	METAL
WTA	10/05/2011	50 U	1 U	0.55 J	41	1 UJ	NA	1 U	100000	4.5	1 U	1 U	50 U	1 U	DMETAL
WTA	10/05/2011	150	1 U	1.6	47	1 U	NA	0.25 J	98000	5.1	0.49 J	5.2 U	270	0.17 J	METAL
WTA	04/05/2012	17 J	1 U	2.4	55	1 U	NA	1 U	100000	5.8	1 U	2.3 U	8.1 UJ	1 U	DMETAL
WTA	04/05/2012	87 UJ	0.23 J	2.3	48	1 U	NA	0.35 UJ	90000	5.2	1 U	2.3 U	68 UJ	1 U	METAL

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganes	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
B120	09/09/2010	150000	92	0.03 U	2.7	7.1	1600 J	2 U	0.5 U	170000	2 U	4.6	15	METAL
B120	04/15/2011	180000	140	0.2 U	2.2 UJ	1 U	1300	1 U	1.7 U	160000	1 U	5.2	3.3 J	DMETAL
B120	10/04/2011	170000	290	0.2 U	0.79 UJ	11	1900	0.97 J	1 U	160000	0.13 J	7.6	9 U	DMETAL
B120	04/03/2012	160000	330	0.079 J	0.9 J	6.5	1700 U	1 U	1 U	180000	1 U	4.7	9 U	DMETAL
B121	09/08/2010	39000	320	0.02 J	1.7	4.3	1600 J	2 U	0.5 U	75000	2 U	2.5 J	6.4	METAL
B121	04/13/2011	34000	7.7	0.2 U	0.33 J	1.2	850	1 U	1 U	59000	1 U	4	20	DMETAL
B121	10/04/2011	40000	8.2	0.2 U	1 U	1 U	640	1 U	0.14 J	64000	1 U	5.9	9.8	DMETAL
B121	04/04/2012	40000	7.6	0.2 U	0.89 J	1 U	470	0.34 UJ	1 U	68000	1 U	4.4	3.8 J	DMETAL
B128	09/23/2010	46000	360	0.048	2.8	2.7	6400	2 U	0.5 U	180000	2 U	4 U	2.8 J	METAL
B128	09/23/2010	39000	56	0.015 J	1.7	2	7700	2 U	0.5 U	170000	2 U	4 U	6.9	METAL
B128	04/18/2011	16000	69	0.11 J	0.91 J	10	730	0.4 J	1.7 U	93000	0.11 J	1.5 UJ	9 U	DMETAL
B128	10/04/2011	22000	170	0.052 UJ	0.36 UJ	7.1	1300	1 U	0.095 J	130000	1 U	2.5	21	DMETAL
B128	04/02/2012	17000	15	0.089 J	1 U	7.2	170 U	0.58 UJ	0.6 J	83000	1 U	1.9	9 U	DMETAL
B128	04/05/2013	17000	86	0.025 J	0.6 UJ	5.8	510	1 U	1 U	110000	1 U	1.2	20 U	DMETAL
B128	04/10/2014	17000	3.6	0.2 U	0.45 J	6	600	1 U	1 U	120000	1 U	1.2	5 U	DMETAL
B128	04/13/2015	18000	35	0.2 U	0.5 UJ	11	210 J	1 U	1 U	98000	1 U	1.8 UJ	12 U	DMETAL
B128	04/13/2015	18000	37	0.2 U	0.46 UJ	10	270 J	0.21 UJ	1 U	100000	1 U	2 UJ	12 U	DMETAL
B150	09/08/2010	19000	30	0.03 U	0.36 J	5.3	1300 J	3.2	0.5 U	36000	2 U	4 U	3.1 J	METAL
B150	04/13/2011	14000	2.2	0.2 U	1 U	2.7	560	37	1 U	26000	1 U	1.4	18	DMETAL
B150	10/05/2011	16000 UJ	5 U	0.2 U	1 U	1 U	580	14	1 U	29000	1 U	6	5 U	DMETAL
B150	10/05/2011	16000 J	5 U	0.2 U	1 U	1 U	590	10	1 U	29000	1 U	2.8	5 U	DMETAL
B150	04/04/2012	13000	1 U	0.2 U	0.22 J	0.58 J	170 U	67	1 U	30000	1 U	2.3	4.6 J	DMETAL
B150	04/04/2012	14000	0.9 J	0.2 U	0.53 J	0.71 J	170 U	66	1 U	30000	1 U	3.1	9 U	DMETAL
B150	04/02/2013	14000	0.76 UJ	0.2 U	1 U	3.4	50 U	29	1 U	26000	1 U	1.2	17 J	DMETAL
B150	04/01/2014	12000	4.6	0.2 U	3.2 U	3.7	250	82	1 U	26000	1 U	0.6 J	5.6 J	DMETAL
B150	04/15/2015	14000	0.16 UJ	0.2 U	0.56 UJ	3.9	170	36	1 U	31000	1 U	3 UJ	12 U	DMETAL
B150	04/15/2015	12000	0.16 UJ	0.2 U	0.52 UJ	3.3	140	31	1 U	27000	1 U	2.8 UJ	12 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganes	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
B158	09/08/2010	2600	13	0.03 U	0.87	1.8	1100 J	2 U	0.5 U	52000	2 U	6.4	3 J	METAL
B158	04/15/2011	1900	1.8	0.2 U	1.9 U	1 U	380	0.3 J	1.7 U	36000	0.068 J	5.9	9 U	DMETAL
B158	10/05/2011	2500	2.3 J	0.2 U	1 U	1 U	350 J	1 U	1 U	50000	1 U	8	5 U	DMETAL
B158	04/06/2012	2900	1.3	0.2 U	0.52 J	1 U	170 U	1 U	0.18 J	53000	1 U	7.3	35	DMETAL
B158	04/08/2013	2200	5.5	0.2 U	0.38 UJ	1 U	340	0.31 J	1 U	50000	1 U	7.3	20 U	DMETAL
B158	04/02/2014	2400	9.5	0.2 U	0.72 J	4.2 U	320	1 U	1 U	48000	1 U	7.1	2.4 J	DMETAL
B158	04/16/2015	2200	54	0.2 U	0.61 UJ	2.2	170	1 U	1 U	49000	1 U	7.1	12 U	DMETAL
B163	09/02/2010	200000	17000	0.083	0.95	170	2800	2 U	0.5 U	230000	2 U	4 U	9.2	METAL
B163	04/12/2011	180000	15000	0.2 UJ	0.23 J	180	1500	1 UJ	1 U	190000	0.08 J	1.9	27	DMETAL
B163	04/12/2011	190000	19000	0.19 J	1 UJ	200	1600	0.39 J	1 U	190000	0.063 J	2.2	27	METAL
B163	10/03/2011	330000	20000	0.17 UJ	0.71 UJ	200	1800	0.65 J	1 U	240000	1 U	0.68 J	15	DMETAL
B163	10/03/2011	240000	20000	0.18 J	0.35 UJ	200	2200 J	0.36 UJ	1 U	250000	1 U	2.2	4.1 J	METAL
B163	04/02/2012	200000	16000	0.23	2.4	180	1800	1.2 UJ	1 U	210000	1 U	3.3	9.1	DMETAL
B163	04/02/2012	200000 J	17000	0.22	1.2 UJ	200	990	1.3 J	1 U	220000	1 U	2.7	7.9 J	METAL
B163	04/03/2013	230000 J	19000	0.095 J	1.7 UJ	200 J	1800 J	1 U	1 U	190000	1 U	1.9	30	DMETAL
B163	04/01/2014	220000	19000	0.2 U	3.2 U	200	1600	0.39 J	1 U	230000	1 U	2.6	8.8 J	DMETAL
B163	04/14/2015	220000	20000	0.053 J	1.1 UJ	210	13000	0.22 J	1 U	200000	1 U	2.5	6.9 J	DMETAL
B175S	09/03/2010	43000	250	0.072	1.3	3.3	2100	2 U	0.5 U	91000	2 U	4 U	2.5 J	METAL
B175S	04/13/2011	30000	12	0.2 U	0.23 J	2.3	740	0.86 J	1 U	67000	0.062 J	2.3	14	DMETAL
B175S	10/04/2011	38000	39	0.054 UJ	0.27 UJ	1 U	630	0.26 J	1 U	67000	1 U	2.7	7.1 J	DMETAL
B175S	04/04/2012	35000	4.6	0.2 U	1 U	1 U	110 J	0.76 UJ	1 U	74000	1 U	2.3	9 U	DMETAL
B175S	04/02/2013	45000	8.2	0.06 J	0.52 UJ	0.59 UJ	450	0.28 J	1 U	84000	1 U	2.9	14 J	DMETAL
B175S	04/01/2014	49000	4.1	0.2 U	3.2 U	1.8 J	490	1.5	1 U	100000	1 U	3.5	16 U	DMETAL
B175S	04/15/2015	42000	3.7	0.033 J	1.6 UJ	1.4	500	1.2	1 U	82000	0.12 J	3.3 UJ	12 U	DMETAL
B175W	09/08/2010	12000	17	0.03 U	0.54	2.5	2700	2 U	0.5 U	56000	2 U	4 U	3.8 J	METAL
B175W	04/13/2011	9700	3.2	0.2 U	0.78 J	0.96 J	1600	1 UJ	1 U	45000	1 U	2.4	15	DMETAL
B175W	10/04/2011	13000	39	0.065 UJ	0.93 UJ	1 U	890	1 U	1 U	45000	1 U	4.7	18	DMETAL
B175W	04/04/2012	11000	4	0.2 U	3	1 U	280	1.1 UJ	1 U	45000	1 U	2	9 U	DMETAL

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganes	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
B177	09/23/2010	9900	3.9	0.03 U	0.27 J	1.8	2000 U	1.1 J	0.5 U	32000	2 U	4 U	4 J	METAL
B177	04/18/2011	14000	0.95 J	0.038 J	0.52 J	1 U	280	1.8	1.7 U	34000	1 U	1.7 UJ	5 U	DMETAL
B177	10/05/2011	11000 J	9.8	0.2 U	1 U	1 U	250 J	1 U	1 U	29000	0.28 J	3	5.8	DMETAL
B177	04/04/2012	21000	0.44 J	0.2 U	0.23 J	7.1	170 U	2.6	1 U	45000	1 U	2	9.3	DMETAL
B178	09/02/2010	140000	570	0.03 U	2.4	7.5	2800	2 U	0.5 U	150000	2 U	2.9 J	4.7 J	METAL
B178	04/15/2011	140000	430	0.2 U	2.4 UJ	1 U	1400	2.5 U	1.7 U	160000	1 U	4.7	3.4 J	DMETAL
B178	10/04/2011	150000	810	0.2 U	2.3 UJ	12	1400	1.5	0.16 J	130000	0.37 J	6.5	6 J	DMETAL
B178	04/03/2012	150000	1100	0.2 U	1.7	12 J	1500	0.41 UJ	1 U	250000	1 U	3.6	3.7 J	DMETAL
B178	04/02/2013	160000	1800	0.2 U	2.9 UJ	7.7	1200	0.51 J	1 U	160000	1 U	2.1	20 U	DMETAL
B178	04/08/2014	190000	2400	0.2 U	1.8	5.1	1600	0.63 J	1 U	250000	0.054 J	0.46 J	3.2 J	DMETAL
B178	04/10/2015	160000	2200	0.2 U	1.6	4.2	1200	1 U	1 U	160000	1 U	1.6 UJ	12 U	DMETAL
B180	09/15/2010	5200	20	0.03 U	1.2	2.2	2000 U	2 U	0.5 U	92000	2 U	9.6	4.2 J	METAL
B180	04/13/2011	4200	2.7	0.2 U	0.91 J	0.53 J	640	1 UJ	1 U	83000	1 U	6.2	54	DMETAL
B180	10/06/2011	5500 J	0.5 J	0.2 U	1.1 UJ	1 U	340	0.66 J	1 U	76000	1 U	9.6	9.6	DMETAL
B180	10/06/2011	5600 J	0.29 J	0.2 U	1 UJ	1 U	320	0.34 J	1 U	76000	1 U	8.5	28	DMETAL
B180	04/04/2012	4700	0.8 J	0.2 U	1.7	1 U	98 J	0.55 UJ	1 U	78000	1 U	6.7	9 U	DMETAL
B185	09/02/2010	130000	330	0.03 U	1	7.1	2400	2 U	0.5 U	130000	2 U	4 U	3.6 J	METAL
B185	04/15/2011	120000	130	0.2 U	1.9 U	1 U	990	2.5 U	1.7 U	92000	1 U	3.4	8.3	DMETAL
B185	04/15/2011	130000	120	0.2 U	1.9 U	1 U	1000	2.5 U	1.7 U	97000	1 U	3.6	5.8 J	DMETAL
B185	10/03/2011	140000	170	0.088 UJ	0.69 UJ	8.4	1200	0.28 J	1 U	120000	1 U	5.7	47	DMETAL
B185	10/03/2011	220000	170	0.088 UJ	1 U	1 U	1300	1 U	1 U	130000	1 U	5.2	29	DMETAL
B185	04/02/2012	140000	440	0.041 J	0.77 J	5.2	780	0.89 UJ	1 U	120000	1 U	4.8	9 U	DMETAL
B194	09/09/2010	39000	180	0.03 U	2.3	1.8	4400	2 U	0.5 U	120000	2 U	2.4 J	5 U	METAL
B194	04/13/2011	35000	1.8	0.2 U	0.74 J	0.79 J	1100	1 UJ	1 U	99000	1 U	3.9	27	DMETAL
B194	10/04/2011	36000	8.7	0.2 U	1 U	1 U	1000	0.51 J	1 U	110000	0.24 J	4.7	9 U	DMETAL
B194	04/04/2012	35000	0.36 J	0.2 U	1 U	1 U	350 U	1 U	1 U	110000	1 U	4.4	5.4 J	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganes	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
B195	09/09/2010	110000	63	10	1.1	3.1	2900	2 U	0.5 U	130000	2 U	4 U	4.3 J	METAL
B195	04/13/2011	39000	11	2.4	1 UJ	1.1	660	0.43 J	1 U	59000	1 U	4.1	5 UJ	METAL
B195	04/13/2011	36000	5	1.2	0.36 J	1.1	570	1 UJ	1 U	57000	1 U	4	57	DMETAL
B195	04/13/2011	40000	8.1	2.2	1 UJ	2.9 U	690	0.41 J	1 U	60000	1 U	3.9	8 UJ	METAL
B195	04/13/2011	35000	5.1	1.1	0.39 J	1	560	0.44 J	1 U	56000	1 U	3.6	27	DMETAL
B195	10/04/2011	120000	15	10	1.2 UJ	3.3	820	1 U	1 U	110000	1.6	5	9 J	DMETAL
B195	10/04/2011	150000	16	15	2.5	1.5	870	1 U	1 U	140000	0.45 J	4	9 U	METAL
B195	04/03/2012	50000	8.3	2	0.71 J	1 U	390	1.1 UJ	1 U	69000	1 U	6.2	9 U	DMETAL
B195	04/03/2012	43000	7 J	2.7	1 U	0.41 J	740	1.3	1 U	65000	1 U	1.9	9 U	METAL
B195	04/02/2013	78000	1.3 UJ	9.9	1.8 UJ	0.96 UJ	740	0.37 J	0.91 J	99000	1 U	3.9	20 U	DMETAL
B195	04/02/2013	76000	1.2 UJ	11	0.33 UJ	0.89 UJ	650	0.4 J	0.51 J	100000	1 U	3.8	20 U	DMETAL
B195	04/02/2014	84000	5	4.51	0.94 J	2.6 J	790	0.47 J	1 U	100000	0.075 J	3.8	9.2	DMETAL
B195	04/02/2014	78000	3.6	4.59	0.97 J	1.5 J	550	0.61 J	1 U	91000	0.068 J	3.7	4.9 J	DMETAL
B195	04/14/2015	57000	0.3 J	4.8	2.6 UJ	1.1	580	0.54 J	1 U	89000	1 U	5	12 U	DMETAL
B197	09/09/2010	120000	36	0.03 U	1.5	2.8	2000	2 U	0.5 U	130000	2 U	2.7 J	5.8	METAL
B197	09/09/2010	120000	34	0.03 U	1.4	2.6	1800 J	2 U	0.5 U	130000	2 U	2.8 J	3.8 J	METAL
B197	04/13/2011	150000	1300	0.2 U	1.3	8.4	1300	1 U	1 U	140000	1 U	2.4	10	DMETAL
B197	10/04/2011	120000	530	0.2 U	0.73 UJ	8	1300	0.68 J	0.21 J	110000	1 U	6.7	14	DMETAL
B197	04/03/2012	170000	2500	0.049 J	1 U	3.3	1700 U	0.44 UJ	1 U	170000	1 U	1 U	9 U	DMETAL
B197	04/03/2012	160000	2400	0.062 J	1 U	2.2	1700 U	0.47 UJ	1 U	170000	1 U	1 U	9 U	DMETAL
B197R	04/08/2013	160000	16	0.2 U	2.3 UJ	1 U	6300	0.66 J	1 U	180000	1 U	3.4	9.5 J	DMETAL
B197R	04/08/2014	230000	7100	0.2 U	1.6	6.1	2500	1 U	1 U	260000	1 U	0.34 J	16	DMETAL
B197R	04/14/2015	170000	2700	0.2 U	0.8 UJ	2.2	1200 J	1.1 J	1 U	150000 J	0.042 J	1.5	12 U	DMETAL
B277	09/15/2010	23000	9.9	0.03 U	1	1 U	2000	2 U	0.5 U	58000	2 U	2.5 J	5 U	METAL
B277	04/18/2011	22000	37	0.07 J	1.4	1 U	1200	0.53 J	1.7 U	45000	1 U	4.5	7.8 J	DMETAL
B277	10/05/2011	23000 J	35	0.2 U	0.3 J	1 U	1100	1 U	1 U	55000	1 U	6.6	25	DMETAL
B277	04/03/2012	24000	4.8	0.2 U	1.1	1 U	1000	0.56 UJ	1 U	47000	1 U	6.2	12	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
B278	09/16/2010	150000	150	0.015 J	0.62	2.7	3900	2 U	0.5 U	190000	2 U	4 U	6.4	METAL
B278	04/19/2011	130000	35	0.15 J	1.9 UJ	2.3 J	2100	2.5 U	1.7 U	170000	1 U	3	38 J	DMETAL
B278	10/05/2011	150000	46	0.2 U	1 U	1 U	2500	1 U	1 U	170000	1 U	5.1	29	DMETAL
B278	04/05/2012	150000	19	0.036 UJ	0.79 UJ	2.7	1700 U	1 U	1 U	200000	1 U	4.1	20 U	DMETAL
B280A	09/16/2010	29000	15	0.03 U	1.6	0.77 J	1200 J	2 U	0.5 U	66000	2 U	2.4 J	5 U	METAL
B280A	04/14/2011	22000	8.3	0.2 U	1.9 UJ	1 U	570	2.5 U	1.7 U	48000	1 U	3.7	9 U	DMETAL
B280A	10/06/2011	25000 J	14	0.2 U	1.6 UJ	0.37 J	840	0.31 J	1 U	54000	1 U	4.8	8.9	DMETAL
B280A	04/03/2012	27000	6.6	0.2 U	1 U	1 U	730	1 U	1 U	62000	1 U	6.3	9 U	DMETAL
B280B	10/01/2010	25000	7.2	0.03 U	3.8	0.62 J	8900	2 U	0.5 U	130000	2 U	4 U	3.2 J	METAL
B280B	04/14/2011	20000	0.86 J	0.2 U	1.9 UJ	1 U	3900	2.5 U	1.7 U	87000	1 U	2.7	6.5 J	DMETAL
B280B	10/06/2011	21000 J	22	0.2 U	2.8	1 U	3000	1 U	1 U	72000	1 U	2.3	7.3	DMETAL
B280B	04/03/2012	20000	3.8	0.066 J	1 U	1 U	2900	1 U	1 U	78000	1 U	5.1	9 U	DMETAL
B300	09/09/2010	82000	110	0.03 U	1	2.8	4100	2 U	0.5 U	110000	2 U	4 U	5 U	METAL
B300	04/15/2011	160000	12000	0.2 U	1.9 UJ	0.8 J	9100 J	0.4 J	1.7 U	190000	1 U	0.73 J	9 U	DMETAL
B300	10/06/2011	5300 J	1400	0.11 UJ	20 U	23 U	13000	20 U	20 U	6500	10 U	12 J	1000	DMETAL
B300	04/09/2012	130000	9200	0.06 UJ	1 U	7.6	3800	1 U	1 U	140000	1 U	0.51 J	53	DMETAL
B38	09/15/2010	23000	37	0.03 U	0.58	3.9	1600 J	2 U	0.5 U	57000	2 U	4 U	3.6 J	METAL
B38	04/19/2011	18000	4.3	0.2 U	1 UJ	2.2 J	520	2.5 U	1.7 U	47000	1 U	2.6	11	DMETAL
B38	04/19/2011	18000	4	0.089 J	1 UJ	2.6 J	590	2.5 U	1.7 U	51000	1 U	2.7	40	DMETAL
B38	10/06/2011	15000 J	31	0.2 U	0.36 UJ	3.1	480	1 U	1 U	37000	1 U	3.1	8.6	DMETAL
B38	04/04/2012	17000	11	0.2 U	0.32 J	0.67 J	170 U	0.46 UJ	1 U	42000	1 U	3.5	6.5 J	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganes	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
B450	04/19/2011	43000	5.1	0.055 J	1.4 UJ	2.9 U	1800	2.5 U	1.7 U	73000	0.36 J	3.2	3.3 J	DMETAL
B450	04/19/2011	51000	22	0.099 J	1.4 J	1 U	2200	2.5 U	1.7 U	84000	0.48 J	3.5	9 U	METAL
B450	10/10/2011	35000	73	0.2 U	0.69 J	1.5	1400	0.32 J	1 U	52000	0.16 J	3.6	38	DMETAL
B450	04/06/2012	61000	1.4	0.2 U	1.4	1 U	2100	1.7	1 U	79000	1 U	2.6	17 J	DMETAL
B450	04/03/2013	40000	5.8	0.2 U	0.27 UJ	1 U	1400	1 U	1 U	47000	1 U	2.5	39	DMETAL
B450	04/03/2014	66000	0.48 J	0.2 U	3.2 U	2.3 J	2800	0.27 J	1 U	72000	1 U	2.4	3.1 J	DMETAL
B450	04/14/2015	52000	1.4	0.2 U	1.3 UJ	1.6	1800	0.46 J	1 U	55000	1 U	3.9	12 U	DMETAL
B460	09/15/2010	17000	500	0.03 U	0.65	2.8	3300	2 U	0.5 U	44000	2 U	4 U	8.2	METAL
B460	04/20/2011	18000 J	7.2	0.08 J	1.9 UJ	1.3 J	2900	2.5 U	1.7 U	45000	1 U	1.7 J	23	DMETAL
B460	10/07/2011	18000	270	0.2 U	1.5 UJ	0.75 J	1800	1 U	1 U	37000	1 U	1.4	7.1	DMETAL
B460	04/06/2012	15000	35	0.2 U	0.64 J	1 U	1000	1 U	1 U	36000	1 U	2.1	17 J	DMETAL
B473	09/24/2010	26000	42	0.03 U	0.95	2	1900 J	2 U	0.5 U	100000	2 U	4.1	23	METAL
B473	04/20/2011	44000 J	1.2 J	0.067 J	1.9 UJ	1.2 J	4000	2.5 U	1.7 U	99000	1 U	3.7	14	DMETAL
B473	10/07/2011	22000	0.55 UJ	0.2 U	0.38 UJ	1 U	1400	1 U	1 U	67000	1 U	3.7	8.4	DMETAL
B473	04/06/2012	18000	2.8	0.2 U	0.89 J	1 U	1000	1 U	1 U	59000	1 U	3.1	12 J	DMETAL
B474	09/23/2010	24000	540	0.024 J	2.1	5.3	3500	2 U	0.5 U	120000	2 U	2.4 J	6.4	METAL
B474	04/20/2011	26000	55	0.2 UJ	3.1	1.7 J	2900	2.5 U	1.7 U	78000	0.057 J	3.7	9 U	METAL
B474	04/20/2011	27000 J	42	0.066 J	2.5 UJ	1.5 J	3000	2.5 U	1.7 U	81000	1 U	4.2	36	DMETAL
B474	10/07/2011	14000	66	0.22	21	6	2000	0.31 J	1 U	17000	1 U	4.6	17	METAL
B474	10/07/2011	10000	4 UJ	0.11 UJ	18	3.5	1500	1 U	1 U	20000	1 U	3.5	98	DMETAL
B474	04/09/2012	16000	140	0.07 UJ	8.7	6.7	2300	1 U	1 U	16000	1 U	4.7	11 J	DMETAL
B474	04/09/2012	14000	140	0.038 J	9.5	6	2200	0.45 J	1 U	20000	1 U	1.7	16 J	METAL
B474	04/03/2013	12000	82	0.027 J	7.8	5.3	1600	1 U	1 U	14000	1 U	2.5	8.4 J	DMETAL
B474	04/03/2014	14000	37	0.106 J	43	7.5	3000	1 U	0.12 J	9600	1 U	2.8	12	DMETAL
B474	04/16/2015	13000	43	0.022 J	14	5.2	2100	1 U	1 U	20000	1 U	2.9	12 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganeses	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
B480	09/24/2010	46000	480	0.03 U	1.5	2	3900	2 U	0.5 U	110000	2 U	2 J	3.3 J	METAL
B480	04/19/2011	39000	37	0.1 J	1.9 UJ	1.3 J	2200	2.5 U	1.7 U	86000	0.082 J	4.1	11	DMETAL
B480	10/07/2011	32000	42 UJ	0.2 U	1.3 UJ	2	1500	0.37 J	1 U	61000	1 U	3.8	30	DMETAL
B480	04/09/2012	50000	3.8	0.06 UJ	1 U	3.3	1700	1 U	1 U	92000	1 U	6.8	21	DMETAL
B480	04/03/2013	49000	11	0.2 U	0.38 UJ	1 U	1100	1 U	1 U	83000	1 U	4.7	9.1 J	DMETAL
B480	04/03/2014	50000	7.9	0.2 U	0.66 J	2.7 J	1100	1 U	1 U	79000	1 U	6	3.7 J	DMETAL
B480	04/17/2015	48000	0.43 J	0.022 J	0.35 UJ	1.5 UJ	1000	1 U	1 U	93000	1 U	6.3	12 U	DMETAL
B490	09/16/2010	54000	86	0.03 U	0.66	2.1	1600 J	2 U	0.5 U	55000	2 U	3.2 J	5 U	METAL
B490	04/20/2011	52000	1.4 J	0.2 U	1.9 UJ	1.1 J	860	2.5 U	1.7 U	56000	1 U	5.2	16	DMETAL
B490	10/10/2011	42000	11	0.2 U	1.2 UJ	0.37 J	500 U	1 U	0.076 J	50000	0.42 J	5.3	18	DMETAL
B490	04/09/2012	50000	4.9	0.049 UJ	0.33 J	2.5	510	1 U	1 U	53000	1 U	6.7	9.8 J	DMETAL
BULB1	10/19/2010	850000	5600	0.09	33	46	150000	8.6	5 U	7700000	20 U	10 U	20	METAL
BULB1	04/12/2011	710000	2000	0.15 J	7.7	7.5	150000	0.6 J	1 U	6400000	0.39 J	1.3	38	METAL
BULB1	04/12/2011	670000	1300	0.2 UJ	5.5	4	190000	1 UJ	1 U	5700000	0.1 J	0.9 J	18	DMETAL
BULB1	09/30/2011	980000	750	0.09 J	4.7	1 U	300000	0.73 UJ	1 U	9700000	1 U	1.3	9 U	METAL
BULB1	09/30/2011	1400000	950	0.2 U	6.5	5	230000	1 J	0.19 J	8200000	1 U	10	19	DMETAL
BULB1	04/05/2012	860000	510	0.043 J	6.2	1.4	260000	1.1 UJ	1 U	7300000	1 U	4.5	20 U	METAL
BULB1	04/05/2012	970000	640	0.2 U	6.5	2.7	270000	0.87 J	1 U	8000000	1 U	0.64 J	20 U	DMETAL
BULB1	04/05/2013	810000	450	0.039 J	3.5 UJ	1 U	230000	1 U	1 U	7000000	1 U	1.2	6.5 J	DMETAL
BULB1	04/10/2014	950000	580	0.2 U	5.1	4.2 U	260000	0.64 J	1 U	8500000	0.086 J	1.1	5.8	DMETAL
BULB1	04/13/2015	920000	230	0.2 U	3.7	0.61 J	300000	0.97 UJ	1 U	8100000	1 U	2 UJ	12 U	DMETAL
BULB1	04/13/2015	930000	220	0.2 U	3.8	0.25 J	310000	0.96 UJ	1 U	8100000	1 U	1.6 UJ	12 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganes	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
BULB2	10/19/2010	190000	5600	2.5	7.9	25	40000	3	0.5 U	1900000	2 U	2.8 J	22	METAL
BULB2	04/12/2011	85000	2800	0.2 J	8.1	16	17000	0.36 J	1 U	740000	0.18 J	3.2	61	METAL
BULB2	04/12/2011	21000	460	0.2 U	6.6	3.2	10000	1 UJ	1 U	400000	0.22 J	2.1	48	DMETAL
BULB2	09/30/2011	42000	760	0.2 U	7.3	2.5	7900	1 U	1 U	220000	1 U	4.9	15	DMETAL
BULB2	09/30/2011	44000	770	0.31	5.6	0.12 J	9100	1 U	1 U	240000	1 U	3.9	9 U	METAL
BULB2	04/05/2012	190000	1600	0.047 UJ	4.2	13	37000	1.3	1 U	1500000	1 U	2.8	8.8 J	DMETAL
BULB2	04/05/2012	200000 J	1400 J	0.099 J	5.9	5.3	30000	0.46 UJ	1 U	1500000 J	1 U	2.5	15 J	METAL
BULB2	04/05/2013	43000	770	0.026 J	6.4	1 U	10000	1 U	1 U	220000	1 U	1.1	20 U	DMETAL
BULB2	04/10/2014	60000	1100	0.2 U	7	2.2 J	9900	0.28 J	1 U	260000	1 U	1.2	16 U	DMETAL
BULB2	04/13/2015	29000	390	0.2 U	6.1	1.8	11000	1 U	1 U	310000	1 U	2.1 UJ	12 U	DMETAL
CCC1	09/08/2010	17000	4.1	0.03 U	2.2	1.2	2500	2 U	0.5 U	98000	2 U	3.3 J	3.5 J	METAL
CCC1	04/14/2011	20000	18	0.047 J	2.4 UJ	1.4 J	1400	2.5 U	1.7 U	91000	0.11 J	3.6	9 UJ	DMETAL
CCC1	10/05/2011	23000 J	24	0.2 U	0.9 J	1 U	1300	1 U	1 U	89000	1 U	6.3	2.1 J	DMETAL
CCC1	04/10/2012	28000	7.7	0.043 UJ	0.24 J	3	1500	0.28 J	1 U	120000	1 U	3.9	17 J	DMETAL
CCC2	09/08/2010	32000	42	0.03 U	2.4	1.6	3600	6.6	0.5 U	120000	2 U	2 J	3.4 J	METAL
CCC2	04/14/2011	180000	100	0.2 U	1 U	40	2100	6.1	1 U	160000	1 U	1.2	5.7 UJ	METAL
CCC2	04/14/2011	160000	69	0.2 U	1.9 U	38	2000	5.4	1.7 U	140000	0.62 J	0.82 J	55	DMETAL
CCC2	10/04/2011	47000	110	0.05 UJ	0.85 UJ	1 U	1700	6.8	1 U	110000	1 U	2.4	13	DMETAL
CCC2	10/04/2011	46000	120	0.2 U	1.3 UJ	4	1700	6.6	1 U	99000	0.63 J	3	9 U	METAL
CCC2	04/10/2012	72000	140	0.043 J	0.75 J	9	2000	4.8	1 U	89000	1 U	1.6	7 J	METAL
CCC2	04/10/2012	84000	200	0.059 UJ	1 U	11	1800	3.5	1 U	110000	1 U	2.3	49	DMETAL
CCC2	04/02/2013	51000	5.7	0.2 U	0.34 UJ	4.2	1200	9.6	0.16 J	100000	1 U	2.2	8.7 J	DMETAL
CCC2	04/02/2013	50000	5.7	0.2 U	0.31 UJ	3	910	8.5	1 U	100000	1 U	2.3	11 J	DMETAL
CCC2	04/02/2014	43000	1.7	0.2 U	0.74 J	1.8 J	1100	7.8	1 U	90000	1 U	2.8	5 U	DMETAL
CCC2	04/15/2015	50000	35	0.2 U	0.93 UJ	5.4	2100 J	3.7	1 U	92000 J	0.042 J	1.5 UJ	5 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganeses	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
CCC3	09/03/2010	47000	940	0.019 J	4	6.5	4200	2 U	0.5 U	110000	2 U	3.5 J	3.9 J	METAL
CCC3	09/03/2010	46000	1200	0.03 U	3.3	5.8	2800	2 U	0.5 U	99000	2 U	4 U	5 U	METAL
CCC3	04/12/2011	35000	31	0.2 U	1.1	1	2000	1 U	1 U	86000	1 U	3.1	13	DMETAL
CCC3	10/04/2011	45000	510	0.2 U	1.6 UJ	1 U	2000	1 U	1 U	91000	1 U	3.5	9 U	DMETAL
CCC3	10/04/2011	44000	520	0.058 UJ	2.3 UJ	1 U	1900	1 U	1 U	85000	1 U	3	9 U	DMETAL
CCC3	04/10/2012	46000	350	0.053 UJ	0.51 J	4.9	2500	1 U	1 U	95000	1 U	2.6	10 J	DMETAL
CCC3	04/02/2013	35000	24	0.024 J	1.6 UJ	1 U	1600	0.31 J	0.4 J	94000	1 U	3.4	20 U	DMETAL
CCC3	04/02/2014	46000	190	0.2 U	1.5	1.9 J	1300	1 U	1 U	86000	1 U	2.4	2.4 J	DMETAL
CCC3	04/15/2015	38000	47	0.2 U	1.1 UJ	1.8	1200	1 U	1 U	90000	1 U	4.3	12 U	DMETAL
CCCT	09/03/2010	81000	1400	0.015 J	2.5	6.6	5000	2 U	0.5 U	150000	2 U	4 U	3.3 J	METAL
CCCT	04/18/2011	68000	86	0.12 J	1.7	1 U	2300	0.47 J	1.7 U	120000	0.072 J	3.2 UJ	2.7 J	DMETAL
CCCT	10/03/2011	84000	210	0.091 UJ	1.6 UJ	1 U	1900	0.26 J	1 U	140000	1 U	1 U	53	DMETAL
CCCT	04/04/2012	91000	210	0.2 U	2.9	1.6	1500	0.5 UJ	1 U	140000	1 U	2.9	7.5 J	DMETAL
CTP	09/30/2010	27000	400	0.03 U	1.2	2.1	2000	2 U	0.5 U	76000	2 U	4 U	5 U	METAL
CTP	09/30/2010	28000	400	0.03 U	1.2	2.1	1700 J	2 U	0.5 U	76000	2 U	4 U	5 U	METAL
CTP	04/14/2011	28000	280	0.2 U	1.9 UJ	1 U	1500	2.5 U	1.7 U	52000	1 U	2.9	230	DMETAL
CTP	10/06/2011	26000 J	230	0.2 U	0.74 UJ	0.9 J	890	0.17 J	1 U	56000	1 U	2.9	63	DMETAL
CTP	04/03/2012	30000	110	0.2 U	1 U	1 U	1000	0.67 UJ	1 U	63000	1 U	1.9	57	DMETAL
CTP	04/04/2013	33000	37	0.2 U	0.78 UJ	2.3	760	0.23 UJ	1 U	67000	1 U	2.5	59	DMETAL
CTP	04/03/2014	34000	66	0.2 U	0.84 J	4.2 U	600	1 U	1 U	71000	1 U	2.8	42	DMETAL
CTP	04/03/2014	34000	66	0.2 U	0.78 J	2.1 J	650	0.41 J	1 U	67000	1 U	2.7	44	DMETAL
CTP	04/17/2015	31000	100	0.2 U	0.6 UJ	1.4 UJ	690	0.26 J	1 U	73000	1 U	4	44	DMETAL
CTPS	09/30/2010	69000	1000	0.03 U	1.3	4.4	7500	2 U	0.5 U	150000	2 U	4 U	2.7 J	METAL
CTPS	04/19/2011	25000	6.8	0.2 U	1 UJ	1.7 J	1300	2.5 U	1.7 U	65000	1 U	0.94 J	11	DMETAL
CTPS	10/07/2011	30000	37 UJ	0.2 U	0.51 UJ	2.4	2000	0.3 J	1 U	78000	0.27 J	1.5	11	DMETAL
CTPS	04/05/2012	24000	1.7	0.023 UJ	0.57 UJ	3.1	430	1 U	0.37 J	62000	1 U	2.1	20 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganeses	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
DH	09/30/2010	340000	1300	0.03 U	2.2	37	6700	2 U	0.5 U	520000	2 U	4 U	5	METAL
DH	04/14/2011	420000	980	0.2 U	1.9 UJ	39	5100	2.5 U	1.7 U	480000	1 U	2.8	17	DMETAL
DH	10/05/2011	560000 J	4500	0.2 U	0.21 J	14	4200	1 U	1 U	570000	1 U	2.4	41	DMETAL
DH	04/06/2012	390000	19000	0.066 J	1.6	56	7900	1 U	1 U	560000	1 U	2.2	25	DMETAL
DHR	04/04/2013	480000	970	0.025 J	0.95 UJ	7	25000	0.46 UJ	1 U	590000	1 U	1.1	29	DMETAL
DHR	04/10/2014	630000	4800	0.2 U	1.3	69	7600	0.26 J	1 U	810000	0.043 J	0.56 J	5.5	DMETAL
DHR	04/13/2015	510000	25000	0.2 U	0.78 UJ	21	3400	0.6 UJ	1 U	610000	1 U	1.2 UJ	12 U	DMETAL
EERC	10/01/2010	350000	5500	0.015 J	2.9	18	9800	2 U	0.5 U	480000	2 U	4 U	7.5	METAL
EERC	04/20/2011	330000 J	320	0.044 J	1.9 UJ	9.5 J	5000	2.5 U	1.7 U	520000	1 U	3.1	11	DMETAL
EERC	04/20/2011	330000	190	0.2 UJ	1.8 J	9.7	4300	2.5 U	1.7 U	570000	0.07 J	3.3	9 U	METAL
EERC	10/07/2011	270000	2900	0.2 U	1.7 UJ	9.9	2900	0.71 J	1 U	400000	1 U	1.2	5.4	DMETAL
EERC	10/07/2011	270000	3500	0.2 U	2.4	13	2800	0.56 J	1 U	430000	1 U	2.9	11	METAL
EERC	04/06/2012	270000	23	0.2 U	1.5	1 U	3300	0.35 J	1 U	440000	1 U	3.6	7.6 J	DMETAL
EERC	04/06/2012	260000	45	0.2 U	2.9	2.7	3500	0.78 J	1 U	430000	1 U	3.1	20 U	METAL
EERC	04/08/2013	330000	3100	0.2 U	1.4 UJ	1 U	1900	1 U	1 U	420000	1 U	0.45 J	20 U	DMETAL
EERC	04/03/2014	350000	2100	0.2 U	1.1	6.6	2100	1 U	1 U	440000	1 U	1.6	5.3	DMETAL
EERC	04/16/2015	250000	1800	0.2 U	1 UJ	7.6	1800	1 U	1 U	350000	1 U	1.2 UJ	12 U	DMETAL
EPA	09/16/2010	39000	700	0.017 J	2.5	2.1	5100	2 U	0.5 U	130000	2 U	4 U	6.2	METAL
EPA	04/19/2011	39000	130	0.2 U	2 UJ	1.3 J	2700	2.5 U	1.7 U	150000	1 U	1.8	4.5 J	DMETAL
EPA	10/06/2011	37000 J	390	0.2 U	1.8 UJ	1 U	2200	0.24 J	1 U	120000	1 U	2.5	11	DMETAL
EPA	04/06/2012	48000	520	0.2 U	1.4	1 U	1700	1 U	1 U	150000	1 U	1	15 J	DMETAL
EPA	04/06/2012	45000	410	0.2 U	1.4	1 U	1300	1 U	1 U	160000	1 U	1.3	8.1 J	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganeses	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
ETA	09/24/2010	86000	4600	2.3	2.7	10	1900 J	2 U	0.5 U	150000	2 U	5.4	110	METAL
ETA	09/24/2010	86000	4600	1.3	2.9	4.9	1600 J	2 U	0.5 U	150000	2 U	4 U	50	METAL
ETA	04/12/2011	81000	4000	0.2 U	4.3	2.8	1300	1 U	1 U	130000	0.3 J	0.55 J	47	DMETAL
ETA	04/12/2011	89000	4300	1.6	4.9	6.3	1800	0.15 J	1 U	130000	1 U	3.9	95	METAL
ETA	09/30/2011	81000	5000	0.2 U	2.1 UJ	3.6	900	0.8 J	0.06 J	150000	1 U	13	47	DMETAL
ETA	09/30/2011	84000	4800	1.6	1.8	4.3 J	980	1 U	1 U	160000	1 U	2.2	61	METAL
ETA	04/10/2012	90000	4900	0.78	3	4	780	1 U	0.74 J	110000	0.28 J	1.1	54	METAL
ETA	04/10/2012	130000	5100	0.083 UJ	1.8	3.8	1300	1 U	1 U	190000	1 U	0.99 J	57	DMETAL
ETA	04/10/2012	110000	4800	0.095 UJ	2	3.6	1200	1 U	1 U	170000	1 U	1.1	55	DMETAL
ETA	04/10/2012	87000	4900	0.64	3	3.9	1200	1 U	1 U	110000	1 U	0.96 J	49	METAL
ETA	04/05/2013	92000	5400	0.2 U	3.2 UJ	1 U	770	1 U	1 U	140000	1 U	0.52 J	40	DMETAL
ETA	04/08/2014	130000	6100	0.2 U	2.6	4.6	1200	1 U	1 U	190000	1 U	1	44	DMETAL
ETA	04/13/2015	120000	7100	0.2 U	2.3	3.1	1300	0.41 UJ	1 U	150000	1 U	1.7 UJ	30	DMETAL
EXT	09/30/2011	20000	3.4	0.2 U	3.3	0.085 J	2100	0.23 J	1 U	48000	1 U	14	11	DMETAL
EXT	09/30/2011	18000	8	0.2 U	2.3	1 U	1400	1 U	1 U	46000	1 U	0.18 J	7.6	METAL
FG	09/23/2010	130000	4200	0.015 J	0.93	130	2700	8 U	0.5 U	130000	2 U	91	170	METAL
FG	04/19/2011	33000	28	0.063 J	1 UJ	2.7 J	800	2.5 U	1.7 U	83000	1 U	1.9	29	DMETAL
FG	04/19/2011	35000	70	0.14 J	1.1 J	7.3	1200	2.5 U	1.7 U	91000	0.21 J	5.8	9 U	METAL
FG	04/19/2011	31000	31	0.057 J	1 UJ	0.26 J	810	2.5 U	1.7 U	79000	1 U	1.8	29	DMETAL
FG	04/19/2011	35000	84	0.1 J	1.9 U	6.7	1000	2.5 U	1.7 U	87000	0.15 J	4.2	9 U	METAL
FG	10/10/2011	54000	160	0.2 U	0.66 J	4.9	1200	0.21 J	1 U	100000	1 U	1.8	10	METAL
FG	10/10/2011	50000	93	0.2 U	0.73 UJ	3.8	2100	0.19 J	1 U	94000	1 U	2	31	DMETAL
FG	04/09/2012	29000	1.8	0.032 UJ	1 U	1 U	420	0.28 J	1 U	75000	1 U	4.2	20 U	DMETAL
FG	04/09/2012	27000	13	0.2 U	0.8 UJ	2.1	810	1 U	1 U	73000	1 U	1.9	20 U	METAL
FG	04/03/2013	33000	4.8	0.2 U	2.4	2.8	1100	0.73 UJ	1 U	83000	1 U	1.7	13 J	DMETAL
FG	04/09/2014	21000	6.9	0.2 U	0.72 UJ	2 J	330	0.48 J	1 U	75000	0.044 J	2.2	16 U	DMETAL
FG	04/16/2015	28000	3.1	0.2 U	0.45 UJ	2.3	520	1 U	1 U	90000	1 U	3.8	12 U	DMETAL

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganes	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
GEO	09/03/2010	30000	43	0.03 U	2.6	1.5	2800	2 U	0.5 U	85000	2 U	2.5 J	5 U	METAL
GEO	04/20/2011	31000 J	440	0.071 J	4.5 UJ	6.2 J	3700	2.5 U	1.7 U	69000	0.17 J	3.2	58	DMETAL
GEO	10/06/2011	25000 J	230	0.2 U	3.4	1.5	1900	0.32 J	1 U	54000	1 U	4	26	DMETAL
GEO	04/06/2012	33000	27	0.2 U	1.6	1 U	810	1 U	1 U	71000	1 U	4.6	36	DMETAL
MFA	09/24/2010	61000	580	0.18	5.2	7.9	1400 J	2 U	0.5 U	150000	2 U	3.9 J	4.4 J	METAL
MFA	04/12/2011	37000	230	0.2 UJ	4.2	7.1	510	1 UJ	1 U	99000	1 U	4.6	39	DMETAL
MFA	10/03/2011	60000	410	0.82	4.1 J	16	450	0.23 J	1 U	120000	1 U	3.3	8.2 J	DMETAL
MFA	04/05/2012	43000	270	0.52	5.4	9.4	200	1 U	1 U	130000	0.21 J	6.4	20 U	DMETAL
MFA	04/08/2014	59000	330	0.505	5.4	11	590	0.54 J	1 U	120000	0.089 J	5.2	5 U	DMETAL
NRLF	09/16/2010	26000	440	0.03 U	1.1	1.9	2400	2 U	0.5 U	57000	2 U	4 U	5 U	METAL
NRLF	04/20/2011	30000 J	640	0.2 U	1.9 UJ	2.9 UJ	2700	2.5 U	1.7 U	81000	1 U	0.92 J	83	DMETAL
NRLF	10/06/2011	22000 J	110	0.2 U	1 UJ	0.31 J	920	1 U	1 U	42000	1 U	2.8	22	DMETAL
NRLF	04/09/2012	25000	210	0.053 UJ	1 U	4.9	1300	1 U	1 U	54000	1 U	0.89 J	11 J	DMETAL
NRLF	04/03/2013	27000	920	0.2 U	1 U	1.1	1200	1 U	1 U	58000	1 U	1 U	13 J	DMETAL
NRLF	04/09/2014	26000	80	0.2 U	0.97 UJ	1.6 J	970	1 U	1 U	56000	1 U	2.4	9 UJ	DMETAL
NRLF	04/16/2015	25000	160	0.2 U	0.42 UJ	1.3	970	1 U	1 U	55000	1 U	1.5	6.3 J	DMETAL
OBS6	09/30/2011	23000	1 U	0.2 U	2.1 UJ	1 U	1800	0.76 J	1 U	49000	1 U	3	4.3 J	DMETAL
OBS6	09/30/2011	21000	100	0.2 U	0.31 J	0.67 UJ	1300	1 U	1 U	45000	1 U	1.7	51	METAL

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganeses	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
PZ11	10/01/2010	210000	1700	0.03 U	3.8	140	1100 J	2 U	0.5 U	170000	2 U	3.8 J	430	METAL
PZ11	04/20/2011	290000 J	11000	0.08 J	1.9 UJ	1700 J	350	2.5 U	1.7 U	180000	1 U	1.7 U	10000	DMETAL
PZ11	04/20/2011	290000	13000	0.23 UJ	1.9 U	2400	430	2.5 U	1.7 U	200000	0.1 J	1.7 U	13000	METAL
PZ11	10/10/2011	250000	3200	0.2 U	3.4	300	730	0.22 J	1 U	150000	1 U	4.4	740	DMETAL
PZ11	10/10/2011	270000	3700	0.2 U	3.6	340	490	1 U	1 U	160000	1 U	3.8	810	METAL
PZ11	04/05/2012	200000	6600	0.049 UJ	1 U	1400	170 U	0.35 J	1 U	170000	1 U	1	7600	DMETAL
PZ11	04/05/2012	180000	5400	0.03 J	0.41 UJ	1200	170 U	0.48 UJ	1 U	160000	1 U	0.4 J	6600	METAL
PZ11	04/05/2013	290000	4900	0.2 U	3.8 UJ	580	730	0.78 J	1 U	180000	1 U	2.1	1700	DMETAL
PZ11	04/05/2013	310000	5200	0.2 U	2 UJ	640	710	1 U	1 U	180000	1 U	2.5	1700	DMETAL
PZ11	04/09/2014	450000	13000	0.2 U	4.6	150	1100	0.42 J	1 U	270000	1 U	2.2	260	DMETAL
PZ11	04/16/2015	250000	8300	0.2 U	5.6	300	790	1 U	1 U	170000	1 U	5.5	880	DMETAL
PZ8	10/15/2010	40000	27	0.03 UJ	0.49 J	2.5	2000 U	2 U	0.5 U	66000	2 U	3.5 J	3.4 J	METAL
PZ8	04/18/2011	31000	2.9	0.04 J	0.56 J	1 U	800	0.26 J	1.7 U	53000	1 U	4.1	5 U	DMETAL
PZ8	10/04/2011	40000	0.73 J	0.07 UJ	0.56 UJ	0.87 J	490	0.26 J	0.099 J	62000	1 U	4.2	9 U	DMETAL
PZ8	04/03/2012	42000	4.5	0.2 U	1 U	1 U	130 J	0.44 J	1 U	56000	1 U	3.1	9 U	DMETAL
PZ8	04/08/2013	41000	2.3	0.2 U	1 U	1 U	700	0.29 J	1 U	59000	1 U	3.8	7.7 J	DMETAL
PZ8	04/08/2014	46000	37	0.2 U	0.46 J	3.6 J	770	0.34 J	1 U	64000	1 U	4.2	4.4 J	DMETAL
PZ8	04/14/2015	41000	0.73 J	0.2 U	0.45 UJ	0.96 J	690	0.92 J	1 U	64000	1 U	5	12 U	DMETAL
PZ8	04/14/2015	41000	0.41 J	0.2 U	0.63 UJ	0.8 J	890	0.67 J	1 U	64000	1 U	5	12 U	DMETAL
PZ9	09/24/2010	36000	260	0.17	0.95	3.5	2000 U	2 U	0.5 U	54000	2 U	2.3 J	4.9 J	METAL
PZ9	04/20/2011	34000 J	1900	0.2 U	1.9 UJ	5.3 J	330	2.5 U	1.7 U	45000	1 U	2.1	10	DMETAL
PZ9	10/07/2011	31000	190	0.022 UJ	0.54 UJ	2.7	560	1 U	1 U	42000	1 U	3.8	69	DMETAL
PZ9	10/07/2011	32000	200	0.2 U	0.64 UJ	1 U	570	1 U	1 U	43000	1 U	3.6	60	DMETAL
PZ9	04/06/2012	44000	2900 J	0.026 J	1.7	1 U	170 U	1 U	1 U	53000	1 U	0.47 J	8.3 J	DMETAL
RWF	09/15/2010	60000	88	0.03 U	0.71	2.8	2000	2 U	0.5 U	77000	2 U	2.1 J	3.8 J	METAL
RWF	04/18/2011	55000	3.1	0.2 U	1	1 U	1100	0.21 J	1.7 U	75000	1 U	2.6 UJ	9 U	DMETAL
RWF	10/06/2011	53000 J	19	0.2 U	0.52 UJ	0.78 J	1000	0.54 J	1 U	61000	1 U	3.7	29	DMETAL
RWF	04/04/2012	57000	290	0.029 J	0.86 J	2.9	2300	1 U	1 U	70000	1 U	3.9	120	DMETAL

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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METALS (µg/L)

Location ID	Sample Date	Magnesium	Manganes	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Analysis Group
California MCLs				2		100		50			2			
Federal MCLs				2				50			2			
TP1	09/29/2010	60000	260	0.33	1.3	5.8	2000	2 U	0.5 U	92000	2 U	2.3 J	7.2	METAL
TP1	04/18/2011	94000	980	0.17 J	1.9	1 U	3900	0.21 J	1.7 U	210000	1 U	1.7 UJ	5.5 J	DMETAL
TP1	10/07/2011	60000	420	0.056 UJ	0.65 UJ	11	980	1 U	1 U	71000	1 U	1.8	12	DMETAL
TP1	04/05/2012	120000	3400	0.2 UJ	2.7	20	1300	1 U	1 U	290000	1 U	1.1	20 U	DMETAL
TP1	04/04/2013	94000	3300	0.028 J	0.8 UJ	1 U	700	1 U	1 U	110000	1 U	1 U	12 J	DMETAL
TP1	04/02/2014	120000	3600	0.139 J	2.3	12	1100	1 U	1 U	230000	1 U	0.79 J	6.8	DMETAL
TP1	04/10/2015	120000	3700	0.026 J	1.1	2.4	1000 J	0.23 J	1 U	160000 J	0.087 J	1.1 UJ	12 U	DMETAL
TP2	09/29/2010	72000	120	0.03 U	1.1	8.6	1600 J	2 U	0.5 U	88000	2 U	2.9 J	5 U	METAL
TP2	04/18/2011	56000	3.3	0.2 U	0.82 J	1 U	2300	0.78 J	1.7 U	75000	1 U	3.9	4.2 J	DMETAL
TP2	10/07/2011	67000	5.1 UJ	0.2 U	0.68 UJ	1 U	1300	0.17 J	1 U	73000	0.11 J	3.4	42	DMETAL
TP2	04/09/2012	66000	5.4	0.054 UJ	1 U	4.1	1800	1 U	1 U	75000	1 U	5.7	8.5 J	DMETAL
TP2	04/09/2012	67000	6.1	0.058 UJ	1 U	3.4	1500	0.28 J	1 U	79000	1 U	6.8	8.7 J	DMETAL
WTA	09/30/2010	66000	48	0.03 U	1.4	1.5	2100	2 U	0.5 U	150000	2 U	3 J	5 U	METAL
WTA	04/14/2011	61000	21	0.2 U	1.9 UJ	0.97 J	1100	2.5 U	1.7 U	120000	0.093 J	3.8	4.3 J	DMETAL
WTA	04/14/2011	63000	31	0.041 J	1 UJ	2.9 U	1200	1 U	1 U	130000	1 U	4.1	5 UJ	METAL
WTA	04/14/2011	61000	20	0.2 U	1.9 UJ	1 J	1100	2.5 U	1.7 U	120000	0.1 J	4.1	9 U	DMETAL
WTA	04/14/2011	64000	29	0.042 J	1 UJ	2.9 U	1200	1 U	1 U	130000	1 U	4.1	9 U	METAL
WTA	10/05/2011	64000 J	93	0.2 U	0.25 J	1 U	1300	1 U	1 U	140000	1 U	4.1	5 U	DMETAL
WTA	10/05/2011	67000 J	120 J	0.2 U	1.2	2.7 UJ	1100	0.66 J	1 U	130000	0.15 J	5.2	5.6	METAL
WTA	04/05/2012	60000	26	0.03 UJ	1.3 UJ	1.1	990	1 U	1 U	150000	1 U	5.1	20 U	DMETAL
WTA	04/05/2012	55000	46	0.2 U	1.5 UJ	1 U	500	0.97 UJ	1 U	140000	1 U	3.9	6.7 J	METAL

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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		VOCs (µg/L)															
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
California MCLs			200				6										
Federal MCLs			200		5		7				70					5	5
B120	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.6	0.5 U
B120	04/15/2011	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	0.5 J	1.3 U
B120	10/04/2011	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	8 U	2 U	2 U	0.6 J	2 U
B120	04/03/2012	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	0.6 J	1.3 U
B120	04/02/2013	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	8 U	2 U	2 U	2 U	2 U
B120	04/01/2014	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	0.5 J	1.3 U
B120	04/10/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.6	0.5 U
B121	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B121	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B121	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B121	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B128	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B128	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B128	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B128	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B128	04/02/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B150	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B150	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B150	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B150	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B150	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B150	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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		VOCs (µg/L)															
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
California MCLs			200				6										
Federal MCLs			200		5		7				70					5	5
B158	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B158	04/15/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B158	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B158	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B163	09/02/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	8.5	0.5 U
B163	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	9	0.5 U
B163	10/03/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	7.1	0.5 U
B163	04/02/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	8.2	0.5 U
B163	04/03/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	8	0.5 U
B163	04/01/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	8	0.5 U
B163	04/14/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	7.6	0.5 U
B175S	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B175S	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B175S	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B175S	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B175S	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B175S	04/01/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B175S	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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		VOCs (µg/L)																
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	
California MCLs			200				6											
Federal MCLs			200		5		7				70						0.5	5
B175W	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B175W	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B175W	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B175W	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B175W	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B175W	04/01/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B175W	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B177	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B177	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B177	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B177	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B178	09/02/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5	0.5 U	
B178	04/15/2011	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	0.4 J	1.3 U	
B178	10/04/2011	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	0.5 J	1.3 U	
B178	04/03/2012	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	6.7 U	1.7 U	1.7 U	0.5 J	1.7 U	
B178	04/02/2013	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	0.6 J	1.3 U	
B178	04/08/2014	1 U	1 U	1 U	1 U	1 U	0.4 J	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	0.4 J	1 U	
B178	04/10/2015	1 U	1 U	1 U	1 U	1 U	0.4 J	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	0.5 J	1 U	
B180	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B180	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B180	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B180	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B180	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
California MCLs			200				6										
Federal MCLs			200		5		7				70					0.5	5
B185	09/02/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	1.4	0.5 U
B185	04/15/2011	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	2.9 U	0.7 U	0.7 U	1	0.7 U
B185	04/15/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	1.3	0.5 U
B185	10/03/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	1.6	0.5 U
B185	10/03/2011	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.3 J	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	2.9 U	0.7 U	0.7 U	1.1	0.7 U
B185	04/02/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	1.1	0.5 U
B185	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	1.8	0.5 U
B185	04/08/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	1.2	0.5 U
B185	04/10/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	1.8	0.5 U
B194	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B194	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B194	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B194	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B195	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	1	0.5 U
B195	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.3 J	0.5 U
B195	04/13/2011	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	2.9 U	0.7 U	0.7 U	0.2 J	0.7 U
B195	10/04/2011	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	0.7 J	1.3 U
B195	04/03/2012	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	0.6 J	1 U
B195	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.6	0.5 U
B195	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.6	0.5 U
B195	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.6	0.5 U
B195	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.6	0.5 U
B195	04/14/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.3 J	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)																
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	
California MCLs			200				6											
Federal MCLs			200		5		7				70						0.5	5
B197	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5	0.5 U	
B197	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5	0.5 U	
B197	04/13/2011	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	6.7 U	1.7 U	1.7 U	1.7 U	1.7 U	
B197	10/04/2011	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	6.7 U	1.7 U	1.7 U	0.4 J	1.7 U	
B197	04/03/2012	1 U	1 U	1 U	1 U	1 U	0.3 J	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	0.7 J	1 U	
B197	04/03/2012	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	0.7 J	1 U	
B197R	04/08/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.7	0.5 U	
B197R	04/08/2014	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	0.4 J	1 U	
B197R	04/14/2015	1 U	1 U	1 U	1 U	1 U	0.9 J	1 U	1 U	1 U	1 U	1 U	4 U	1 U	1 U	0.5 J	1 U	
B277	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B277	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B277	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B277	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B277	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B277	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B277	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B278	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B278	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B278	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B278	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B278	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B278	04/09/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
B278	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	

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University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
California MCLs			200				6										
Federal MCLs			200		5		7				70					0.5	5
B280A	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B280A	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B280A	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B280A	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B280A	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B280A	04/09/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B280A	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B280B	10/01/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B280B	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B280B	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B280B	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B300	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B300	04/15/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B300	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B300	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B38	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B38	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B38	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B38	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B38	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
California MCLs			200				6										
Federal MCLs			200		5		7				70					0.5	5
B450	04/19/2011	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B450	10/10/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B450	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B450	04/03/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B450	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B450	04/14/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B460	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B460	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B460	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B460	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B473	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B473	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B473	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B473	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B473	04/03/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B473	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B473	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B473	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B474	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B474	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B474	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B474	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
California MCLs			200				6										
Federal MCLs			200		5		7				70					5	5
B480	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B480	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B480	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B480	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B480	04/03/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B480	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B480	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B490	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B490	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B490	10/10/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
B490	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
BULB1	10/19/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
BULB1	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
BULB1	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
BULB1	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
BULB1	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
BULB1	04/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
BULB1	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
BULB1	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)																
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	
California MCLs			200				6											
Federal MCLs			200		5		7				70					5	5	
BULB2	10/19/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
BULB2	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
BULB2	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
BULB2	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
BULB2	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
BULB2	04/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
BULB2	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC1	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC1	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC1	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC1	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC2	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC2	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC2	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC2	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC2	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC2	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC2	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
CCC2	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
California MCLs			200				6										
Federal MCLs			200		5		7				70					5	5
CCC3	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC3	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC3	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC3	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC3	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC3	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC3	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC3	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC3	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CCCT	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.2 J	0.5 U
CCCT	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.2 J	0.5 U
CCCT	10/03/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.2 J	0.5 U
CCCT	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.2 J	0.5 U
CCCT	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.2 J	0.5 U
CCCT	04/08/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.3 J	0.5 U
CCCT	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
California MCLs			200				6										
Federal MCLs			200		5		7				70					5	5
CTP	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTP	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTP	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTP	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTP	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTP	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTP	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTP	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTP	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTP	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTPDEEP	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTPS	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTPS	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTPS	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
CTPS	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
DH	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
DH	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
DH	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
DH	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
California MCLs			200				6										
Federal MCLs			200		5		7				70					5	5
EERC	10/01/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EERC	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EERC	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EERC	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EERC	04/08/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EERC	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EERC	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EPA	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EPA	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EPA	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EPA	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EPA	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EPA	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EPA	04/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
EPA	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
ETA	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
ETA	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
ETA	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
ETA	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.2 J	0.5 U
ETA	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
ETA	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
ETA	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.2 J	0.5 U
ETA	04/08/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.2 J	0.5 U
ETA	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.2 J	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
California MCLs			200				6										
Federal MCLs			200		5		7				70					0.5	5
EXT	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
FG	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
FG	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
FG	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
FG	10/10/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
FG	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
GEO	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
GEO	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
GEO	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
GEO	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
GEO	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
GEO	04/09/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
GEO	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
MFA	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
MFA	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
MFA	10/03/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
MFA	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
MFA	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
MFA	04/08/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
MFA	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U

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University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)																
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	
California MCLs			200				6											
Federal MCLs			200		5		7				70					5	5	
NRLF	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
NRLF	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
NRLF	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
NRLF	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
OBS6	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
PZ11	10/01/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
PZ11	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
PZ11	10/10/2011	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	2.4 J	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	13 U	3.1 U	3.1 U	3.1 U	3.1 U	
PZ11	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
PZ11	04/05/2013	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	2.2	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	1.3 U	1.3 U	
PZ11	04/05/2013	2 U	2 U	2 U	2 U	2 U	2.1	2 U	2 U	2 U	2 U	2 U	8 U	2 U	2 U	2 U	2 U	
PZ11	04/09/2014	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.6 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	
PZ11	04/16/2015	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.6 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	
PZ8	10/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
PZ8	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
PZ8	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
PZ8	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
California MCLs			200				6										
Federal MCLs			200		5		7				70					0.5	5
PZ9	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
PZ9	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
PZ9	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
PZ9	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
PZ9	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
PZ9	04/03/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
PZ9	04/09/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
PZ9	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
RWF	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
RWF	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
RWF	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
RWF	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
RWF	04/08/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
RWF	04/09/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
RWF	04/14/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
TP1	09/29/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
TP1	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
TP1	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
TP1	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
TP1	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
TP1	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U
TP1	04/10/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)																
Location ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	
California MCLs			200				6											
Federal MCLs			200		5		7				70						0.5	5
TP2	09/29/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
TP2	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
TP2	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
TP2	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
TP2	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
TP2	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
TP2	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
TP2	04/10/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
TP2	04/10/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
WTA	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5	
WTA	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.4 J	
WTA	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.4 J	
WTA	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 J	
WTA	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
WTA	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.1 J	
WTA	04/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	
WTA	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
California MCLs													1				
Federal MCLs													5				
B120	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B120	04/15/2011	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	25 U	1.3 U	25 U	25 U	1.3 U	1.3 U	1.3 U	1.3 U	2.5 U
B120	10/04/2011	2 U	2 U	2 U	2 U	2 U	40 U	2 U	40 U	2 U	40 U	40 U	2 U	2 U	2 U	2 U	4 U
B120	04/03/2012	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	25 U	1.3 U	25 U	25 U	1.3 U	1.3 U	1.3 U	1.3 U	2.5 U
B120	04/02/2013	2 U	2 U	2 U	2 U	2 U	40 U	2 U	40 U	2 U	40 U	40 U	2 U	2 U	2 U	2 U	4 U
B120	04/01/2014	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	25 U	1.3 U	25 U	25 UJ	1.3 U	1.3 U	1.3 U	1.3 U	2.5 U
B120	04/10/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B121	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	2 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B121	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B121	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B121	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B128	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	43	0.5 U	NA	0.5 U	NA	11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B128	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	49	0.5 U	NA	0.5 U	NA	14 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B128	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B128	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B128	04/02/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B150	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B150	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B150	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B150	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B150	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B150	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
California MCLs													1				
Federal MCLs													5				
B158	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B158	04/15/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B158	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B158	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B163	09/02/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	4 U	0.5 U	NA	0.5 U	NA	2.7 UJ	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U
B163	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.3 J	0.5 U	0.5 U	0.5 U	1 U
B163	10/03/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.3 J	0.5 U	0.5 U	0.5 U	1 U
B163	04/02/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.4 J	0.5 U	0.5 U	0.5 U	1 U
B163	04/03/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.3 J	0.5 U	0.5 U	0.5 U	1 U
B163	04/01/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.3 J	0.5 U	0.5 U	0.5 U	1 U
B163	04/14/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.3 J	0.5 U	0.5 U	0.5 U	1 U
B175S	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	4 U	0.5 U	NA	0.5 U	NA	2.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B175S	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B175S	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B175S	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B175S	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B175S	04/01/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B175S	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B175W	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B175W	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B175W	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B175W	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B175W	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B175W	04/01/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B175W	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	
California MCLs													1					
Federal MCLs													5					
B177	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
B177	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B177	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B177	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B178	09/02/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
B178	04/15/2011	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	25 U	1.3 U	25 U	25 U	1.3 U	1.3 U	1.3 U	1.3 U	2.5 U	
B178	10/04/2011	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	25 U	1.3 U	25 U	25 U	1.3 U	1.3 U	1.3 U	1.3 U	2.5 U	
B178	04/03/2012	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	33 U	1.7 U	33 U	1.7 U	33 U	33 U	1.7 U	1.7 U	1.7 U	1.7 U	3.3 U	
B178	04/02/2013	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	25 U	1.3 U	25 U	25 U	1.3 U	1.3 U	1.3 U	1.3 U	2.5 U	
B178	04/08/2014	1 U	1 U	1 U	1 U	1 U	20 U	1 U	20 U	1 U	20 U	20 UJ	1 U	1 U	1 U	1 U	2 U	
B178	04/10/2015	1 U	1 U	1 U	1 U	1 U	20 U	1 U	20 U	1 U	20 U	20 U	1 U	1 U	1 U	1 U	2 U	
B180	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
B180	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B180	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B180	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B180	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B185	09/02/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
B185	04/15/2011	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	14 U	0.7 U	14 U	0.7 U	14 U	14 U	0.7 U	0.7 U	0.7 U	0.7 U	1.4 U	
B185	04/15/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.1 J	0.5 U	0.5 U	0.5 U	1 U	
B185	10/03/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.1 J	0.5 U	0.5 U	0.5 U	1 U	
B185	10/03/2011	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	14 U	0.7 U	14 U	0.7 U	14 U	14 U	0.7 U	0.7 U	0.7 U	0.7 U	1.4 U	
B185	04/02/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.1 J	0.5 U	0.5 U	0.5 U	1 U	
B185	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.2 J	0.5 U	0.5 U	0.5 U	1 U	
B185	04/08/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.1 J	0.5 U	0.5 U	0.5 U	1 U	
B185	04/10/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.2 J	0.5 U	0.5 U	0.5 U	1 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
California MCLs																	
Federal MCLs													1				
													5				
B194	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.1 J	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B194	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B194	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B194	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B195	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B195	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B195	04/13/2011	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	14 U	0.7 U	14 U	0.7 U	14 U	14 U	0.7 U	0.7 U	0.7 U	0.7 U	1.4 U
B195	10/04/2011	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	25 U	1.3 U	25 U	25 U	1.3 U	1.3 U	1.3 U	1.3 U	2.5 U
B195	04/03/2012	1 U	1 U	1 U	1 U	1 U	20 U	1 U	20 U	1 U	20 U	20 UJ	1 U	1 U	1 U	1 U	2 U
B195	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B195	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B195	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B195	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B195	04/14/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B197	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B197	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B197	04/13/2011	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	33 U	1.7 U	33 U	1.7 U	33 U	33 U	1.7 U	1.7 U	1.7 U	1.7 U	3.3 U
B197	10/04/2011	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	33 U	1.7 U	33 U	1.7 U	33 U	33 U	1.7 U	1.7 U	1.7 U	1.7 U	3.3 U
B197	04/03/2012	1 U	1 U	1 U	1 U	1 U	20 U	1 U	20 U	1 U	20 U	20 UJ	1 U	1 U	1 U	1 U	2 U
B197	04/03/2012	1 U	1 U	1 U	1 U	1 U	20 U	1 U	20 U	1 U	20 U	20 U	1 U	1 U	1 U	1 U	2 U
B197R	04/08/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B197R	04/08/2014	1 U	1 U	1 U	1 U	1 U	20 U	1 U	20 U	1 U	20 U	20 U	1 U	1 U	1 U	1 U	2 U
B197R	04/14/2015	1 U	1 U	1 U	1 U	1 U	20 U	1 U	20 U	1 U	20 U	20 U	1 U	1 U	1 U	1 U	2 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
California MCLs													1				
Federal MCLs													5				
B277	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B277	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B277	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B277	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B277	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B277	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B277	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B278	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	12	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B278	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B278	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B278	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B278	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B278	04/09/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B278	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B280A	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B280A	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B280A	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B280A	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B280A	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B280A	04/09/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B280A	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B280B	10/01/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B280B	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B280B	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B280B	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U

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University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	
California MCLs													1					
Federal MCLs													5					
B300	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
B300	04/15/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B300	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	1.5 J	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B300	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B38	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
B38	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B38	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B38	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B38	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B450	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B450	10/10/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B450	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B450	04/03/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B450	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B450	04/14/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B460	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	27	0.5 U	NA	0.5 U	NA	22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
B460	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B460	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
B460	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
California MCLs																	
Federal MCLs													1				
													5				
B473	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B473	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B473	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B473	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B473	04/03/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B473	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B473	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B473	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B474	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	180	0.5 U	NA	0.5 U	NA	40 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B474	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B474	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B474	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B480	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	3.2 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B480	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B480	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B480	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B480	04/03/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B480	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B480	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B490	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
B490	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B490	10/10/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
B490	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
California MCLs													1				
Federal MCLs													5				
BULB1	10/19/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	2.3 J	2.3	0.5 U	0.5 U	0.5 U	0.5 U
BULB1	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB1	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB1	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB1	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB1	04/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB1	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB1	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB2	10/19/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	3.3 J	4.1	0.5 U	0.5 U	0.5 U	0.5 U
BULB2	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB2	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB2	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB2	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB2	04/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
BULB2	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC1	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	2.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC1	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC1	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC1	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
California MCLs																	
Federal MCLs													1				
													5				
CCC2	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC2	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC2	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC2	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC2	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC2	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC2	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC2	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC3	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	30	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC3	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	32	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CCC3	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC3	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC3	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC3	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC3	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC3	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCC3	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCCT	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	3.2 J	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CCCT	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCCT	10/03/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCCT	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCCT	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCCT	04/08/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CCCT	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U

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		VOCs (µg/L)															
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California MCLs													1				
Federal MCLs													5				
CTP	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	35 J	0.5 U	NA	0.5 U	NA	7 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CTP	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	17 J	0.5 U	NA	0.5 U	NA	4.4 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CTP	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CTP	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CTP	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CTP	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CTP	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CTP	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CTP	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CTP	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CTPDEEP	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CTPS	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CTPS	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CTPS	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
CTPS	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
DH	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	2.4 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
DH	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
DH	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
DH	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	15 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	
California MCLs													1					
Federal MCLs													5					
EERC	10/01/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
EERC	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EERC	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EERC	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EERC	04/08/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EERC	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EERC	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EPA	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
EPA	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EPA	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EPA	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EPA	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EPA	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EPA	04/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EPA	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
ETA	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
ETA	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
ETA	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
ETA	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
ETA	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
ETA	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
ETA	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
ETA	04/08/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
ETA	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
EXT	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
California MCLs													1				
Federal MCLs													5				
FG	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	2.7 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
FG	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
FG	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
FG	10/10/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
FG	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
GEO	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
GEO	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
GEO	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
GEO	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
GEO	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
GEO	04/09/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
GEO	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
MFA	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MFA	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
MFA	10/03/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
MFA	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
MFA	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
MFA	04/08/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
MFA	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
NRLF	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	200	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
NRLF	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
NRLF	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
NRLF	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
OBS6	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)																
Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	
California MCLs														1				
Federal MCLs														5				
PZ11	10/01/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
PZ11	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
PZ11	10/10/2011	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	63 U	3.1 U	63 U	3.1 U	63 U	63 U	3.1 U	3.1 U	3.1 U	3.1 U	6.3 U	
PZ11	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
PZ11	04/05/2013	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	25 U	1.3 U	25 U	25 U	1.3 U	1.3 U	1.3 U	1.3 U	2.5 U	
PZ11	04/05/2013	2 U	2 U	2 U	2 U	2 U	40 U	2 U	40 U	2 U	40 U	40 U	2 U	2 U	2 U	2 U	4 U	
PZ11	04/09/2014	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	50 U	2.5 U	50 U	2.5 U	50 U	50 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	
PZ11	04/16/2015	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	50 U	2.5 U	50 U	2.5 U	50 U	50 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	
PZ8	10/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
PZ8	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
PZ8	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
PZ8	04/03/2012	0.5 U	0.5 U	0.5 U	0.1 J	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
PZ9	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
PZ9	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
PZ9	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
PZ9	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
PZ9	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
PZ9	04/03/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
PZ9	04/09/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	
PZ9	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
California MCLs													1				
Federal MCLs													5				
RWF	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
RWF	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
RWF	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
RWF	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
RWF	04/08/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
RWF	04/09/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
RWF	04/14/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP1	09/29/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TP1	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP1	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP1	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP1	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP1	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP1	04/10/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP2	09/29/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	4 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TP2	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP2	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP2	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP2	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP2	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP2	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 UJ	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP2	04/10/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
TP2	04/10/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
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		VOCs (µg/L)																	
Location ID	Sample Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform		
California MCLs													1						
Federal MCLs													5						
WTA	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4 U	0.5 U	NA	0.5 U	NA	2 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		
WTA	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U		
WTA	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U		
WTA	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U		
WTA	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U		
WTA	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U		
WTA	04/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U		
WTA	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	10 U	0.5 U	10 U	10 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U		

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
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		VOCs (µg/L)																	
Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12		
California MCLs				0.5													6		
Federal MCLs				5													70		
B120	09/09/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3.1	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA		
B120	04/15/2011	2.5 U	1.3 U	1.3 U	1.3 U	2.5 U	0.3 J	2.5 U	3.6	1.3 U	1.3 U	1.3 U	NA	1.3 U	1.3 U	5 U	2.5 U		
B120	10/04/2011	4 U	2 U	2 U	2 U	4 U	2 U	4 U	3.5	2 U	2 U	2 U	NA	2 U	2 U	8 U	4 U		
B120	04/03/2012	2.5 U	1.3 U	1.3 U	1.3 U	2.5 U	1.3 U	2.5 U	3	1.3 U	1.3 U	1.3 U	NA	1.3 U	1.3 U	5 U	2.5 U		
B120	04/02/2013	4 U	2 U	2 U	2 U	4 U	2 U	4 U	3.4	2 U	2 U	2 U	NA	2 U	2 U	8 U	4 U		
B120	04/01/2014	2.5 U	1.3 U	1.3 U	1.3 U	2.5 U	1.3 U	2.5 U	3.8	1.3 U	1.3 U	1.3 U	NA	1.3 U	1.3 U	5 U	2.5 U		
B120	04/10/2015	1 U	0.5 U	0.5 U	0.1 J	1 U	0.2 J	1 U	4.5	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B121	09/08/2010	0.5 U	NA	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA		
B121	04/13/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B121	10/04/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B121	04/04/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.1 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B128	09/23/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA		
B128	09/23/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA		
B128	04/18/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B128	10/04/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B128	04/02/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ		
B150	09/08/2010	0.5 U	NA	0.5 U	0.5 U	0.5 UJ	1.4	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA		
B150	04/13/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B150	10/05/2011	1 UJ	0.5 U	0.5 U	0.5 U	1 U	0.6	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ		
B150	10/05/2011	1 UJ	0.5 U	0.5 U	0.5 U	1 U	0.5 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ		
B150	04/04/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B150	04/04/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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VOCs (µg/L)

Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12
California MCLs				0.5													6
Federal MCLs				5													70
B158	09/08/2010	0.5 U	NA	0.5 U	0.5 U	0.5 UJ	4	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA
B158	04/15/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	1.6	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B158	10/05/2011	1 UJ	0.5 U	0.5 U	0.5 U	1 U	2	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ
B158	04/06/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	1.6 UJ	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ
B163	09/02/2010	0.5 U	NA	0.5 U	6.5	0.5 U	2.1	0.5 U	3	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
B163	04/12/2011	1 U	0.5 U	0.5 U	8.4	1 U	2.3	1 U	3.2	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B163	10/03/2011	1 U	0.5 U	0.5 U	7.6	1 U	2.4	1 U	3.6	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B163	04/02/2012	1 U	0.5 U	0.5 U	7.5	1 U	2.3	1 U	3	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ
B163	04/03/2013	1 U	0.5 U	0.5 U	6.9	1 U	2.2	1 U	3.6	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B163	04/01/2014	1 U	0.5 U	0.5 U	6.9	1 U	1.9	1 U	4.2	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B163	04/14/2015	1 U	0.5 U	0.5 U	6.4	1 U	1.6	1 U	4	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175S	09/03/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
B175S	04/13/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175S	10/04/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.2 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175S	04/04/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175S	04/02/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.1 J	1 U	0.2 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175S	04/01/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175S	04/15/2015	1 U	0.5 UJ	0.5 U	0.5 U	1 U	0.2 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175W	09/08/2010	0.5 U	NA	0.5 U	0.5 U	0.5 UJ	0.4 J	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA
B175W	04/13/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.2 J	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175W	10/04/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.2 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175W	04/04/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.3 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175W	04/02/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175W	04/01/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.1 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B175W	04/15/2015	1 U	0.5 UJ	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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VOCs (µg/L)

Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12	
California MCLs				0.5														6
Federal MCLs				5														70
B177	09/23/2010	0.5 UJ	NA	0.5 U	0.5 U	0.5 U	9.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 UJ	NA	
B177	04/18/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	2.7	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
B177	10/05/2011	1 UJ	0.5 U	0.5 U	0.5 U	1 U	6.5	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ	
B177	04/04/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.9	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
B178	09/02/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	2.5	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	
B178	04/15/2011	2.5 U	1.3 U	1.3 U	1.3 U	2.5 U	0.4 J	2.5 U	2.7	1.3 U	1.3 U	1.3 U	NA	1.3 U	1.3 U	5 U	2.5 U	
B178	10/04/2011	2.5 U	1.3 U	1.3 U	1.3 U	2.5 U	1.3 U	2.5 U	3.2	1.3 U	1.3 U	1.3 U	NA	1.3 U	1.3 U	5 U	2.5 U	
B178	04/03/2012	3.3 U	1.7 U	1.7 U	1.7 U	3.3 U	1.7 U	3.3 U	2.3	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	6.7 U	3.3 U	
B178	04/02/2013	2.5 U	1.3 U	1.3 U	1.3 U	2.5 U	1.3 U	2.5 U	3.4	1.3 U	1.3 U	1.3 U	NA	1.3 U	1.3 U	5 U	2.5 U	
B178	04/08/2014	2 U	0.5 J	1 U	1 U	2 U	1 U	2 U	3	1 U	1 U	1 U	NA	1 U	1 U	4 U	2 U	
B178	04/10/2015	2 U	1 U	1 U	1 U	2 U	1 U	2 U	4.8	1 U	1 U	1 U	NA	1 U	1 U	4 U	2 U	
B180	09/15/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	1.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	
B180	04/13/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.3 J	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
B180	10/06/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.4 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
B180	10/06/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.4 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
B180	04/04/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.1 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
B185	09/02/2010	0.5 U	NA	4.3	1.2	0.5 U	1.3	0.5 U	1	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	
B185	04/15/2011	1.4 U	0.7 U	3.5	1	1.4 U	0.8	1.4 U	1	0.7 U	0.7 U	0.7 U	NA	0.7 U	0.7 U	2.9 U	1.4 U	
B185	04/15/2011	1 U	0.5 U	4.7	1.1	1 U	1.2	1 U	1.5	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
B185	10/03/2011	1 U	0.5 U	5.6	1.6	1 U	1.4	1 U	1.4	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
B185	10/03/2011	1.4 U	0.7 U	4.1	1.1	1.4 U	1	1.4 U	1.3	0.7 U	0.7 U	0.7 U	NA	0.7 U	0.7 U	2.9 U	1.4 U	
B185	04/02/2012	1 U	0.5 U	4.8	1.2	1 U	0.9	1 U	1.1	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ	
B185	04/02/2013	1 U	0.5 U	8.1	1.7	1 U	1.8	1 U	1.8	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
B185	04/08/2014	1 U	0.5 U	4.4	1	1 U	1.1	1 U	1.5	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
B185	04/10/2015	1 U	0.5 U	8.2	1.7	1 U	3.7	1 U	2	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12
California MCLs				0.5					6								
Federal MCLs				5					70								
B194	09/09/2010	0.5 U	NA	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA
B194	04/13/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B194	10/04/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B194	04/04/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B195	09/09/2010	0.5 U	NA	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	3.7	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA
B195	04/13/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.4	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B195	04/13/2011	1.4 U	0.7 U	0.7 U	0.7 U	1.4 U	0.7 U	1.4 UJ	1	0.7 U	0.7 U	0.7 U	NA	0.7 U	0.7 U	2.9 U	1.4 U
B195	10/04/2011	2.5 U	1.3 UJ	1.3 U	0.9 J	2.5 U	1.3 U	2.5 UJ	4.1	1.3 U	1.3 U	1.3 U	NA	1.3 U	1.3 U	5 U	2.5 U
B195	04/03/2012	2 U	1 U	1 U	0.9 J	2 U	1 U	2 U	1.7	1 U	1 U	1 U	NA	1 U	1 U	4 U	2 U
B195	04/02/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	3.1	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B195	04/02/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	3	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B195	04/02/2014	1 U	0.5 U	0.5 U	2	1 U	0.1 J	1 U	3.9	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B195	04/02/2014	1 U	0.5 U	0.5 U	2.1	1 U	0.1 J	1 U	3.7	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B195	04/14/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.1 J	1 U	2.2	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B197	09/09/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.8	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
B197	09/09/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.9	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
B197	04/13/2011	3.3 U	1.7 U	1.7 U	1.7 U	3.3 U	1.7 U	3.3 UJ	2.2	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	6.7 U	3.3 U
B197	10/04/2011	3.3 U	1.7 U	1.7 U	1.7 U	3.3 U	1.7 U	3.3 U	3.6	1.7 U	1.7 U	1.7 U	NA	1.7 U	1.7 U	6.7 U	3.3 U
B197	04/03/2012	2 U	1 U	1 U	1 U	2 U	1 U	2 U	2.3	1 U	1 U	1 U	NA	1 U	1 U	4 U	2 U
B197	04/03/2012	2 U	1 U	1 U	1 U	2 U	1 U	2 U	2.5	1 U	1 U	1 U	NA	1 U	1 U	4 U	2 U
B197R	04/08/2013	1 U	0.5 U	0.5 U	0.2 J	1 U	0.1 J	1 U	3.3	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B197R	04/08/2014	2 U	1 U	1 U	1 U	2 U	1 U	2 U	2.9	1 U	1 U	1 U	NA	1 U	1 U	4 U	2 U
B197R	04/14/2015	2 U	1 U	1 U	1 U	2 U	1 U	2 U	4.4	1 U	1 U	1 U	NA	1 U	1 U	4 U	2 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12	
California MCLs				0.5														6
Federal MCLs				5														70
B277	09/15/2010	0.5 U	NA	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
B277	04/18/2011	1 U	0.5 U	1	0.5 U	1 U	0.3 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B277	10/05/2011	1 UJ	0.5 U	0.8	0.5 U	1 U	0.3 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 UJ	
B277	04/03/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B277	04/04/2013	1 U	0.5 U	0.5	0.5 U	1 U	0.3 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B277	04/02/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B277	04/16/2015	1 U	0.5 U	0.4 J	0.5 U	1 U	0.1 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B278	09/16/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	1.7	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
B278	04/19/2011	1 U	0.5 U	0.3 J	0.5 U	1 U	2.1	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B278	10/05/2011	1 UJ	0.5 U	0.1 J	0.5 U	1 U	0.9	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 UJ	
B278	04/05/2012	1 U	0.5 U	0.2 J	0.5 U	1 U	1	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B278	04/04/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.4 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B278	04/09/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.4 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B278	04/17/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B280A	09/16/2010	0.5 U	NA	0.9	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
B280A	04/14/2011	1 U	0.5 U	1.1	0.5 U	1 U	0.2 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B280A	10/06/2011	1 U	0.5 U	1.4	0.5 U	1 U	0.1 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B280A	04/03/2012	1 U	0.5 U	0.9	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B280A	04/04/2013	1 U	0.5 U	1.3	0.5 U	1 U	0.3 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B280A	04/09/2014	1 U	0.5 U	0.5	0.5 U	1 U	0.1 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B280A	04/17/2015	1 U	0.5 U	1.3	0.5 U	1 U	0.3 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B280B	10/01/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA
B280B	04/14/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.1 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B280B	10/06/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	
B280B	04/03/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	1 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12
California MCLs				0.5					6								
Federal MCLs				5					70								
B300	09/09/2010	0.5 U	NA	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA
B300	04/15/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B300	10/06/2011	0.3 J	0.5 U	0.5 U	0.5 U	1 U	0.5 U	5.1	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B300	04/09/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B38	09/15/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
B38	04/19/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B38	04/19/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.1 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B38	10/06/2011	0.4 J	0.5 U	0.5 U	0.5 U	1 U	0.5 U	3.1	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B38	04/04/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B450	04/19/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.2 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B450	10/10/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.2 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B450	04/06/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 UJ	1 U	0.3 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ
B450	04/03/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B450	04/03/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.1 J	1 U	1	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B450	04/14/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.4 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B460	09/15/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
B460	04/20/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B460	10/07/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
B460	04/06/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)																	
Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12		
California MCLs				0.5													6		
Federal MCLs				5													70		
B473	09/24/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA		
B473	04/20/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B473	10/07/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B473	04/06/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ		
B473	04/03/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B473	04/03/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	2.6	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B473	04/03/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	2.8	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B473	04/16/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.7	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B474	09/23/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA		
B474	04/20/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B474	10/07/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B474	04/09/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B480	09/24/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA		
B480	04/19/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B480	10/07/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.9	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B480	04/09/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B480	04/03/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B480	04/03/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.2 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B480	04/17/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.3 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B490	09/16/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA		
B490	04/20/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B490	10/10/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
B490	04/09/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		

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VOCs (µg/L)

Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12
California MCLs				0.5													6
Federal MCLs				5													70
BULB1	10/19/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
BULB1	04/12/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
BULB1	09/30/2011	1 U	0.6	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
BULB1	04/05/2012	1 U	0.4 J	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
BULB1	04/05/2013	0.4 J	2.9	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
BULB1	04/10/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
BULB1	04/13/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
BULB1	04/13/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
BULB2	10/19/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
BULB2	04/12/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
BULB2	09/30/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.4 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
BULB2	04/05/2012	1 U	0.5 U	0.5 U	0.3 J	1 U	0.5 U	1 U	0.3 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.1 J	2 U	1 U
BULB2	04/05/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.4 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
BULB2	04/10/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
BULB2	04/13/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.6	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC1	09/08/2010	0.5 U	NA	0.5 U	0.5 U	0.5 UJ	1.2	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA
CCC1	04/14/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.4 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC1	10/05/2011	1 UJ	0.5 U	0.5 U	0.5 U	1 U	0.2 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ
CCC1	04/10/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.1 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12
California MCLs				0.5					6								
Federal MCLs				5					70								
CCC2	09/08/2010	0.5 U	NA	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA
CCC2	04/14/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC2	10/04/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.1 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC2	04/10/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC2	04/02/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.2 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC2	04/02/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.1 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC2	04/02/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.3 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC2	04/15/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC3	09/03/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
CCC3	09/03/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
CCC3	04/12/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC3	10/04/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC3	10/04/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC3	04/10/2012	1 U	0.5 J	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC3	04/02/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC3	04/02/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCC3	04/15/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCCT	09/03/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
CCCT	04/18/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.1	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCCT	10/03/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.3	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCCT	04/04/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.4	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCCT	04/02/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.7	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCCT	04/08/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	2.2	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
CCCT	04/15/2015	1 U	0.5 UJ	0.5 U	0.5 U	1 U	0.5 U	1 U	0.9	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)																	
Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12		
California MCLs				0.5													6		
Federal MCLs				5													70		
CTP	09/30/2010	0.5 U	NA	19	0.5 U	0.5 U	8.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	
CTP	09/30/2010	0.5 U	NA	20	0.5 U	0.5 U	8.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	
CTP	04/14/2011	1 U	0.5 U	16	0.5 U	1 U	5.5	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
CTP	10/06/2011	1 U	0.5 U	25	0.5 U	1 U	7.6	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
CTP	04/03/2012	1 U	0.5 U	14	0.5 U	1 U	6.6	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
CTP	04/03/2012	1 U	0.5 U	22	0.5 U	1 U	7	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
CTP	04/04/2013	1 U	0.5 U	18	0.5 U	1 U	8.4	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
CTP	04/03/2014	1 U	0.5 U	14	0.5 U	1 U	6.5	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
CTP	04/03/2014	1 U	0.5 U	15	0.5 U	1 U	7.4	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
CTP	04/17/2015	1 U	0.5 U	11	0.5 U	1 U	5.2	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
CTPDEEP	04/03/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
CTPS	09/30/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	6.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	
CTPS	04/19/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
CTPS	10/07/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
CTPS	04/05/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
DH	09/30/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	
DH	04/14/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
DH	10/05/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
DH	04/05/2012	1 U	24	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12
California MCLs				0.5					6								
Federal MCLs				5					70								
EERC	10/01/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA
EERC	04/20/2011	1 UJ	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
EERC	10/07/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 UJ	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
EERC	04/06/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ
EERC	04/08/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
EERC	04/03/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
EERC	04/16/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ
EPA	09/16/2010	0.5 U	NA	1.8	0.5 U	0.5 U	2.3	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA
EPA	04/19/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.2 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
EPA	10/06/2011	1 U	0.5 U	0.5 U	0.1 J	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
EPA	04/06/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ
EPA	04/06/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ
EPA	04/04/2013	1 U	0.5 U	0.5 U	0.2 J	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
EPA	04/10/2014	1 U	0.5 U	0.5 U	0.2 J	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
EPA	04/17/2015	1 U	0.5 U	0.5 U	0.2 J	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
ETA	09/24/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA
ETA	09/24/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA
ETA	04/12/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.7	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
ETA	09/30/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.7	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
ETA	04/10/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	2.1	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
ETA	04/10/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	2	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
ETA	04/05/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	2.4	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
ETA	04/08/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	3.6	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
ETA	04/13/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	4	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U
EXT	09/30/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12	
California MCLs				0.5														6
Federal MCLs				5														70
FG	09/23/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA	
FG	04/19/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
FG	04/19/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
FG	10/10/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
FG	04/09/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
GEO	09/03/2010	0.5 U	NA	1.1	0.5 U	0.5 U	1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA	
GEO	04/20/2011	1 U	0.5 U	1.2	0.5 U	1 U	0.7	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
GEO	10/06/2011	1 U	0.5 U	1	0.5 U	1 U	0.5	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
GEO	04/06/2012	1 U	0.5 U	0.9	0.5 U	1 U	0.8 UJ	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ	
GEO	04/04/2013	1 U	0.5 U	1	0.5 U	1 U	0.7	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
GEO	04/09/2014	1 U	0.5 U	0.9	0.5 U	1 U	0.7	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
GEO	04/16/2015	1 U	0.5 U	1	0.5 U	1 U	0.7	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
MFA	09/24/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA	
MFA	04/12/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
MFA	10/03/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.7	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
MFA	04/05/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
MFA	04/05/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	2.2	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
MFA	04/08/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.7	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
MFA	04/13/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	2.3	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
NRLF	09/16/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	
NRLF	04/20/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
NRLF	10/06/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
NRLF	04/09/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
OBS6	09/30/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12	
California MCLs				0.5					6									
Federal MCLs				5					70									
PZ11	10/01/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	
PZ11	04/20/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
PZ11	10/10/2011	6.3 U	3.1 U	3.1 U	3.1 U	6.3 U	3.1 U	6.3 U	87	3.1 U	3.1 U	3.1 U	NA	3.1 U	3.1 U	13 U	6.3 U	
PZ11	04/05/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.3 J	1 U	0.3 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
PZ11	04/05/2013	2.5 U	1.3 U	1.3 U	1.3 U	2.5 U	1.3 U	2.5 U	200	1.3 U	1.3 U	1.3 U	NA	1.3 U	1.3 U	5 U	2.5 U	
PZ11	04/05/2013	4 U	2 U	2 U	2 U	4 U	2 U	4 U	200	2 U	2 U	2 U	NA	2 U	2 U	8 U	4 U	
PZ11	04/09/2014	5 U	2.5 U	2.5 U	2.5 U	5 U	2.5 U	5 U	410	2.5 U	2.5 U	2.5 U	NA	2.5 U	2.5 U	10 U	5 U	
PZ11	04/16/2015	5 U	2.5 U	2.5 U	2.5 U	5 U	2.5 U	5 U	480	2.5 U	2.5 U	2.5 U	NA	2.5 U	2.5 U	10 U	5 U	
PZ8	10/15/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA	
PZ8	04/18/2011	0.1 J	0.5 U	0.5 U	0.5 U	1 U	0.4 J	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
PZ8	10/04/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.9	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
PZ8	04/03/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	1.4	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
PZ9	09/24/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA	
PZ9	04/20/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.3 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
PZ9	10/07/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 UJ	0.6	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
PZ9	10/07/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 UJ	0.7	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
PZ9	04/06/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.2	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ	
PZ9	04/03/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
PZ9	04/09/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.6	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	
PZ9	04/16/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	1.5	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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		VOCs (µg/L)																	
Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12		
California MCLs				0.5													6		
Federal MCLs				5													70		
RWF	09/15/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA		
RWF	04/18/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
RWF	10/06/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
RWF	04/04/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
RWF	04/08/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
RWF	04/09/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
RWF	04/14/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP1	09/29/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA		
TP1	04/18/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP1	10/07/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 UJ	0.2 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP1	04/05/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP1	04/04/2013	1 U	1.3	0.5 U	0.5 U	1 U	0.5 U	1 U	0.3 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP1	04/02/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP1	04/10/2015	1 U	0.1 J	0.5 U	0.5 U	1 U	0.5 U	1 U	0.4 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP2	09/29/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	NA	0.5 U	0.5 U	NA		
TP2	04/18/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP2	10/07/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 UJ	0.2 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP2	04/09/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP2	04/09/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP2	04/04/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.2 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP2	04/02/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.2 J	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP2	04/10/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.7	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
TP2	04/10/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.7	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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		VOCs (µg/L)																	
Location ID	Sample Date	Bromomethane	Carbon disulfide	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	Cis-1,2-Dichloroethene	Cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl tert-butyl ether	Ethylbenzene	Freon 113	Freon 12		
California MCLs				0.5													6		
Federal MCLs				5													70		
WTA	09/30/2010	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	NA		
WTA	04/14/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
WTA	04/14/2011	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
WTA	10/05/2011	1 UJ	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 UJ		
WTA	04/05/2012	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
WTA	04/05/2013	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
WTA	04/10/2014	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		
WTA	04/13/2015	1 U	0.5 U	0.5 U	0.5 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U	0.5 U	2 U	1 U		

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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		VOCs (µg/L)															
Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M, P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs																	
Federal MCLs		100000				13		100000						100			
B120	09/09/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B120	04/15/2011	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U
B120	10/04/2011	8 U	2 U	2 U	2 U	2 U	40 U	2 U	2 U	8 U	2 U	2 U	2 U	2 U	40 U	2 U	2 U
B120	04/03/2012	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U
B120	04/02/2013	8 U	2 U	2 U	2 U	2 U	40 U	2 U	2 U	8 U	2 U	2 U	2 U	2 U	40 U	2 U	2 U
B120	04/01/2014	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U
B120	04/10/2015	2 U	0.5 U	0.5 U	0.5 U	0.1 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U
B121	09/08/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B121	04/13/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B121	10/04/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B121	04/04/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B128	09/23/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B128	09/23/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B128	04/18/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B128	10/04/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B128	04/02/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B150	09/08/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B150	04/13/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B150	10/05/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B150	10/05/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B150	04/04/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B150	04/04/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M,P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-Isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs																	
Federal MCLs		100000					13						100000	100			
B158	09/08/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B158	04/15/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B158	10/05/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B158	04/06/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B163	09/02/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B163	04/12/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B163	10/03/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B163	04/02/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B163	04/03/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B163	04/01/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B163	04/14/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175S	09/03/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B175S	04/13/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175S	10/04/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175S	04/04/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175S	04/02/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175S	04/01/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175S	04/15/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175W	09/08/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B175W	04/13/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175W	10/04/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175W	04/04/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175W	04/02/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175W	04/01/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B175W	04/15/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M, P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-Isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs															13		
Federal MCLs															100000	100000	100
B177	09/23/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B177	04/18/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B177	10/05/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B177	04/04/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B178	09/02/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B178	04/15/2011	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U
B178	10/04/2011	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U
B178	04/03/2012	6.7 U	1.7 U	1.7 U	1.7 U	1.7 U	33 U	1.7 U	1.7 U	6.7 U	1.7 U	1.7 U	1.7 U	1.7 U	33 U	1.7 U	1.7 U
B178	04/02/2013	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U
B178	04/08/2014	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U
B178	04/10/2015	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	20 UJ	1 U	1 U
B180	09/15/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B180	04/13/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B180	10/06/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B180	10/06/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B180	04/04/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B185	09/02/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B185	04/15/2011	2.9 U	0.7 U	0.7 U	0.7 U	0.2 J	14 U	0.7 U	0.7 U	2.9 U	0.7 U	0.7 U	0.7 U	0.7 U	14 U	0.7 U	0.7 U
B185	04/15/2011	2 U	0.5 U	0.5 U	0.5 U	0.3 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B185	10/03/2011	2 U	0.5 U	0.5 U	0.5 U	0.2 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B185	10/03/2011	2.9 U	0.7 U	0.7 U	0.7 U	0.2 J	14 U	0.7 U	0.7 U	2.9 U	0.7 U	0.7 U	0.7 U	0.7 U	14 U	0.7 U	0.7 U
B185	04/02/2012	2 U	0.5 U	0.5 U	0.5 U	0.2 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B185	04/02/2013	2 U	0.5 U	0.5 U	0.5 U	0.3 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B185	04/08/2014	2 U	0.5 U	0.5 U	0.5 U	0.2 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B185	04/10/2015	2 U	0.5 U	0.5 U	0.5 U	0.2 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M,P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-Isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs																	
Federal MCLs		100000					13	100000					100				
B194	09/09/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B194	04/13/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B194	10/04/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B194	04/04/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B195	09/09/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B195	04/13/2011	2 UJ	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B195	04/13/2011	2.9 U	0.7 U	0.7 U	0.7 U	0.7 U	14 U	0.7 U	0.7 U	2.9 U	0.7 U	0.7 U	0.7 U	0.7 U	14 U	0.7 U	0.7 U
B195	10/04/2011	5 U	1.3 U	1.3 U	0.4 J	1.3 U	25 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U
B195	04/03/2012	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U
B195	04/02/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B195	04/02/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B195	04/02/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U
B195	04/02/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U
B195	04/14/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B197	09/09/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B197	09/09/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B197	04/13/2011	6.7 U	1.7 U	1.7 U	1.7 U	1.7 U	33 U	1.7 U	1.7 U	6.7 U	1.7 U	1.7 U	1.7 U	1.7 U	33 U	1.7 U	1.7 U
B197	10/04/2011	6.7 U	1.7 U	1.7 U	1.7 U	1.7 U	33 U	1.7 U	1.7 U	6.7 U	1.7 U	1.7 U	1.7 U	1.7 U	33 U	1.7 U	1.7 U
B197	04/03/2012	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U
B197	04/03/2012	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U
B197R	04/08/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B197R	04/08/2014	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U
B197R	04/14/2015	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	20 U	1 U	1 U

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2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M,P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-Isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs																	
Federal MCLs		100000					13						100000	100			
B277	09/15/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B277	04/18/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B277	10/05/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B277	04/03/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B277	04/04/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B277	04/02/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U
B277	04/16/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B278	09/16/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B278	04/19/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B278	10/05/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B278	04/05/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B278	04/04/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B278	04/09/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B278	04/17/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B280A	09/16/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B280A	04/14/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B280A	10/06/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B280A	04/03/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B280A	04/04/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B280A	04/09/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B280A	04/17/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B280B	10/01/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B280B	04/14/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B280B	10/06/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B280B	04/03/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M, P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-Isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs																	
Federal MCLs		100000					13	100000					100				
B300	09/09/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B300	04/15/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.2 J	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B300	10/06/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	1.6 J	0.5 U	3.5	0.5 U	0.5 U	10 U	0.5 U	0.1 J
B300	04/09/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.2 J	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B38	09/15/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B38	04/19/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B38	04/19/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B38	10/06/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.2 J	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B38	04/04/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B450	04/19/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B450	10/10/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B450	04/06/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B450	04/03/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B450	04/03/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B450	04/14/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B460	09/15/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B460	04/20/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B460	10/07/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B460	04/06/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M,P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs																	
Federal MCLs		100000					13	100000					100				
B473	09/24/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B473	04/20/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B473	10/07/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B473	04/06/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B473	04/03/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B473	04/03/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B473	04/03/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B473	04/16/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B474	09/23/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B474	04/20/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B474	10/07/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B474	04/09/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B480	09/24/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B480	04/19/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B480	10/07/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B480	04/09/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B480	04/03/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B480	04/03/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B480	04/17/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B490	09/16/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
B490	04/20/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B490	10/10/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
B490	04/09/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U

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2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M,P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-Isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs																	
Federal MCLs		100000					13	100000					100				
BULB1	10/19/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
BULB1	04/12/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
BULB1	09/30/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
BULB1	04/05/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
BULB1	04/05/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
BULB1	04/10/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
BULB1	04/13/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
BULB1	04/13/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
BULB2	10/19/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
BULB2	04/12/2011	2 U	0.5 U	0.5 U	0.5 U	0.9	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
BULB2	09/30/2011	2 U	0.5 U	0.5 U	0.5 U	0.9	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
BULB2	04/05/2012	2 U	0.5 U	0.3 J	0.2 J	0.6	10 U	0.5 U	0.5 U	2 UJ	0.3 J	0.5 U	0.1 J	0.5 U	10 U	0.5 U	0.5 U
BULB2	04/05/2013	2 U	0.5 U	0.5 U	0.5 U	0.8	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
BULB2	04/10/2014	2 U	0.5 U	0.5 U	0.5 U	0.7	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
BULB2	04/13/2015	2 U	0.5 U	0.5 U	0.5 U	0.5	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC1	09/08/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
CCC1	04/14/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC1	10/05/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC1	04/10/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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VOCs (µg/L)

Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M, P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-Isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs																	
Federal MCLs		100000					13	100000					100				
CCC2	09/08/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
CCC2	04/14/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC2	10/04/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC2	04/10/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC2	04/02/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC2	04/02/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC2	04/02/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC2	04/15/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC3	09/03/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
CCC3	09/03/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
CCC3	04/12/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC3	10/04/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC3	10/04/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC3	04/10/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC3	04/02/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC3	04/02/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCC3	04/15/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCCT	09/03/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
CCCT	04/18/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCCT	10/03/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCCT	04/04/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCCT	04/02/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCCT	04/08/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CCCT	04/15/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

VOCs (µg/L)

Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M, P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-Isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs																	
Federal MCLs		100000					13	100000					100				
CTP	09/30/2010	0.5 U	NA	0.5 U	1 U	2 U	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
CTP	09/30/2010	0.5 U	NA	0.5 U	1 U	2 U	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
CTP	04/14/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CTP	10/06/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CTP	04/03/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CTP	04/03/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 J	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CTP	04/04/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CTP	04/03/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CTP	04/03/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CTP	04/17/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CTPDEEP	04/03/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9 J	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CTPS	09/30/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
CTPS	04/19/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CTPS	10/07/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
CTPS	04/05/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
DH	09/30/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
DH	04/14/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
DH	10/05/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
DH	04/05/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U	2 U	0.5 U	0.1 J	0.5 U	0.5 U	10 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

		VOCs (µg/L)															
Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M, P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs																	
Federal MCLs		100000				13		100000						100			
EERC	10/01/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
EERC	04/20/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EERC	10/07/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EERC	04/06/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EERC	04/08/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EERC	04/03/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EERC	04/16/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EPA	09/16/2010	0.5 U	NA	0.5 U	1 U	2 U	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
EPA	04/19/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EPA	10/06/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EPA	04/06/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EPA	04/06/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EPA	04/04/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EPA	04/10/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EPA	04/17/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
ETA	09/24/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
ETA	09/24/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
ETA	04/12/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
ETA	09/30/2011	2 U	0.5 U	0.5 U	0.5 U	0.1 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
ETA	04/10/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
ETA	04/10/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
ETA	04/05/2013	2 U	0.5 U	0.5 U	0.5 U	0.1 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
ETA	04/08/2014	2 U	0.5 U	0.5 U	0.5 U	0.1 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
ETA	04/13/2015	2 U	0.5 U	0.5 U	0.5 U	0.1 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
EXT	09/30/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M,P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene		
California MCLs						13													
Federal MCLs						100000							100000						
FG	09/23/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U		
FG	04/19/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
FG	04/19/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
FG	10/10/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
FG	04/09/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
GEO	09/03/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U		
GEO	04/20/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
GEO	10/06/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
GEO	04/06/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
GEO	04/04/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
GEO	04/09/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
GEO	04/16/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
MFA	09/24/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U		
MFA	04/12/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
MFA	10/03/2011	2 U	0.5 U	0.5 U	0.5 U	0.1 J	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
MFA	04/05/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
MFA	04/05/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
MFA	04/08/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
MFA	04/13/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
NRLF	09/16/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U		
NRLF	04/20/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
NRLF	10/06/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
NRLF	04/09/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		
OBS6	09/30/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U		

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VOCs (µg/L)

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California MCLs																	
Federal MCLs		100000					13	100000					100				
PZ11	10/01/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
PZ11	04/20/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
PZ11	10/10/2011	13 U	3.1 U	3.1 U	3.1 U	3.1 U	63 U	3.1 U	3.1 U	13 U	3.1 U	3.1 U	3.1 U	3.1 U	63 U	3.1 U	3.1 U
PZ11	04/05/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
PZ11	04/05/2013	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	1.3 U	1.3 U	25 U	1.3 U	1.3 U
PZ11	04/05/2013	8 U	2 U	2 U	2 U	2 U	40 U	2 U	2 U	8 U	2 U	2 U	2 U	2 U	40 U	2 U	2 U
PZ11	04/09/2014	10 U	2.5 U	2.5 U	2.5 U	2.5 U	50 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	50 U	2.5 U	2.5 U
PZ11	04/16/2015	10 U	2.5 U	2.5 U	2.5 U	2.5 U	50 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	2.5 U	2.5 U	50 U	2.5 U	2.5 U
PZ8	10/15/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
PZ8	04/18/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
PZ8	10/04/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
PZ8	04/03/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
PZ9	09/24/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
PZ9	04/20/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
PZ9	10/07/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
PZ9	10/07/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
PZ9	04/06/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
PZ9	04/03/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
PZ9	04/09/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
PZ9	04/16/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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VOCs (µg/L)

Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M,P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-Isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene			
California MCLs															13					
Federal MCLs															100000		100000		100	
RWF	09/15/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U			
RWF	04/18/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
RWF	10/06/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
RWF	04/04/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
RWF	04/08/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
RWF	04/09/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
RWF	04/14/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
TP1	09/29/2010	0.5 U	NA	0.5 U	1 U	2 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U			
TP1	04/18/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
TP1	10/07/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
TP1	04/05/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
TP1	04/04/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
TP1	04/02/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U			
TP1	04/10/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U			
TP2	09/29/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U			
TP2	04/18/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
TP2	10/07/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
TP2	04/09/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
TP2	04/09/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
TP2	04/04/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U			
TP2	04/02/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U			
TP2	04/10/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U			
TP2	04/10/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 UJ	0.5 U	0.5 U			

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		VOCs (µg/L)															
Location ID	Sample Date	Hexachlorobutadiene	Isopropyl ether	Isopropylbenzene	M, P-Xylene	Methyl Tert-Butyl Ether	Methylene Chloride	N-Butylbenzene	N-Propylbenzene	Naphthalene	O-Xylene	P-Isopropyltoluene	Sec-Butylbenzene	Styrene	Tert Butyl Alcohol	Tert-amyl methyl ether	Tert-Butylbenzene
California MCLs		13															
Federal MCLs		100000				100000						100					
WTA	09/30/2010	0.5 U	NA	0.5 U	1 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.5 U
WTA	04/14/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
WTA	04/14/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
WTA	10/05/2011	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
WTA	04/05/2012	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
WTA	04/05/2013	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
WTA	04/10/2014	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U
WTA	04/13/2015	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
B120	09/09/2010	0.4 J	0.5 U	0.5 U	0.5 U	210	0.5 U	NA	0.5 U
B120	04/15/2011	1.3 U	1.3 U	1.3 U	1.3 U	170	2.5 U	25 U	1.3 U
B120	10/04/2011	0.4 J	2 U	0.4 J	2 U	180	4 U	40 U	2 U
B120	04/03/2012	0.7 J	1.3 U	1.3 U	1.3 U	190	2.5 U	25 U	1.3 U
B120	04/02/2013	2 U	2 U	2 U	2 U	190	4 U	40 U	2 U
B120	04/01/2014	0.6 J	1.3 U	0.4 J	1.3 U	160	2.5 U	25 U	1.3 U
B120	04/10/2015	0.7	0.5 U	0.5 J	0.5 U	140	1 U	10 U	0.5 U
B121	09/08/2010	0.3 J	0.5 U	0.5 U	0.5 U	0.8	0.5 U	NA	0.5 UJ
B121	04/13/2011	0.4 J	0.5 U	0.5 U	0.5 U	1.1	1 U	10 U	0.5 U
B121	10/04/2011	0.3 J	0.5 U	0.5 U	0.5 U	1.8	1 U	10 U	0.5 U
B121	04/04/2012	0.3 J	0.5 U	0.5 U	0.5 U	2	1 U	10 U	0.5 U
B128	09/23/2010	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
B128	09/23/2010	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
B128	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B128	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B128	04/02/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
B150	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 UJ
B150	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B150	10/05/2011	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
B150	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
B150	04/04/2012	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B150	04/04/2012	0.3 J	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
B158	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 UJ
B158	04/15/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B158	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
B158	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B163	09/02/2010	8.4	0.5 U	0.3 J	0.5 U	100	0.5 U	NA	0.7
B163	04/12/2011	9.5	0.5 U	0.4 J	0.5 U	77 J	1 U	10 UJ	1.2
B163	10/03/2011	12	0.5 U	0.4 J	0.5 U	70	1 U	10 U	0.8
B163	04/02/2012	11	0.5 U	0.4 J	0.5 U	78	1 U	10 UJ	0.9
B163	04/03/2013	11	0.5 U	0.5 J	0.5 U	78 J	1 U	10 U	0.9
B163	04/01/2014	9.3	0.5 U	0.6	0.5 U	80	1 U	10 U	1
B163	04/14/2015	9	0.5 U	0.6	0.5 U	93	1 U	10 U	1
B175S	09/03/2010	0.2 J	0.5 U	0.5 U	0.5 U	7.9	0.5 U	NA	0.5 U
B175S	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	5.3	1 U	10 U	0.5 U
B175S	10/04/2011	0.1 J	0.5 U	0.5 U	0.5 U	8.6	1 U	10 U	0.5 U
B175S	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	2.6	1 U	10 U	0.5 U
B175S	04/02/2013	0.2 J	0.5 U	0.5 U	0.5 U	10	1 U	10 U	0.5 U
B175S	04/01/2014	0.1 J	0.5 U	0.5 U	0.5 U	3.9	1 U	10 U	0.5 U
B175S	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	7.9	1 U	10 U	0.5 U
B175W	09/08/2010	1.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 UJ
B175W	04/13/2011	1.7	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B175W	10/04/2011	1.6	0.5 U	0.5 U	0.5 U	0.1 J	1 U	10 U	0.5 U
B175W	04/04/2012	2.7	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
B175W	04/02/2013	2	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B175W	04/01/2014	2.3	0.5 U	0.5 U	0.5 U	0.1 J	1 U	10 U	0.5 U
B175W	04/15/2015	2.1	0.5 U	0.5 U	0.5 U	0.2 J	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
B177	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
B177	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B177	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
B177	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B178	09/02/2010	0.2 J	0.5 U	0.4 J	0.5 U	360	0.5 U	NA	0.5 U
B178	04/15/2011	0.3 J	1.3 U	1.3 U	1.3 U	160	2.5 U	25 U	1.3 U
B178	10/04/2011	0.3 J	1.3 U	0.5 J	1.3 U	170	2.5 U	25 U	1.3 U
B178	04/03/2012	1.7 U	1.7 U	1.7 U	1.7 U	170	3.3 U	33 U	1.7 U
B178	04/02/2013	0.5 J	1.3 U	0.5 J	1.3 U	160	2.5 U	25 U	1.3 U
B178	04/08/2014	0.4 J	1 U	0.4 J	1 U	110	2 U	20 U	1 U
B178	04/10/2015	0.4 J	1 U	0.4 J	1 U	130	2 U	20 U	1 U
B180	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
B180	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B180	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B180	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B180	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B185	09/02/2010	0.4 J	0.5 U	0.5 U	0.5 U	150	0.5 U	NA	0.2 J
B185	04/15/2011	0.3 J	0.7 U	0.7 U	0.7 U	77	1.4 U	14 UJ	0.2 J
B185	04/15/2011	0.3 J	0.5 U	0.2 J	0.5 U	93	1 U	10 U	0.1 J
B185	10/03/2011	0.4 J	0.5 U	0.2 J	0.5 U	94	1 U	10 U	0.3 J
B185	10/03/2011	0.4 J	0.7 U	0.2 J	0.7 U	77	1.4 U	14 U	0.7 U
B185	04/02/2012	0.4 J	0.5 U	0.5 U	0.5 U	95	1 U	10 UJ	0.2 J
B185	04/02/2013	0.4 J	0.5 U	0.2 J	0.5 U	99	1 U	10 U	0.3 J
B185	04/08/2014	0.3 J	0.5 U	0.1 J	0.5 U	85	1 U	10 U	0.1 J
B185	04/10/2015	0.6	0.5 U	0.2 J	0.5 U	72	1 U	10 U	0.3 J

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
B194	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	2	0.5 U	NA	0.5 UJ
B194	04/13/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B194	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B194	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B195	09/09/2010	3.1	0.5 U	0.4 J	0.5 U	140	0.5 U	NA	0.5 UJ
B195	04/13/2011	2.2	0.5 U	0.2 J	0.5 U	68	1 U	10 UJ	0.5 U
B195	04/13/2011	1.7	0.7 U	0.7 U	0.7 U	65	1.4 U	14 U	0.7 U
B195	10/04/2011	3	1.1 J	0.5 J	1.3 U	170 J	2.5 U	25 U	1.3 U
B195	04/03/2012	2.8	1 U	0.3 J	1 U	120	2 U	20 U	1 U
B195	04/02/2013	3.2	0.5 U	0.4 J	0.5 U	89	1 U	10 U	0.5 U
B195	04/02/2013	3.1	0.5 U	0.4 J	0.5 U	98	1 U	10 U	0.5 U
B195	04/02/2014	3.8	0.5 U	0.4 J	0.5 U	140	1 U	10 U	0.5 U
B195	04/02/2014	3.4	0.5 U	0.4 J	0.5 U	140	1 U	10 U	0.5 U
B195	04/14/2015	2.2	0.5 U	0.3 J	0.5 U	79	1 U	10 U	0.5 U
B197	09/09/2010	1	0.5 U	0.4 J	0.5 U	200	0.5 U	NA	0.5 U
B197	09/09/2010	1	0.5 U	0.4 J	0.5 U	170	0.5 U	NA	0.5 U
B197	04/13/2011	1.7 U	1.7 U	1.7 U	1.7 U	150	3.3 U	33 U	1.7 U
B197	10/04/2011	1.1 J	1.7 U	0.4 J	1.7 U	170	3.3 U	33 U	1.7 U
B197	04/03/2012	1.1	1 U	0.3 J	1 U	160	2 U	20 U	1 U
B197	04/03/2012	0.9 J	1 U	0.3 J	1 U	170	2 U	20 U	1 U
B197R	04/08/2013	1.5	0.5 U	0.4 J	0.5 U	150	1 U	10 U	0.5 U
B197R	04/08/2014	0.8 J	1 U	1 U	1 U	110	2 U	20 U	1 U
B197R	04/14/2015	1.2	1 U	0.4 J	1 U	140	2 U	20 U	1 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
B277	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
B277	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B277	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
B277	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B277	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B277	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B277	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B278	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	13 J	0.5 U	NA	0.5 U
B278	04/19/2011	0.1 J	0.5 U	0.5 U	0.5 U	15	1 U	10 UJ	0.5 U
B278	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	11	1 U	10 UJ	0.5 U
B278	04/05/2012	0.1 J	0.5 U	0.5 U	0.5 U	11	1 U	10 U	0.5 U
B278	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	8.9	1 U	10 U	0.5 U
B278	04/09/2014	0.1 J	0.5 U	0.5 U	0.5 U	6.5	1 U	10 U	0.5 U
B278	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	8	1 U	10 U	0.5 U
B280A	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
B280A	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B280A	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B280A	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B280A	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B280A	04/09/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B280A	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B280B	10/01/2010	0.5 U	0.5 U	0.5 U	0.5 UJ	1.8	0.5 U	NA	0.5 U
B280B	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B280B	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B280B	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
B300	09/09/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.7	0.5 U	NA	0.5 UJ
B300	04/15/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B300	10/06/2011	0.5 U	0.4 J	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B300	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B38	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
B38	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
B38	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
B38	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B38	04/04/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B450	04/19/2011	0.2 J	0.5 U	0.5 U	0.5 U	5	1 U	10 UJ	0.5 U
B450	10/10/2011	0.1 J	0.5 U	0.5 U	0.5 U	6.7	1 U	10 U	0.5 U
B450	04/06/2012	0.4 J	0.5 U	0.5 U	0.5 U	26	1 U	10 U	0.5 U
B450	04/03/2013	0.3 J	0.5 U	0.5 U	0.5 U	11	1 U	10 U	0.5 U
B450	04/03/2014	0.6	0.5 U	0.5 U	0.5 U	31	1 U	10 U	0.5 U
B450	04/14/2015	0.6	0.5 U	0.5 U	0.5 U	21	1 U	10 U	0.5 U
B460	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
B460	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
B460	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B460	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
B473	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	12	0.5 U	NA	0.5 U
B473	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	3.4	1 U	10 UJ	0.5 U
B473	10/07/2011	0.1 J	0.5 U	0.5 U	0.5 U	6.1	1 U	10 U	0.5 U
B473	04/06/2012	0.2 J	0.5 U	0.5 U	0.5 U	6	1 U	10 U	0.5 U
B473	04/03/2013	0.3 J	0.5 U	0.5 U	0.5 U	8.8	1 U	10 U	0.5 U
B473	04/03/2014	0.9	0.5 U	0.5 U	0.5 U	37	1 U	10 U	0.5 U
B473	04/03/2014	1	0.5 U	0.5 U	0.5 U	37	1 U	10 U	0.5 U
B473	04/16/2015	0.7	0.5 U	0.5 U	0.5 U	26	1 U	10 U	0.5 U
B474	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
B474	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	1 U	10 UJ	0.5 U
B474	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B474	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B480	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	10	0.5 U	NA	0.5 U
B480	04/19/2011	0.1 J	0.5 U	0.5 U	0.5 U	9.1	1 U	10 UJ	0.5 U
B480	10/07/2011	0.2 J	0.5 U	0.5 U	0.5 U	13	1 U	10 U	0.5 U
B480	04/09/2012	0.2 J	0.5 U	0.5 U	0.5 U	14	1 U	10 U	0.5 U
B480	04/03/2013	0.5 J	0.5 U	0.5 U	0.5 U	23	1 U	10 U	0.5 U
B480	04/03/2014	0.4 J	0.5 U	0.5 U	0.5 U	21	1 U	10 U	0.5 U
B480	04/17/2015	0.5	0.5 U	0.5 U	0.5 U	23	1 U	10 U	0.5 U
B490	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
B490	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
B490	10/10/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
B490	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
BULB1	10/19/2010	0.5 U	3.4	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
BULB1	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
BULB1	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
BULB1	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
BULB1	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
BULB1	04/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
BULB1	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
BULB1	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
BULB2	10/19/2010	0.5 U	6.8	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
BULB2	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	1 U	10 UJ	0.5 U
BULB2	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	1	1 U	10 U	0.5 U
BULB2	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1 U	10 U	0.5 U
BULB2	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	1.5	1 U	10 U	0.5 U
BULB2	04/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	1.7	1 U	10 U	0.5 U
BULB2	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	2.4	1 U	10 U	0.5 U
CCC1	09/08/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 UJ
CCC1	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
CCC1	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
CCC1	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
CCC2	09/08/2010	2.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 UJ
CCC2	04/14/2011	0.2 J	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
CCC2	10/04/2011	2.1	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
CCC2	04/10/2012	1.1	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
CCC2	04/02/2013	1.7	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
CCC2	04/02/2013	2.1	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
CCC2	04/02/2014	3.3	0.5 U	0.5 U	0.5 U	0.1 J	1 U	10 U	0.5 U
CCC2	04/15/2015	1.1	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
CCC3	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	6	0.5 U	NA	0.5 U
CCC3	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	6.2	0.5 U	NA	0.5 U
CCC3	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.7	1 U	10 UJ	0.5 U
CCC3	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	1.9	1 U	10 U	0.5 U
CCC3	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	1.9	1 U	10 U	0.5 U
CCC3	04/10/2012	0.5 U	0.5 U	0.5 U	0.5 U	1.3	1 U	10 U	0.5 U
CCC3	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	1 U	10 U	0.5 U
CCC3	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	1	1 U	10 U	0.5 U
CCC3	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1 U	10 U	0.5 U
CCCT	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	120	0.5 U	NA	0.5 U
CCCT	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	84	1 U	10 U	0.5 U
CCCT	10/03/2011	0.5 U	0.5 U	0.1 J	0.5 U	79	1 U	10 U	0.5 U
CCCT	04/04/2012	0.5 U	0.5 U	0.1 J	0.5 U	85	1 U	10 U	0.5 U
CCCT	04/02/2013	0.5 U	0.5 U	0.5 U	0.5 U	90	1 U	10 U	0.5 U
CCCT	04/08/2014	0.1 J	0.5 U	0.2 J	0.5 U	97	1 U	10 U	0.5 U
CCCT	04/15/2015	0.5 U	0.5 U	0.5 U	0.5 U	22	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
CTP	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	NA	0.5 U
CTP	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	NA	0.5 U
CTP	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1 U	10 U	0.5 U
CTP	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1 U	10 U	0.5 U
CTP	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1 U	10 U	0.5 U
CTP	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1 U	10 U	0.5 U
CTP	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	1 U	10 U	0.5 U
CTP	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	1 U	10 U	0.5 U
CTP	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	1 U	10 U	0.5 U
CTP	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	1 U	10 U	0.5 U
CTPDEEP	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
CTPS	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	NA	0.5 U
CTPS	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
CTPS	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
CTPS	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
DH	09/30/2010	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	NA	0.5 U
DH	04/14/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
DH	10/05/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
DH	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
EERC	10/01/2010	0.3 J	0.5 U	0.5 U	0.5 U	6.8	0.5 U	NA	0.5 UJ
EERC	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
EERC	10/07/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
EERC	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
EERC	04/08/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
EERC	04/03/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
EERC	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
EPA	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.6	0.5 U	NA	0.5 U
EPA	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
EPA	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
EPA	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
EPA	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
EPA	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
EPA	04/10/2014	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
EPA	04/17/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
ETA	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	12	0.5 U	NA	0.5 U
ETA	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	14	0.5 U	NA	0.5 U
ETA	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	7.3	1 U	10 UJ	0.5 U
ETA	09/30/2011	0.3 J	0.5 U	0.3 J	0.5 U	17	1 U	10 U	0.5 U
ETA	04/10/2012	0.5 U	0.5 U	1	0.5 U	9.2	1 U	10 U	0.5 U
ETA	04/10/2012	0.5 U	0.5 U	0.9	0.5 U	9.3	1 U	10 U	0.5 U
ETA	04/05/2013	0.2 J	0.5 U	0.9	0.5 U	16	1 U	10 U	0.5 U
ETA	04/08/2014	0.2 J	0.5 U	1.6	0.5 U	16	1 U	10 U	0.5 U
ETA	04/13/2015	0.5 U	0.5 U	1.9	0.5 U	16	1 U	10 U	0.5 U
EXT	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
FG	09/23/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
FG	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
FG	04/19/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
FG	10/10/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	1 U	10 U	0.5 U
FG	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
GEO	09/03/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.4 J	0.5 U	NA	0.5 U
GEO	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
GEO	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
GEO	04/06/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
GEO	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
GEO	04/09/2014	0.1 J	0.5 U	0.5 U	0.5 U	0.1 J	1 U	10 U	0.5 U
GEO	04/16/2015	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
MFA	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	5.7	0.5 U	NA	0.5 U
MFA	04/12/2011	0.5 U	0.5 U	0.5 U	0.5 U	3.1	1 U	10 UJ	0.5 U
MFA	10/03/2011	0.5 U	0.5 U	0.5 U	0.5 U	8.2	1 U	10 U	0.2 J
MFA	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	5.4	1 U	10 U	0.5 U
MFA	04/05/2013	0.5 U	0.5 U	0.5 U	0.5 U	13	1 U	10 U	0.2 J
MFA	04/08/2014	0.5 U	0.5 U	0.5 U	0.5 U	15	1 U	10 U	0.5 U
MFA	04/13/2015	0.5 U	0.5 U	0.5 U	0.5 U	19	1 U	10 U	0.3 J
NRLF	09/16/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
NRLF	04/20/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 UJ	0.5 U
NRLF	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
NRLF	04/09/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
OBS6	09/30/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
PZ11	10/01/2010	67	0.5 U	2.4	0.5 UJ	690	0.5 U	NA	0.6
PZ11	04/20/2011	1.2	0.5 U	0.5 U	0.5 U	8.1	1 U	10 UJ	0.5 U
PZ11	10/10/2011	53	3.1 U	9.6	3.1 U	490	6.3 U	63 U	3.1 U
PZ11	04/05/2012	0.9	0.5 U	0.5 U	0.5 U	9.7	1 U	10 U	0.5 U
PZ11	04/05/2013	12	1.3 U	56	1.3 U	240	2.5 U	25 U	0.9 J
PZ11	04/05/2013	12	2 U	57	2 U	240	4 U	40 U	0.8 J
PZ11	04/09/2014	3.5	2.5 U	61	2.5 U	120	5 U	50 U	5.8
PZ11	04/16/2015	3	2.5 U	53	2.5 U	75	5 U	50 U	17
PZ8	10/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	0.5 U
PZ8	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
PZ8	10/04/2011	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
PZ8	04/03/2012	0.5 U	0.5 U	0.5 U	0.5 U	0.1 J	1 U	10 U	0.5 U
PZ9	09/24/2010	0.5 U	0.5 U	0.5 U	0.5 U	16	0.5 U	NA	0.5 U
PZ9	04/20/2011	0.2 J	0.5 U	0.5 U	0.5 U	11	1 U	10 UJ	0.5 U
PZ9	10/07/2011	0.3 J	0.5 U	0.5 U	0.5 U	28	1 U	10 U	0.5 U
PZ9	10/07/2011	0.4 J	0.5 U	0.5 U	0.5 U	27	1 U	10 U	0.5 U
PZ9	04/06/2012	0.6	0.5 U	0.5 U	0.5 U	65 J	1 U	10 UJ	0.5 U
PZ9	04/03/2013	1.2	0.5 U	0.5 U	0.5 U	64	1 U	10 U	0.5 U
PZ9	04/09/2014	1.1	0.5 U	0.5 U	0.5 U	69	1 U	10 U	0.5 U
PZ9	04/16/2015	0.9	0.5 U	0.5 U	0.5 U	63	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
RWF	09/15/2010	0.5 U	0.5 U	0.5 U	0.5 U	4.4	0.5 U	NA	0.5 U
RWF	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	2.8	1 U	10 U	0.5 U
RWF	10/06/2011	0.5 U	0.5 U	0.5 U	0.5 U	5	1 U	10 U	0.5 U
RWF	04/04/2012	0.1 J	0.5 U	0.5 U	0.5 U	2.8	1 U	10 U	0.5 U
RWF	04/08/2013	0.1 J	0.5 U	0.5 U	0.5 U	4.9	1 U	10 U	0.5 U
RWF	04/09/2014	0.1 J	0.5 U	0.5 U	0.5 U	4	1 U	10 U	0.5 U
RWF	04/14/2015	0.5 U	0.5 U	0.5 U	0.5 U	4.8	1 U	10 U	0.5 U
TP1	09/29/2010	0.5 U	0.5 U	0.5 UJ	0.5 U	13	0.5 U	NA	0.5 U
TP1	04/18/2011	0.5 U	0.5 U	0.5 U	0.5 U	1.8	1 U	10 U	0.5 U
TP1	10/07/2011	0.1 J	0.5 U	0.5 U	0.5 U	8.5	1 U	10 U	0.5 U
TP1	04/05/2012	0.5 U	0.5 U	0.5 U	0.5 U	3.8	1 U	10 U	0.5 U
TP1	04/04/2013	0.5 U	0.5 U	0.5 U	0.5 U	6.3	1 U	10 U	0.5 U
TP1	04/02/2014	0.5 U	0.5 U	0.5 U	0.5 U	4.2	1 U	10 U	0.5 U
TP1	04/10/2015	0.2 J	0.5 U	0.5 U	0.5 U	4.7	1 U	10 U	0.5 U
TP2	09/29/2010	0.2 J	0.5 U	0.5 U	0.5 U	15	0.5 U	NA	0.5 U
TP2	04/18/2011	0.3 J	0.5 U	0.5 U	0.5 U	12	1 U	10 U	0.5 U
TP2	10/07/2011	0.3 J	0.5 U	0.5 U	0.5 U	14	1 U	10 U	0.5 U
TP2	04/09/2012	0.3 J	0.5 U	0.5 U	0.5 U	13	1 U	10 U	0.5 U
TP2	04/09/2012	0.2 J	0.5 U	0.5 U	0.5 U	12	1 U	10 U	0.5 U
TP2	04/04/2013	0.3 J	0.5 U	0.5 U	0.5 U	18	1 U	10 U	0.5 U
TP2	04/02/2014	0.4 J	0.5 U	0.5 U	0.5 U	22	1 U	10 U	0.5 U
TP2	04/10/2015	0.5	0.5 U	0.5 U	0.5 U	29	1 U	10 U	0.5 U
TP2	04/10/2015	0.5	0.5 U	0.5 U	0.5 U	28	1 U	10 U	0.5 U

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VOCs (µg/L)

Location ID	Sample Date	Tetrachloroethene	Toluene	Trans-1,2-Dichloroethene	Trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride
California MCLs		5	150	10		5			0.5
Federal MCLs		5	1000	100		5			2
WTA	09/30/2010	3.2	0.5 U	0.5 U	0.5 UJ	0.4 J	0.5 U	NA	0.5 U
WTA	04/14/2011	3.8	0.5 U	0.5 U	0.5 U	0.4 J	1 U	10 U	0.5 U
WTA	04/14/2011	4.1	0.5 U	0.5 U	0.5 U	0.4 J	1 U	10 U	0.5 U
WTA	10/05/2011	3.2	0.5 U	0.5 U	0.5 U	0.5 J	1 U	10 UJ	0.5 U
WTA	04/05/2012	1.3	0.5 U	0.5 U	0.5 U	0.2 J	1 U	10 U	0.5 U
WTA	04/05/2013	1.5	0.5 U	0.5 U	0.5 U	0.2 J	1 U	10 U	0.5 U
WTA	04/10/2014	1	0.5 U	0.5 U	0.5 U	0.5 U	1 U	10 U	0.5 U
WTA	04/13/2015	1.5	0.5 U	0.5 U	0.5 U	0.3 J	1 U	10 U	0.5 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B120	09/09/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B120	09/09/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 U	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 UJ	0.9 U	0.9 U
B120	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B120	04/15/2011	NA	NA	NA	NA	0.03 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B120	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B120	10/04/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B120	04/03/2012	9.6 U	9.6 U	9.6 U	9.6 U	NA	NA	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	9.6 U	9.6 U	9.6 U
B120	04/03/2012	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B121	09/08/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 U	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 U	0.9 U	0.9 U
B121	09/08/2010	NA	NA	NA	NA	NA	0.048 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B121	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B121	04/13/2011	NA	NA	NA	NA	0.06 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B121	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B121	10/04/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B121	04/04/2012	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B121	04/04/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B128	09/23/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	09/23/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
B128	09/23/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
B128	09/23/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B128	04/18/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B128	10/04/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/02/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/02/2012	9.6 U	9.6 U	9.6 U	9.6 U	NA	NA	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	9.6 U	9.6 U	9.6 U
B128	04/05/2013	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/05/2013	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B128	04/10/2014	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/10/2014	9.8 U	9.8 U	9.8 U	9.8 U	NA	NA	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	20 U	9.8 U	9.8 U	9.8 U
B128	04/13/2015	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/13/2015	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B128	04/13/2015	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/13/2015	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B150	09/08/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	4.8 U	4.8 U	4.8 U	4.8 U	19 U	1 U	1 U	1 U
B150	09/08/2010	NA	NA	NA	NA	NA	0.048 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B150	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B150	04/13/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B150	10/05/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B150	10/05/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B150	10/05/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B150	10/05/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B150	04/04/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B150	04/04/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B150	04/04/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B150	04/04/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B158	09/08/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
B158	09/08/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B158	04/15/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B158	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B158	10/05/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B158	10/05/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B158	04/06/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B158	04/06/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B163	09/02/2010	1 U	1 U	1 U	1 U	0.5 J	NA	1 UJ	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
B163	09/02/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B163	04/12/2011	NA	NA	NA	NA	0.2 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B163	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 UJ	9.4 U	9.4 U	9.4 U
B163	10/03/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B163	10/03/2011	NA	NA	NA	NA	0.2 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B163	04/02/2012	NA	NA	NA	NA	0.09 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B163	04/02/2012	9.6 U	9.6 U	9.6 U	9.6 U	NA	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	9.6 U	9.6 U	9.6 U
B163	04/03/2013	NA	NA	NA	NA	0.2 J	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B163	04/03/2013	11 U	11 U	11 U	11 U	NA	11 U	11 U	11 U	11 U	11 U	11 U	11 U	21 U	11 U	11 U	11 U
B163	04/01/2014	NA	NA	NA	NA	0.2 J	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B163	04/01/2014	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B163	04/14/2015	NA	NA	NA	NA	0.2 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B163	04/14/2015	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	10 U
B175S	09/03/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 UJ	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 U	0.9 U	0.9 U
B175S	09/03/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B175S	04/13/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B175S	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B175S	10/04/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B175S	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B175S	04/04/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B175S	04/04/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B175W	09/08/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
B175W	09/08/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B175W	04/13/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B175W	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B175W	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B175W	10/04/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B175W	04/04/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B175W	04/04/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B177	09/23/2010	0.9 U	0.9 U	0.9 U	0.9 UJ	0.9 U	NA	0.9 U	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 U	0.9 U	0.9 U
B177	09/23/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B177	04/18/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B177	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B177	10/05/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B177	10/05/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B177	04/04/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B177	04/04/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B178	09/02/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B178	09/02/2010	1 U	1 U	1 U	1 U	1 U	NA	1 UJ	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
B178	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B178	04/15/2011	NA	NA	NA	NA	0.04 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B178	10/04/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B178	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B178	04/03/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B178	04/03/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B180	09/15/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	4.8 U	4.8 U	4.8 U	4.8 U	19 U	1 UJ	1 U	1 U
B180	09/15/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B180	04/13/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	10/06/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 UJ	9.4 U	9.4 U	9.4 U
B180	10/06/2011	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	10/06/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 UJ	9.4 U	9.4 U	9.4 U
B180	10/06/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	04/04/2012	9.7 U	9.7 U	9.7 U	9.7 U	NA	NA	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	19 U	9.7 U	9.7 U	9.7 U
B180	04/04/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	04/08/2013	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	04/08/2013	9.3 U	9.3 U	9.3 U	9.3 U	NA	NA	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	9.3 U	9.3 U	9.3 U
B180	04/08/2014	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B180	04/08/2014	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	04/14/2015	9.6 U	9.6 U	9.6 U	9.6 U	NA	NA	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	9.6 U	9.6 U	9.6 U
B180	04/14/2015	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B185	09/02/2010	0.9 U	0.9 U	0.9 U	0.9 U	10	NA	0.9 UJ	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 U	0.9 U	0.9 U
B185	09/02/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B185	04/15/2011	NA	NA	NA	NA	6	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B185	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B185	04/15/2011	NA	NA	NA	NA	6.8	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B185	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B185	10/03/2011	NA	NA	NA	NA	6.1	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B185	10/03/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B185	10/03/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B185	10/03/2011	NA	NA	NA	NA	6.3	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B185	04/02/2012	9.6 U	9.6 U	9.6 U	9.6 U	NA	NA	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	9.6 U	9.6 U	9.6 U
B185	04/02/2012	NA	NA	NA	NA	4.4	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B194	09/09/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 U	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 UJ	0.9 U	0.9 U
B194	09/09/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B194	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B194	04/13/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B194	10/04/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B194	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B194	04/04/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B194	04/04/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B195	09/09/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 U	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 UJ	0.9 U	0.9 U
B195	09/09/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B195	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B195	04/13/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B195	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B195	04/13/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B195	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B195	10/04/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B195	04/03/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B195	04/03/2012	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
B197	09/09/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 U	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 UJ	0.9 U	0.9 U
B197	09/09/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B197	09/09/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B197	09/09/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	4.8 U	4.8 U	4.8 U	4.8 U	19 U	1 UJ	1 U	1 U
B197	04/13/2011	NA	NA	NA	NA	0.04 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B197	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B197	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B197	10/04/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B197	04/03/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B197	04/03/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B197	04/03/2012	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B197	04/03/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B277	09/15/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B277	09/15/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 UJ	1 U	1 U
B277	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B277	04/18/2011	NA	NA	NA	NA	0.2 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B277	10/05/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B277	10/05/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B277	04/03/2012	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
B277	04/03/2012	NA	NA	NA	NA	0.1 J	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B278	09/16/2010	1 U	1 U	1 U	1 U	1.4	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 UJ	1 U	1 U
B278	09/16/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B278	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B278	04/19/2011	NA	NA	NA	NA	1.1	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B278	10/05/2011	NA	NA	NA	NA	0.9 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B278	10/05/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B278	04/05/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B278	04/05/2012	NA	NA	NA	NA	1.1	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B280A	09/16/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 UJ	1 U	1 U
B280A	09/16/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B280A	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B280A	04/14/2011	NA	NA	NA	NA	0.2 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B280A	10/06/2011	NA	NA	NA	NA	0.2 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B280A	10/06/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 UJ	9.4 U	9.4 U	9.4 U
B280A	04/03/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B280A	04/03/2012	NA	NA	NA	NA	0.2 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B280A	04/04/2013	10 U	10 U	10 U	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	10 U
B280A	04/04/2013	NA	NA	NA	NA	0.2 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B280A	04/09/2014	9.3 U	9.3 U	9.3 U	9.3 U	NA	NA	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	9.3 U	9.3 U	9.3 U
B280A	04/09/2014	NA	NA	NA	NA	0.2 J	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B280A	04/17/2015	NA	NA	NA	NA	0.2 J	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B280A	04/17/2015	9.8 U	9.8 U	9.8 U	9.8 U	NA	NA	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	20 U	9.8 U	9.8 U	9.8 U
B280B	10/01/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
B280B	10/01/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B280B	04/14/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B280B	04/14/2011	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	10 U
B280B	10/06/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 UJ	9.4 U	9.4 U	9.4 U
B280B	10/06/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B280B	04/03/2012	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
B280B	04/03/2012	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B300	09/09/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B300	09/09/2010	0.9 U	0.9 U	0.9 U	0.9 U	1.4	NA	0.9 U	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 UJ	0.9 U	0.9 U
B300	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B300	04/15/2011	NA	NA	NA	NA	0.1 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B300	10/06/2011	97 U	97 U	97 U	97 U	NA	NA	97 U	97 U	97 U	97 U	97 U	97 U	190 UJ	97 U	97 U	97 U
B300	10/06/2011	NA	NA	NA	NA	5.9	0.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B300	04/09/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B300	04/09/2012	NA	NA	NA	NA	0.8 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B38	09/15/2010	NA	NA	NA	NA	NA	0.05 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B38	09/15/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 UJ	1 U	1 U
B38	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B38	04/19/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B38	04/19/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B38	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B38	10/06/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B38	10/06/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 UJ	9.4 U	9.4 U	9.4 U
B38	04/04/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B38	04/04/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B450	04/19/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B450	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B450	10/10/2011	NA	NA	NA	NA	0.3 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B450	10/10/2011	9.6 UJ	9.6 UJ	9.6 UJ	9.6 UJ	NA	NA	9.6 UJ	9.6 UJ	9.6 UJ	9.6 UJ	9.6 UJ	9.6 UJ	19 UJ	9.6 UJ	9.6 UJ	9.6 UJ
B450	04/06/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B450	04/06/2012	NA	NA	NA	NA	0.5 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B460	09/15/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B460	09/15/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 UJ	1 U	1 U
B460	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B460	04/20/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B460	10/07/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B460	10/07/2011	9.6 U	9.6 U	9.6 U	9.6 U	NA	NA	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	9.6 U	9.6 U	9.6 U
B460	04/06/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B460	04/06/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B473	09/24/2010	1 U	1 U	1 U	1 U	0.5 J	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
B473	09/24/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B473	04/20/2011	NA	NA	NA	NA	0.06 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B473	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B473	10/07/2011	NA	NA	NA	NA	0.3 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B473	10/07/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B473	04/06/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B473	04/06/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B474	09/23/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
B474	09/23/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B474	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B474	04/20/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B474	10/07/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B474	10/07/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B474	04/09/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B474	04/09/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
B480	09/24/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
B480	09/24/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B480	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B480	04/19/2011	NA	NA	NA	NA	0.2 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B480	10/07/2011	NA	NA	NA	NA	0.3 J	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B480	10/07/2011	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
B480	04/09/2012	NA	NA	NA	NA	0.1 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B480	04/09/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B490	09/16/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 UJ	1 U	1 U
B490	09/16/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B490	04/20/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B490	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B490	10/10/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B490	10/10/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B490	04/09/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B490	04/09/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
BULB1	10/19/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB1	10/19/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 U	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 UJ	0.9 U	0.9 U	0.9 U
BULB1	04/12/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB1	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
BULB1	09/30/2011	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
BULB1	09/30/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB1	04/05/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB1	04/05/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
BULB2	10/19/2010	1 U	1 U	1 U	1 U	1.3	NA	1 U	NA	5 U	5 U	5 U	5 U	20 UJ	1 U	1 U	1 U
BULB2	10/19/2010	NA	NA	NA	NA	NA	0.033 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	04/12/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
BULB2	09/30/2011	NA	NA	NA	NA	1.2	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	09/30/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
BULB2	04/05/2012	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	04/05/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
BULB2	04/05/2013	10 U	10 U	10 U	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	10 U
BULB2	04/05/2013	NA	NA	NA	NA	1 J	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	04/10/2014	NA	NA	NA	NA	1	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	04/10/2014	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
BULB2	04/13/2015	9.6 U	9.6 U	9.6 U	9.6 U	NA	NA	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	9.6 U	9.6 U	9.6 U
BULB2	04/13/2015	NA	NA	NA	NA	0.8 J	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC1	09/08/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC1	09/08/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 U	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 U	0.9 U	0.9 U
CCC1	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC1	04/14/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC1	10/05/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC1	10/05/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC1	04/10/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC1	04/10/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
CCC2	09/08/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	09/08/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	4.8 U	4.8 U	4.8 U	4.8 U	19 U	1 U	1 U	1 U
CCC2	04/14/2011	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC2	10/04/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC2	04/10/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC2	04/10/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2013	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2013	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
CCC2	04/02/2013	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2013	9.3 U	9.3 U	9.3 U	9.3 U	NA	NA	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	9.3 U	9.3 U	9.3 U
CCC2	04/02/2014	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2014	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC2	04/15/2015	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC2	04/15/2015	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
CCC3	09/03/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 UJ	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 U	0.9 U	0.9 U
CCC3	09/03/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC3	09/03/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC3	09/03/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 UJ	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 U	0.9 U	0.9 U
CCC3	04/12/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC3	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC3	10/04/2011	NA	NA	NA	NA	0.1 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC3	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC3	10/04/2011	NA	NA	NA	NA	0.1 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC3	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC3	04/10/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC3	04/10/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCCT	09/03/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 UJ	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 U	0.9 U	0.9 U
CCCT	09/03/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCCT	04/18/2011	NA	NA	NA	NA	0.1 J	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCCT	04/18/2011	9.5 U	9.5 U	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
CCCT	10/03/2011	NA	NA	NA	NA	0.08 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCCT	10/03/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCCT	04/04/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCCT	04/04/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
CTP	09/30/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	09/30/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
CTP	09/30/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	09/30/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
CTP	04/14/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CTP	10/06/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	10/06/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 UJ	9.4 U	9.4 U	9.4 U
CTP	04/03/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/03/2012	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
CTP	04/04/2013	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/04/2013	10 U	10 U	10 U	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	10 U
CTP	04/03/2014	9.3 U	9.3 U	9.3 U	9.3 U	NA	NA	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	9.3 U	9.3 U	9.3 U
CTP	04/03/2014	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/03/2014	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/03/2014	10 U	10 U	10 U	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	10 U
CTP	04/17/2015	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/17/2015	9.3 U	9.3 U	9.3 U	9.3 U	NA	NA	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	9.3 U	9.3 U	9.3 U

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University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
CTPS	10/01/2010	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	NA	1.2 U	NA	6 U	6 U	6 U	6 U	24 U	1.2 U	1.2 U	1.2 U
CTPS	10/18/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTPS	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CTPS	04/19/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTPS	10/07/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CTPS	10/10/2011	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTPS	04/05/2012	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
CTPS	04/05/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DH	09/30/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DH	09/30/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
DH	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
DH	04/14/2011	NA	NA	NA	NA	0.04 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DH	10/05/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
DH	10/05/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DH	04/05/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DH	04/06/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
EERC	10/01/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
EERC	10/15/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EERC	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
EERC	04/20/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EERC	10/07/2011	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EERC	10/07/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
EERC	04/06/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EERC	04/06/2012	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
EPA	09/16/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 UJ	1 U	1 U
EPA	09/16/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA	04/19/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
EPA	10/06/2011	9.8 U	9.8 U	9.8 U	9.8 U	NA	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	20 UJ	9.8 U	9.8 U	9.8 U
EPA	10/06/2011	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA	04/06/2012	NA	NA	NA	NA	0.5 J	0.05 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA	04/06/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
EPA	04/06/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
EPA	04/06/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA	04/04/2013	9.3 U	9.3 U	9.3 U	9.3 U	NA	NA	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	9.3 U	9.3 U	9.3 U
EPA	04/04/2013	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA	04/10/2014	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA	04/10/2014	9.6 U	9.6 U	9.6 U	9.6 U	NA	NA	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	9.6 U	9.6 U	9.6 U
EPA	04/17/2015	9.6 U	9.6 U	9.6 U	9.6 U	NA	NA	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	9.6 U	9.6 U	9.6 U
EPA	04/17/2015	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
ETA	09/24/2010	NA	NA	NA	NA	NA	0.033 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETA	09/24/2010	0.9 U	0.9 U	0.9 U	0.9 U	12	NA	0.9 U	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 U	0.9 U	0.9 U
ETA	09/24/2010	1 U	1 U	1 U	1 U	12	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
ETA	09/24/2010	NA	NA	NA	NA	NA	0.032 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETA	04/12/2011	NA	NA	NA	NA	8.1	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETA	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
ETA	09/30/2011	NA	NA	NA	NA	6.1	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETA	09/30/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
ETA	04/10/2012	NA	NA	NA	NA	12	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETA	04/10/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
ETA	04/10/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
ETA	04/10/2012	NA	NA	NA	NA	12	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EXT	09/30/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
EXT	09/30/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FG	09/23/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FG	09/23/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
FG	04/19/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FG	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
FG	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
FG	04/19/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FG	10/10/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FG	10/10/2011	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
FG	04/09/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
FG	04/09/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
GEO	09/03/2010	NA	NA	NA	NA	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GEO	09/03/2010	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	0.9 UJ	NA	4.7 U	4.7 U	4.7 U	4.7 U	19 U	0.9 U	0.9 U	0.9 U
GEO	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
GEO	04/20/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GEO	10/06/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 UJ	9.4 U	9.4 U	9.4 U
GEO	10/06/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GEO	04/06/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GEO	04/06/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
MFA	09/24/2010	1 U	1 U	1 U	1 U	2.3	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
MFA	09/24/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
MFA	04/12/2011	NA	NA	NA	NA	1.1	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	10/03/2011	NA	NA	NA	NA	1.7	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	10/03/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
MFA	04/05/2012	NA	NA	NA	NA	1.2	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	04/05/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
MFA	04/05/2013	10 U	10 U	10 U	10 U	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	10 U
MFA	04/05/2013	NA	NA	NA	NA	1.9	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	04/08/2014	NA	NA	NA	NA	1.8	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	04/08/2014	9.3 U	9.3 U	9.3 U	9.3 U	NA	NA	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	9.3 U	9.3 U	9.3 U
MFA	04/13/2015	NA	NA	NA	NA	1.6	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	04/13/2015	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
NRLF	09/16/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	4.8 U	4.8 U	4.8 U	4.8 U	19 U	1 UJ	1 U	1 U
NRLF	09/16/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NRLF	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
NRLF	04/20/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NRLF	10/06/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NRLF	10/06/2011	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 UJ	9.5 U	9.5 U	9.5 U
NRLF	04/09/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
NRLF	04/09/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OBS6	09/30/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
OBS6	09/30/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ11	10/01/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ11	10/01/2010	1 U	1 U	1 U	1 U	0.7 J	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
PZ11	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ11	04/20/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ11	10/10/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ11	10/10/2011	NA	NA	NA	NA	0.3 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ11	04/05/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ11	04/05/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
PZ8	10/15/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ8	10/15/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 UJ	1 U	1 U	1 U
PZ8	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ8	04/18/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ8	10/04/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ8	10/04/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ8	04/03/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ8	04/03/2012	9.7 UJ	9.7 UJ	9.7 UJ	9.7 UJ	NA	NA	9.7 UJ	9.7 UJ	9.7 UJ	9.7 UJ	9.7 UJ	9.7 UJ	19 UJ	9.7 UJ	9.7 UJ	9.7 UJ
PZ9	09/24/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ9	09/24/2010	1 U	1 U	1 U	1 U	1.6	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
PZ9	04/20/2011	NA	NA	NA	NA	0.9 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ9	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ9	10/07/2011	NA	NA	NA	NA	1.2	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ9	10/07/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ9	10/07/2011	NA	NA	NA	NA	1.2	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ9	10/07/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ9	04/06/2012	NA	NA	NA	NA	1	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ9	04/06/2012	9.4 UJ	9.4 U	9.4 UJ	9.4 UJ	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
RWF	09/15/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RWF	09/15/2010	1 U	1 U	1 U	1 U	0.7 J	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 UJ	1 U	1 U
RWF	04/18/2011	NA	NA	NA	NA	0.06 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RWF	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
RWF	10/06/2011	NA	NA	NA	NA	0.6 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RWF	10/06/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 UJ	9.4 U	9.4 U	9.4 U
RWF	04/04/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RWF	04/04/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
TP1	09/29/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP1	09/29/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
TP1	04/18/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP1	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
TP1	10/07/2011	NA	NA	NA	NA	0.05 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP1	10/07/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
TP1	04/05/2012	NA	NA	NA	NA	1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP1	04/05/2012	9.5 U	9.5 U	9.5 U	9.5 U	NA	NA	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
TP2	09/29/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP2	09/29/2010	1 U	1 U	1 U	1 U	1.1	NA	1 U	NA	5 U	5 U	5 U	5 U	20 U	1 U	1 U	1 U
TP2	04/18/2011	NA	NA	NA	NA	0.7 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP2	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
TP2	10/07/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
TP2	10/07/2011	NA	NA	NA	NA	0.9 J	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP2	04/09/2012	NA	NA	NA	NA	0.3 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP2	04/09/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
TP2	04/09/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
TP2	04/09/2012	NA	NA	NA	NA	0.4 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,4-Dioxane	1-Methylnaphthalene	2,2'-Oxybis(1-Chloropropane)	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
California MCLs																	
Federal MCLs		70															
WTA	09/30/2010	NA	NA	NA	NA	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	09/30/2010	1 U	1 U	1 U	1 U	1 U	NA	1 U	NA	5 U	5 U	5 U	5 U	20 UJ	1 U	1 U	1 U
WTA	04/14/2011	NA	NA	NA	NA	0.06 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
WTA	04/14/2011	NA	NA	NA	NA	0.07 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
WTA	10/05/2011	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	10/05/2011	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
WTA	04/05/2012	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	04/05/2012	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
WTA	04/05/2013	9.8 U	9.8 U	9.8 U	9.8 U	NA	NA	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	20 U	9.8 U	9.8 U	9.8 U
WTA	04/05/2013	NA	NA	NA	NA	0.04 J	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	04/10/2014	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
WTA	04/10/2014	NA	NA	NA	NA	0.9 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	04/13/2015	9.4 U	9.4 U	9.4 U	9.4 U	NA	NA	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
WTA	04/13/2015	NA	NA	NA	NA	0.03 J	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol
California MCLs																	
Federal MCLs																	
B120	09/09/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B120	09/09/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	NA	4.7 U	4.7 UJ
B120	04/15/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B120	04/15/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B120	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B120	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B120	04/03/2012	9.6 U	NA	9.6 U	19 U	19 U	19 U	19 U	NA	19 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	19 U
B120	04/03/2012	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B121	09/08/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	NA	4.7 U	4.7 U
B121	09/08/2010	NA	0.048 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B121	04/13/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B121	04/13/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B121	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B121	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B121	04/04/2012	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B121	04/04/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol
California MCLs																	
Federal MCLs																	
B128	09/23/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	09/23/2010	5 U	1 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U
B128	09/23/2010	5 U	1 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U
B128	09/23/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/18/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B128	04/18/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B128	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/02/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/02/2012	9.6 U	NA	9.6 U	19 U	19 U	19 U	19 U	NA	19 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	19 U
B128	04/05/2013	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/05/2013	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B128	04/10/2014	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/10/2014	9.8 U	NA	9.8 U	20 U	20 U	20 U	20 U	NA	20 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	20 U	20 U
B128	04/13/2015	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/13/2015	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B128	04/13/2015	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B128	04/13/2015	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
B150	09/08/2010	4.8 U	1 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 UJ	1 U	4.8 U	4.8 U	1 U	NA	4.8 U	4.8 U	
B150	09/08/2010	NA	0.048 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B150	04/13/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B150	04/13/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B150	10/05/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B150	10/05/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B150	10/05/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B150	10/05/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B150	04/04/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B150	04/04/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B150	04/04/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B150	04/04/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B158	09/08/2010	5 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	
B158	09/08/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B158	04/15/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B158	04/15/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B158	10/05/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B158	10/05/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B158	04/06/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B158	04/06/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
B163	09/02/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	NA	5 UJ	1 U	5 U	5 U	1 U	5 U	5 U	5 U	
B163	09/02/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B163	04/12/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B163	04/12/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U	19 U	19 U	
B163	10/03/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B163	10/03/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B163	04/02/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B163	04/02/2012	9.6 U	NA	9.6 U	19 U	19 U	19 U	19 U	NA	19 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	19 U	
B163	04/03/2013	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B163	04/03/2013	11 U	NA	11 U	21 U	21 U	21 U	21 U	NA	21 U	11 U	11 U	11 U	11 U	11 U	21 U	21 U	
B163	04/01/2014	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B163	04/01/2014	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B163	04/14/2015	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B163	04/14/2015	10 U	NA	10 U	20 U	20 U	20 U	20 U	NA	20 U	10 U	10 U	10 U	10 U	10 U	20 U	20 U	
B175S	09/03/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 UJ	4.7 U	NA	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	
B175S	09/03/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B175S	04/13/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B175S	04/13/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B175S	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B175S	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B175S	04/04/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B175S	04/04/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
B175W	09/08/2010	5 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	
B175W	09/08/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B175W	04/13/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B175W	04/13/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B175W	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B175W	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B175W	04/04/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B175W	04/04/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B177	09/23/2010	4.7 U	0.9 U	4.7 UJ	4.7 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	NA	4.7 U	4.7 U	
B177	09/23/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B177	04/18/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B177	04/18/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B177	10/05/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B177	10/05/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B177	04/04/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B177	04/04/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B178	09/02/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B178	09/02/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	NA	5 UJ	1 U	5 U	5 U	1 U	5 U	5 U	5 U	
B178	04/15/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B178	04/15/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B178	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B178	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B178	04/03/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B178	04/03/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol
California MCLs																	
Federal MCLs																	
B180	09/15/2010	4.8 U	1 U	4.8 U	4.8 U	4.8 U	4.8 UJ	4.8 U	4.8 U	4.8 UJ	1 U	4.8 U	4.8 U	1 U	NA	4.8 U	4.8 UJ
B180	09/15/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	04/13/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B180	04/13/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	10/06/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B180	10/06/2011	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	10/06/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B180	10/06/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	04/04/2012	9.7 U	NA	9.7 U	19 U	19 U	19 U	19 U	NA	19 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	19 U	19 U
B180	04/04/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	04/08/2013	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	04/08/2013	9.3 U	NA	9.3 U	19 U	19 U	19 U	19 U	NA	19 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	19 U
B180	04/08/2014	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B180	04/08/2014	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B180	04/14/2015	9.6 U	NA	9.6 U	19 U	19 U	19 U	19 U	NA	19 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	19 U
B180	04/14/2015	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
B185	09/02/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 UJ	4.7 U	NA	4.7 UJ	0.9 U	4.7 U	4.7 UJ	0.9 U	4.7 U	4.7 U	4.7 U	
B185	09/02/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B185	04/15/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B185	04/15/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B185	04/15/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B185	04/15/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B185	10/03/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B185	10/03/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B185	10/03/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B185	10/03/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B185	04/02/2012	9.6 U	NA	9.6 U	19 U	19 U	19 U	19 U	NA	19 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	19 U	
B185	04/02/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B194	09/09/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	NA	4.7 U	4.7 UJ	
B194	09/09/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B194	04/13/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B194	04/13/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B194	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B194	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B194	04/04/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B194	04/04/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
B195	09/09/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	NA	4.7 U	4.7 UJ	
B195	09/09/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B195	04/13/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B195	04/13/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B195	04/13/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B195	04/13/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B195	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B195	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B195	04/03/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B195	04/03/2012	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U	
B197	09/09/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	NA	4.7 U	4.7 UJ	
B197	09/09/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B197	09/09/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B197	09/09/2010	4.8 U	1 U	4.8 U	4.8 U	4.8 U	4.8 UJ	4.8 U	4.8 U	4.8 UJ	1 U	4.8 U	4.8 U	1 U	NA	4.8 U	4.8 UJ	
B197	04/13/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B197	04/13/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B197	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B197	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B197	04/03/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B197	04/03/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B197	04/03/2012	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B197	04/03/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
B277	09/15/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B277	09/15/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 UJ	
B277	04/18/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B277	04/18/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B277	10/05/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B277	10/05/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B277	04/03/2012	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U	
B277	04/03/2012	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B278	09/16/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 UJ	
B278	09/16/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B278	04/19/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B278	04/19/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B278	10/05/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B278	10/05/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B278	04/05/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B278	04/05/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
B280A	09/16/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 UJ	
B280A	09/16/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B280A	04/14/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B280A	04/14/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B280A	10/06/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B280A	10/06/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B280A	04/03/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B280A	04/03/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B280A	04/04/2013	10 U	NA	10 U	20 U	20 U	20 U	20 U	NA	20 U	10 U	10 U	10 U	10 U	10 U	20 U	20 U	
B280A	04/04/2013	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B280A	04/09/2014	9.3 U	NA	9.3 U	19 U	19 U	19 U	19 U	NA	19 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	19 U	
B280A	04/09/2014	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B280A	04/17/2015	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B280A	04/17/2015	9.8 U	NA	9.8 U	20 U	20 U	20 U	20 U	NA	20 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	20 U	20 U	
B280B	10/01/2010	5 U	1 UJ	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	
B280B	10/01/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B280B	04/14/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B280B	04/14/2011	10 U	10 U	10 U	20 U	20 U	20 U	20 U	NA	20 U	10 U	10 U	10 U	10 U	10 U	20 U	20 U	
B280B	10/06/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B280B	10/06/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B280B	04/03/2012	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U	
B280B	04/03/2012	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol
California MCLs																	
Federal MCLs																	
B300	09/09/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B300	09/09/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	NA	4.7 U	4.7 UJ
B300	04/15/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B300	04/15/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B300	10/06/2011	97 U	NA	97 U	190 U	190 U	190 U	190 U	NA	190 U	97 U	97 U	97 U	97 U	97 U	190 U	190 U
B300	10/06/2011	NA	0.5 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B300	04/09/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B300	04/09/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B38	09/15/2010	NA	0.05 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B38	09/15/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 UJ
B38	04/19/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B38	04/19/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B38	04/19/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B38	04/19/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B38	10/06/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B38	10/06/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B38	04/04/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B38	04/04/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B450	04/19/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B450	04/19/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B450	10/10/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B450	10/10/2011	9.6 UJ	NA	9.6 UJ	19 UJ	19 UJ	19 UJ	19 UJ	NA	19 UJ	9.6 UJ	9.6 UJ	9.6 UJ	9.6 UJ	9.6 UJ	19 UJ	19 UJ
B450	04/06/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
B450	04/06/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
B460	09/15/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B460	09/15/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 UJ	
B460	04/20/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B460	04/20/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B460	10/07/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B460	10/07/2011	9.6 U	NA	9.6 U	19 U	19 U	19 U	19 U	NA	19 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	19 U	
B460	04/06/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B460	04/06/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B473	09/24/2010	5 U	1 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	
B473	09/24/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B473	04/20/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B473	04/20/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B473	10/07/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B473	10/07/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B473	04/06/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B473	04/06/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B474	09/23/2010	5 U	1 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	
B474	09/23/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B474	04/20/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B474	04/20/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B474	10/07/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B474	10/07/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B474	04/09/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B474	04/09/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
B480	09/24/2010	5 U	1 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	
B480	09/24/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B480	04/19/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B480	04/19/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B480	10/07/2011	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B480	10/07/2011	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U	
B480	04/09/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B480	04/09/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B490	09/16/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 UJ	
B490	09/16/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B490	04/20/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B490	04/20/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B490	10/10/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B490	10/10/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
B490	04/09/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
B490	04/09/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
BULB1	10/19/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
BULB1	10/19/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	NA	4.7 U	4.7 U	
BULB1	04/12/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
BULB1	04/12/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 UJ	19 U	
BULB1	09/30/2011	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U	
BULB1	09/30/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
BULB1	04/05/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
BULB1	04/05/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol
California MCLs																	
Federal MCLs																	
BULB2	10/19/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U
BULB2	10/19/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	04/12/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	04/12/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 UJ	19 U
BULB2	09/30/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	09/30/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
BULB2	04/05/2012	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	04/05/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
BULB2	04/05/2013	10 U	NA	10 U	20 U	20 U	20 U	20 U	NA	20 U	10 U	10 U	10 U	10 U	10 U	20 U	20 U
BULB2	04/05/2013	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	04/10/2014	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BULB2	04/10/2014	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
BULB2	04/13/2015	9.6 U	NA	9.6 U	19 U	19 U	19 U	19 U	NA	19 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	19 U
BULB2	04/13/2015	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC1	09/08/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC1	09/08/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	NA	4.7 U	4.7 U
CCC1	04/14/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
CCC1	04/14/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC1	10/05/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC1	10/05/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
CCC1	04/10/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC1	04/10/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
CCC2	09/08/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	09/08/2010	4.8 U	1 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 UJ	1 U	4.8 U	4.8 U	1 U	NA	4.8 U	4.8 U	4.8 U
CCC2	04/14/2011	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	04/14/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
CCC2	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
CCC2	04/10/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
CCC2	04/10/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2013	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2013	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U	19 U
CCC2	04/02/2013	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2013	9.3 U	NA	9.3 U	19 U	19 U	19 U	19 U	NA	19 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	19 U	19 U
CCC2	04/02/2014	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2014	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
CCC2	04/15/2015	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
CCC2	04/15/2015	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
CCC3	09/03/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	NA	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	
CCC3	09/03/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CCC3	09/03/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CCC3	09/03/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	NA	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	
CCC3	04/12/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CCC3	04/12/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U	19 U	19 U	
CCC3	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CCC3	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
CCC3	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CCC3	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
CCC3	04/10/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
CCC3	04/10/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CCCT	09/03/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	NA	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	
CCCT	09/03/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CCCT	04/18/2011	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CCCT	04/18/2011	9.5 U	9.5 U	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U	
CCCT	10/03/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CCCT	10/03/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
CCCT	04/04/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CCCT	04/04/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol
California MCLs																	
Federal MCLs																	
CTP	09/30/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	09/30/2010	5 U	1 UJ	5 UJ	5 U	5 U	5 UJ	5 UJ	13	5 UJ	1 U	5 U	5 UJ	1 U	NA	5 U	5 U
CTP	09/30/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	09/30/2010	5 U	1 UJ	5 UJ	5 U	5 U	5 UJ	5 UJ	9	5 UJ	1 U	5 U	5 UJ	1 U	NA	5 U	5 U
CTP	04/14/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/14/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
CTP	10/06/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	10/06/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
CTP	04/03/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/03/2012	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U
CTP	04/04/2013	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/04/2013	10 U	NA	10 U	20 U	20 U	20 U	20 U	NA	20 U	10 U	10 U	10 U	10 U	10 U	20 U	20 U
CTP	04/03/2014	9.3 U	NA	9.3 U	19 U	19 U	19 U	19 U	NA	19 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	19 U
CTP	04/03/2014	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/03/2014	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/03/2014	10 U	NA	10 U	20 U	20 U	20 U	20 U	NA	20 U	10 U	10 U	10 U	10 U	10 U	20 U	20 U
CTP	04/17/2015	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTP	04/17/2015	9.3 U	NA	9.3 U	19 U	19 U	19 U	19 U	NA	19 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	19 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
CTPS	10/01/2010	6 U	1.2 UJ	6 UJ	6 U	6 U	6 UJ	6 U	6 U	6 UJ	1.2 U	6 U	6 U	1.2 U	NA	6 U	6 U	
CTPS	10/18/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CTPS	04/19/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
CTPS	04/19/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CTPS	10/07/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
CTPS	10/10/2011	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
CTPS	04/05/2012	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U	
CTPS	04/05/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
DH	09/30/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
DH	09/30/2010	5 U	1 UJ	5 UJ	5 U	5 U	5 UJ	5 UJ	5 U	5 UJ	1 U	5 U	5 UJ	1 U	NA	5 U	5 U	
DH	04/14/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
DH	04/14/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
DH	10/05/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
DH	10/05/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
DH	04/05/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
DH	04/06/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	3.2 J	19 U	19 U	
EERC	10/01/2010	5 U	1 UJ	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	
EERC	10/15/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EERC	04/20/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
EERC	04/20/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EERC	10/07/2011	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EERC	10/07/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
EERC	04/06/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EERC	04/06/2012	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U	

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
EPA	09/16/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 UJ	
EPA	09/16/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EPA	04/19/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EPA	04/19/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
EPA	10/06/2011	9.8 U	NA	9.8 U	20 U	20 U	20 U	20 U	NA	20 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	20 U	20 U	
EPA	10/06/2011	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EPA	04/06/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EPA	04/06/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
EPA	04/06/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
EPA	04/06/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EPA	04/04/2013	9.3 U	NA	9.3 U	19 U	19 U	19 U	19 U	NA	19 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	19 U	
EPA	04/04/2013	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EPA	04/10/2014	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EPA	04/10/2014	9.6 U	NA	9.6 U	19 U	19 U	19 U	19 U	NA	19 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	19 U	
EPA	04/17/2015	9.6 U	NA	9.6 U	19 U	19 U	19 U	19 U	NA	19 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	19 U	19 U	
EPA	04/17/2015	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
ETA	09/24/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETA	09/24/2010	4.7 U	0.9 U	4.7 UJ	4.7 U	4.7 U	4.7 UJ	4.7 U	4.7 U	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	NA	4.7 U	4.7 U	
ETA	09/24/2010	5 U	1 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	
ETA	09/24/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETA	04/12/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETA	04/12/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U	19 U	19 U	
ETA	09/30/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETA	09/30/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
ETA	04/10/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETA	04/10/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
ETA	04/10/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
ETA	04/10/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EXT	09/30/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
EXT	09/30/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FG	09/23/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FG	09/23/2010	5 U	1 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	
FG	04/19/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FG	04/19/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
FG	04/19/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
FG	04/19/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FG	10/10/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FG	10/10/2011	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U	
FG	04/09/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
FG	04/09/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
GEO	09/03/2010	NA	0.047 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GEO	09/03/2010	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 U	4.7 U	NA	4.7 UJ	0.9 U	4.7 U	4.7 U	0.9 U	4.7 U	4.7 U	4.7 U	4.7 U
GEO	04/20/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
GEO	04/20/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GEO	10/06/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
GEO	10/06/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GEO	04/06/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GEO	04/06/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
MFA	09/24/2010	5 U	1 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	5 U
MFA	09/24/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	04/12/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U	19 U	19 U	19 U
MFA	04/12/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	10/03/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	10/03/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
MFA	04/05/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	04/05/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
MFA	04/05/2013	10 U	NA	10 U	20 U	20 U	20 U	20 U	NA	20 U	10 U	10 U	10 U	10 U	10 U	20 U	20 U	20 U
MFA	04/05/2013	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	04/08/2014	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	04/08/2014	9.3 U	NA	9.3 U	19 U	19 U	19 U	19 U	NA	19 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19 U	19 U	19 U
MFA	04/13/2015	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MFA	04/13/2015	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
NRLF	09/16/2010	4.8 U	1 U	4.8 U	4.8 U	4.8 U	4.8 UJ	4.8 U	4.8 U	4.8 UJ	1 U	4.8 U	4.8 U	1 U	NA	4.8 U	4.8 UJ	
NRLF	09/16/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
NRLF	04/20/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
NRLF	04/20/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
NRLF	10/06/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
NRLF	10/06/2011	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U	
NRLF	04/09/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
NRLF	04/09/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
OBS6	09/30/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
OBS6	09/30/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
PZ11	10/01/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PZ11	10/01/2010	5 U	1 UJ	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	
PZ11	04/20/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
PZ11	04/20/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PZ11	10/10/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	
PZ11	10/10/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PZ11	04/05/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PZ11	04/05/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	
California MCLs																		
Federal MCLs																		
PZ8	10/15/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ8	10/15/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	5 U
PZ8	04/18/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
PZ8	04/18/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ8	10/04/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ8	10/04/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
PZ8	04/03/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ8	04/03/2012	9.7 UJ	NA	9.7 UJ	19 UJ	19 UJ	19 UJ	19 UJ	NA	19 UJ	9.7 UJ	9.7 UJ	9.7 UJ	9.7 UJ	9.7 UJ	19 UJ	19 UJ	19 UJ
PZ9	09/24/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ9	09/24/2010	5 U	1 U	5 UJ	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 U	5 U
PZ9	04/20/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ9	04/20/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
PZ9	10/07/2011	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ9	10/07/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
PZ9	10/07/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ9	10/07/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U
PZ9	04/06/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PZ9	04/06/2012	9.4 UJ	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol
California MCLs																	
Federal MCLs																	
RWF	09/15/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RWF	09/15/2010	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 UJ	1 U	5 U	5 U	1 U	NA	5 U	5 UJ
RWF	04/18/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RWF	04/18/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
RWF	10/06/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RWF	10/06/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
RWF	04/04/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
RWF	04/04/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
TP1	09/29/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP1	09/29/2010	5 U	1 UJ	5 UJ	5 U	5 U	5 UJ	5 UJ	5 U	5 UJ	1 U	5 U	5 UJ	1 U	NA	5 U	5 U
TP1	04/18/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP1	04/18/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
TP1	10/07/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP1	10/07/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
TP1	04/05/2012	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP1	04/05/2012	9.5 U	NA	9.5 U	19 U	19 U	19 U	19 U	NA	19 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	19 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol
California MCLs																	
Federal MCLs																	
TP2	09/29/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP2	09/29/2010	5 U	1 UJ	5 UJ	5 U	5 U	5 UJ	5 UJ	5 U	5 UJ	1 U	5 U	5 UJ	1 U	NA	5 U	5 U
TP2	04/18/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP2	04/18/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
TP2	10/07/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
TP2	10/07/2011	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP2	04/09/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP2	04/09/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
TP2	04/09/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
TP2	04/09/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	3/4-Methylphenol	4,6-Dinitro-2-Methylphenol	4-Bromophenyl-Phenylether	4-Chloro-3-Methylphenol	4-Chloroaniline	4-Chlorophenyl-Phenylether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol
California MCLs																	
Federal MCLs																	
WTA	09/30/2010	NA	0.05 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	09/30/2010	5 U	1 UJ	5 UJ	5 U	5 U	5 UJ	5 UJ	5 U	5 UJ	1 U	5 U	5 UJ	1 U	NA	5 U	5 U
WTA	04/14/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	04/14/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
WTA	04/14/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	04/14/2011	9.4 U	9.4 U	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
WTA	10/05/2011	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	10/05/2011	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
WTA	04/05/2012	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	04/05/2012	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
WTA	04/05/2013	9.8 U	NA	9.8 U	20 U	20 U	20 U	20 U	NA	20 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	20 U	20 U
WTA	04/05/2013	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	04/10/2014	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
WTA	04/10/2014	NA	0.09 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WTA	04/13/2015	9.4 U	NA	9.4 U	19 U	19 U	19 U	19 U	NA	19 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	19 U
WTA	04/13/2015	NA	0.1 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole	
California MCLs																		
Federal MCLs															6			
B120	09/09/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA	
B120	09/09/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	4.7 U	0.9 U	0.9 U	0.9 UJ	0.9 UJ	0.9 U	
B120	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	
B120	04/15/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	
B120	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	
B120	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	
B120	04/03/2012	NA	NA	NA	9.6 U	NA	NA	NA	NA	NA	48 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	
B120	04/03/2012	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	
B121	09/08/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 UJ	NA	4.7 U	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	
B121	09/08/2010	0.048 U	0.048 U	0.048 U	NA	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	NA	NA	NA	NA	NA	NA	NA	
B121	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	
B121	04/13/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	
B121	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U	
B121	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA	
B121	04/04/2012	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA	
B121	04/04/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs															6		
B128	09/23/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
B128	09/23/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	6.2	1 UJ	1 U
B128	09/23/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 UJ	1 U
B128	09/23/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B128	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B128	04/18/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B128	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B128	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B128	04/02/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B128	04/02/2012	NA	NA	NA	9.6 U	NA	NA	NA	NA	NA	48 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
B128	04/05/2013	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B128	04/05/2013	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B128	04/10/2014	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B128	04/10/2014	NA	NA	NA	9.8 U	NA	NA	NA	NA	NA	49 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U
B128	04/13/2015	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B128	04/13/2015	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B128	04/13/2015	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
B128	04/13/2015	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs															6		
B150	09/08/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 UJ	NA	4.8 U	1 U	1 U	1 UJ	1 U	1 U
B150	09/08/2010	0.048 U	0.048 U	0.048 U	NA	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	NA	NA	NA	NA	NA	NA	NA
B150	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B150	04/13/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B150	10/05/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B150	10/05/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B150	10/05/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B150	10/05/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B150	04/04/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U
B150	04/04/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B150	04/04/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B150	04/04/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B158	09/08/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 UJ	NA	5 U	1 U	1 U	1 UJ	1 U	1 U
B158	09/08/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
B158	04/15/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B158	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B158	10/05/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	2.4 UJ	9.4 U	9.4 U
B158	10/05/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B158	04/06/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B158	04/06/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
B163	09/02/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 UJ	NA	5 U	1 U	1 U	5.7	1 U	1 U
B163	09/02/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
B163	04/12/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B163	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U
B163	10/03/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B163	10/03/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B163	04/02/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B163	04/02/2012	NA	NA	NA	9.6 U	NA	NA	NA	NA	NA	48 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
B163	04/03/2013	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
B163	04/03/2013	NA	NA	NA	11 U	NA	NA	NA	NA	NA	53 U	11 U	11 U	11 U	8.9 UJ	11 U	11 U
B163	04/01/2014	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
B163	04/01/2014	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B163	04/14/2015	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B163	04/14/2015	NA	NA	NA	10 U	NA	NA	NA	NA	NA	50 U	10 U	10 U	10 U	10 U	10 U	10 U
B175S	09/03/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 UJ	NA	4.7 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U
B175S	09/03/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
B175S	04/13/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B175S	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B175S	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B175S	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B175S	04/04/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B175S	04/04/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
B175W	09/08/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 UJ	NA	5 U	1 U	1 U	1 UJ	1 U	1 U
B175W	09/08/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B175W	04/13/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B175W	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B175W	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B175W	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B175W	04/04/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B175W	04/04/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B177	09/23/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	4.7 U	0.9 U	0.9 U	0.9 U	0.9 UJ	0.9 U
B177	09/23/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
B177	04/18/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B177	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B177	10/05/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B177	10/05/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B177	04/04/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B177	04/04/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B178	09/02/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B178	09/02/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 UJ	NA	5 U	1 U	1 U	1 U	1 U	1 U
B178	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B178	04/15/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B178	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B178	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B178	04/03/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B178	04/03/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
B180	09/15/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	4.8 U	1 U	1 U	1 UJ	1 UJ	1 U
B180	09/15/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B180	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U
B180	04/13/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B180	10/06/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B180	10/06/2011	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
B180	10/06/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	20 UJ	9.4 U	9.4 U
B180	10/06/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B180	04/04/2012	NA	NA	NA	9.7 U	NA	NA	NA	NA	NA	49 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U	9.7 U
B180	04/04/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B180	04/08/2013	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B180	04/08/2013	NA	NA	NA	9.3 U	NA	NA	NA	NA	NA	47 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
B180	04/08/2014	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	79 UJ	9.4 U	9.4 U
B180	04/08/2014	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B180	04/14/2015	NA	NA	NA	9.6 U	NA	NA	NA	NA	NA	48 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
B180	04/14/2015	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA

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California MCLs																	
Federal MCLs															6		
B185	09/02/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 UJ	NA	4.7 U	0.9 U	0.9 U	0.5 UJ	0.9 U	0.9 U
B185	09/02/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B185	04/15/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B185	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	20 UJ	9.4 U	9.4 U
B185	04/15/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B185	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B185	10/03/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B185	10/03/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B185	10/03/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B185	10/03/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B185	04/02/2012	NA	NA	NA	9.6 U	NA	NA	NA	NA	NA	48 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
B185	04/02/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B194	09/09/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	4.7 U	0.9 U	0.9 U	0.9 UJ	0.9 UJ	0.9 U
B194	09/09/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
B194	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U
B194	04/13/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B194	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B194	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B194	04/04/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B194	04/04/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
B195	09/09/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	4.7 U	0.9 U	0.9 U	0.9 UJ	0.9 UJ	0.9 U
B195	09/09/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
B195	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B195	04/13/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B195	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B195	04/13/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B195	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B195	10/04/2011	0.09 U	0.09 U	0.09 UJ	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B195	04/03/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B195	04/03/2012	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
B197	09/09/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	4.7 U	0.9 U	0.9 U	0.9 UJ	0.9 UJ	0.9 U
B197	09/09/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
B197	09/09/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
B197	09/09/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	4.8 U	1 U	1 U	1 UJ	1 UJ	1 U
B197	04/13/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B197	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B197	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B197	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B197	04/03/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B197	04/03/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B197	04/03/2012	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
B197	04/03/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzy Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethoxy)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
B277	09/15/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B277	09/15/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 UJ	1 UJ	1 U
B277	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B277	04/18/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B277	10/05/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B277	10/05/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B277	04/03/2012	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
B277	04/03/2012	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
B278	09/16/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 UJ	1 UJ	1 U
B278	09/16/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B278	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B278	04/19/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B278	10/05/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B278	10/05/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B278	04/05/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B278	04/05/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
B280A	09/16/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 UJ	1 UJ	1 U
B280A	09/16/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B280A	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B280A	04/14/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B280A	10/06/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B280A	10/06/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U
B280A	04/03/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B280A	04/03/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B280A	04/04/2013	NA	NA	NA	10 U	NA	NA	NA	NA	NA	50 U	10 U	10 U	10 U	10 U	10 U	10 U
B280A	04/04/2013	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B280A	04/09/2014	NA	NA	NA	9.3 U	NA	NA	NA	NA	NA	47 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
B280A	04/09/2014	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
B280A	04/17/2015	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
B280A	04/17/2015	NA	NA	NA	9.8 U	NA	NA	NA	NA	NA	49 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U	9.8 U
B280B	10/01/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 U	1 U
B280B	10/01/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B280B	04/14/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B280B	04/14/2011	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U
B280B	10/06/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B280B	10/06/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B280B	04/03/2012	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
B280B	04/03/2012	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
B300	09/09/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
B300	09/09/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	4.7 U	0.9 U	0.9 U	0.9 UJ	0.9 UJ	0.9 U
B300	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B300	04/15/2011	0.09 U	0.08 J	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B300	10/06/2011	NA	NA	NA	97 U	NA	NA	NA	NA	NA	180 J	73 J	97 U	97 U	97 U	97 U	97 U
B300	10/06/2011	0.5 U	4.9	0.5 U	NA	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	NA	NA	NA	NA	NA
B300	04/09/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B300	04/09/2012	0.09 U	0.2	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B38	09/15/2010	0.05 UJ	0.05 UJ	0.05 UJ	NA	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	NA	NA	NA	NA	NA	NA	NA
B38	09/15/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 UJ	1 UJ	1 U
B38	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B38	04/19/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B38	04/19/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B38	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B38	10/06/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B38	10/06/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B38	04/04/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	13 UJ	9.4 U	9.4 U
B38	04/04/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B450	04/19/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B450	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B450	10/10/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B450	10/10/2011	NA	NA	NA	9.6 UJ	NA	NA	NA	NA	NA	48 UJ	9.6 UJ	9.6 UJ	9.6 UJ	9.6 UJ	9.6 UJ	9.6 UJ
B450	04/06/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U
B450	04/06/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
B460	09/15/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B460	09/15/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 UJ	1 UJ	1 U
B460	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B460	04/20/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B460	10/07/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B460	10/07/2011	NA	NA	NA	9.6 U	NA	NA	NA	NA	NA	48 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
B460	04/06/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U
B460	04/06/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B473	09/24/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	0.5 J	1 UJ	1 U
B473	09/24/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B473	04/20/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B473	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B473	10/07/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B473	10/07/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B473	04/06/2012	0.09 U	0.09 U	0.02 J	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B473	04/06/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B474	09/23/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 UJ	1 U
B474	09/23/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B474	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B474	04/20/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B474	10/07/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B474	10/07/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B474	04/09/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B474	04/09/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																	
															6		
B480	09/24/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	0.8 J	1 UJ	1 U
B480	09/24/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B480	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B480	04/19/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B480	10/07/2011	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
B480	10/07/2011	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
B480	04/09/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B480	04/09/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B490	09/16/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 UJ	1 UJ	1 U
B490	09/16/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
B490	04/20/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B490	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B490	10/10/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B490	10/10/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
B490	04/09/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
B490	04/09/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
BULB1	10/19/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
BULB1	10/19/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	4.7 U	0.9 U	0.9 U	0.6 UJ	0.9 U	0.9 U
BULB1	04/12/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
BULB1	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
BULB1	09/30/2011	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
BULB1	09/30/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
BULB1	04/05/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
BULB1	04/05/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs															6		
BULB2	10/19/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 U	1 U
BULB2	10/19/2010	0.062	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
BULB2	04/12/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
BULB2	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
BULB2	09/30/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
BULB2	09/30/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	19 UJ	9.4 U	9.4 U
BULB2	04/05/2012	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
BULB2	04/05/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
BULB2	04/05/2013	NA	NA	NA	10 U	NA	NA	NA	NA	NA	50 U	10 U	10 U	10 U	10 U	10 U	10 U
BULB2	04/05/2013	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
BULB2	04/10/2014	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
BULB2	04/10/2014	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
BULB2	04/13/2015	NA	NA	NA	9.6 U	NA	NA	NA	NA	NA	48 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
BULB2	04/13/2015	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
CCC1	09/08/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
CCC1	09/08/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 UJ	NA	4.7 U	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U
CCC1	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CCC1	04/14/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCC1	10/05/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCC1	10/05/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CCC1	04/10/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCC1	04/10/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs															6		
CCC2	09/08/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
CCC2	09/08/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 UJ	NA	4.8 U	1 U	1 U	0.6 J	1 U	1 U
CCC2	04/14/2011	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
CCC2	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CCC2	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCC2	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U
CCC2	04/10/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CCC2	04/10/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2013	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2013	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
CCC2	04/02/2013	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2013	NA	NA	NA	9.3 U	NA	NA	NA	NA	NA	47 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
CCC2	04/02/2014	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
CCC2	04/02/2014	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CCC2	04/15/2015	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	11 UJ	9.4 U	9.4 U
CCC2	04/15/2015	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
CCC3	09/03/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 UJ	NA	4.7 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U
CCC3	09/03/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
CCC3	09/03/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
CCC3	09/03/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 UJ	NA	4.7 U	0.9 U	0.9 U	1 UJ	0.9 U	0.9 U
CCC3	04/12/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCC3	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U
CCC3	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCC3	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CCC3	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCC3	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CCC3	04/10/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CCC3	04/10/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCCT	09/03/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 UJ	NA	4.7 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U
CCCT	09/03/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
CCCT	04/18/2011	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
CCCT	04/18/2011	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
CCCT	10/03/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCCT	10/03/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CCCT	04/04/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CCCT	04/04/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethoxy)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
CTP	09/30/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
CTP	09/30/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 U	1 U
CTP	09/30/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
CTP	09/30/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 U	1 U
CTP	04/14/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CTP	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CTP	10/06/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CTP	10/06/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CTP	04/03/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CTP	04/03/2012	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
CTP	04/04/2013	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
CTP	04/04/2013	NA	NA	NA	10 U	NA	NA	NA	NA	NA	50 U	10 U	10 U	10 U	10 U	10 U	10 U
CTP	04/03/2014	NA	NA	NA	9.3 U	NA	NA	NA	NA	NA	47 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
CTP	04/03/2014	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
CTP	04/03/2014	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CTP	04/03/2014	NA	NA	NA	10 U	NA	NA	NA	NA	NA	50 U	10 U	10 U	10 U	10 U	10 U	10 U
CTP	04/17/2015	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
CTP	04/17/2015	NA	NA	NA	9.3 U	NA	NA	NA	NA	NA	47 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs															6		
CTPS	10/01/2010	1.2 U	1.2 U	1.2 U	NA	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	NA	6 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
CTPS	10/18/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
CTPS	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CTPS	04/19/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
CTPS	10/07/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
CTPS	10/10/2011	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
CTPS	04/05/2012	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
CTPS	04/05/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
DH	09/30/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
DH	09/30/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 U	1 U
DH	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
DH	04/14/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
DH	10/05/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	2.2 U	9.4 U	9.4 U
DH	10/05/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
DH	04/05/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
DH	04/06/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
EERC	10/01/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 U	1 U
EERC	10/15/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
EERC	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
EERC	04/20/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
EERC	10/07/2011	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
EERC	10/07/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
EERC	04/06/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
EERC	04/06/2012	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzy Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
EPA	09/16/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 UJ	1 UJ	1 U
EPA	09/16/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
EPA	04/19/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
EPA	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
EPA	10/06/2011	NA	NA	NA	9.8 U	NA	NA	NA	NA	NA	49 U	9.8 U	9.8 U	9.8 U	9.8 UJ	9.8 U	9.8 U
EPA	10/06/2011	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
EPA	04/06/2012	0.2	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
EPA	04/06/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
EPA	04/06/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
EPA	04/06/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
EPA	04/04/2013	NA	NA	NA	9.3 U	NA	NA	NA	NA	NA	47 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
EPA	04/04/2013	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
EPA	04/10/2014	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
EPA	04/10/2014	NA	NA	NA	9.6 U	NA	NA	NA	NA	NA	48 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
EPA	04/17/2015	NA	NA	NA	9.6 U	NA	NA	NA	NA	NA	48 U	9.6 U	9.6 U	9.6 U	9.6 UJ	9.6 U	9.6 U
EPA	04/17/2015	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs															6		
ETA	09/24/2010	0.11	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
ETA	09/24/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	NA	4.7 U	0.9 U	0.9 U	1.1	0.9 UJ	0.9 U
ETA	09/24/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	0.5 J	1 UJ	1 U
ETA	09/24/2010	0.11	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
ETA	04/12/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
ETA	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
ETA	09/30/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
ETA	09/30/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
ETA	04/10/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
ETA	04/10/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
ETA	04/10/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
ETA	04/10/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
EXT	09/30/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
EXT	09/30/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
FG	09/23/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
FG	09/23/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 UJ	1 U
FG	04/19/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
FG	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
FG	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
FG	04/19/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
FG	10/10/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
FG	10/10/2011	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U
FG	04/09/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
FG	04/09/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
 University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
GEO	09/03/2010	0.047 U	0.047 U	0.047 U	NA	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA	NA
GEO	09/03/2010	0.9 U	0.9 U	0.9 U	NA	0.9 U	0.9 U	0.9 U	0.9 U	0.9 UJ	NA	4.7 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U
GEO	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
GEO	04/20/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
GEO	10/06/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
GEO	10/06/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
GEO	04/06/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
GEO	04/06/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
MFA	09/24/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	27	1 UJ	1 U
MFA	09/24/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
MFA	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
MFA	04/12/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
MFA	10/03/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
MFA	10/03/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
MFA	04/05/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
MFA	04/05/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
MFA	04/05/2013	NA	NA	NA	10 U	NA	NA	NA	NA	NA	50 U	10 U	10 U	10 U	9.4 U	10 U	10 U
MFA	04/05/2013	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
MFA	04/08/2014	0.09 U	0.09 U	0.09 UJ	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
MFA	04/08/2014	NA	NA	NA	9.3 U	NA	NA	NA	NA	NA	47 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
MFA	04/13/2015	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
MFA	04/13/2015	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U

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 University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzy Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
NRLF	09/16/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	4.8 U	1 U	1 U	1 UJ	1 UJ	1 U
NRLF	09/16/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
NRLF	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U
NRLF	04/20/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
NRLF	10/06/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
NRLF	10/06/2011	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 UJ	9.5 U	9.5 U
NRLF	04/09/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
NRLF	04/09/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
OBS6	09/30/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
OBS6	09/30/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
PZ11	10/01/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
PZ11	10/01/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 U	1 U
PZ11	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
PZ11	04/20/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
PZ11	10/10/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
PZ11	10/10/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
PZ11	04/05/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
PZ11	04/05/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzyl Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																6	
PZ8	10/15/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
PZ8	10/15/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 U	1 U
PZ8	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
PZ8	04/18/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
PZ8	10/04/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
PZ8	10/04/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
PZ8	04/03/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
PZ8	04/03/2012	NA	NA	NA	9.7 UJ	NA	NA	NA	NA	NA	49 UJ	9.7 UJ	9.7 UJ	9.7 UJ	9.7 UJ	9.7 UJ	9.7 UJ
PZ9	09/24/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
PZ9	09/24/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 UJ	1 U
PZ9	04/20/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
PZ9	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
PZ9	10/07/2011	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
PZ9	10/07/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
PZ9	10/07/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
PZ9	10/07/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
PZ9	04/06/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
PZ9	04/06/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzy Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs																	
															6		
RWF	09/15/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
RWF	09/15/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 UJ	1 UJ	1 U
RWF	04/18/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
RWF	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
RWF	10/06/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
RWF	10/06/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
RWF	04/04/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
RWF	04/04/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
TP1	09/29/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
TP1	09/29/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 U	1 U
TP1	04/18/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
TP1	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
TP1	10/07/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
TP1	10/07/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
TP1	04/05/2012	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
TP1	04/05/2012	NA	NA	NA	9.5 U	NA	NA	NA	NA	NA	48 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U

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Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzy Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs															6		
TP2	09/29/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
TP2	09/29/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 U	1 U
TP2	04/18/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
TP2	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
TP2	10/07/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
TP2	10/07/2011	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA
TP2	04/09/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
TP2	04/09/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
TP2	04/09/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	23 UJ	9.4 U	9.4 U
TP2	04/09/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Azobenzene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Benzoic Acid	Benzy Alcohol	Bis(2-Chloroethoxy)Methane	Bis(2-Chloroethyl)Ether	Bis(2-Ethylhexyl)Phthalate	Butylbenzylphthalate	Carbazole
California MCLs																	
Federal MCLs															6		
WTA	09/30/2010	0.05 U	0.05 U	0.05 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	NA	NA	NA	NA	NA	NA	NA
WTA	09/30/2010	1 U	1 U	1 U	NA	1 U	1 U	1 U	1 U	1 U	NA	5 U	1 U	1 U	1 U	1 U	1 U
WTA	04/14/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
WTA	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 UJ	9.4 U	9.4 U
WTA	04/14/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
WTA	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
WTA	10/05/2011	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
WTA	10/05/2011	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	3.3 UJ	9.4 U	9.4 U
WTA	04/05/2012	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
WTA	04/05/2012	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
WTA	04/05/2013	NA	NA	NA	9.8 U	NA	NA	NA	NA	NA	49 U	9.8 U	9.8 U	9.8 U	9.2 UJ	9.8 U	9.8 U
WTA	04/05/2013	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
WTA	04/10/2014	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
WTA	04/10/2014	0.09 U	0.09 U	0.09 U	NA	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	NA	NA	NA	NA	NA	NA
WTA	04/13/2015	NA	NA	NA	9.4 U	NA	NA	NA	NA	NA	47 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U
WTA	04/13/2015	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	NA	NA	NA	NA	NA	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B120	09/09/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
B120	09/09/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 UJ	0.9 U	0.9 U	0.9 U
B120	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B120	04/15/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B120	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B120	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B120	04/03/2012	NA	9.6 U	9.6 U	NA	9.6 U	9.6 U	9.6 U	NA	NA	NA	9.6 U	9.6 U	19 U	9.6 U	NA	9.6 U
B120	04/03/2012	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
B121	09/08/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 U	0.9 U	0.9 U	0.9 U
B121	09/08/2010	0.048 U	NA	NA	0.048 U	NA	NA	NA	NA	0.048 U	0.048 U	NA	NA	NA	NA	0.048 U	NA
B121	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B121	04/13/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B121	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B121	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B121	04/04/2012	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
B121	04/04/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B128	09/23/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
B128	09/23/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B128	09/23/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B128	09/23/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B128	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B128	04/18/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B128	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B128	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B128	04/02/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B128	04/02/2012	NA	9.6 U	9.6 U	NA	9.6 U	9.6 U	9.6 U	NA	NA	NA	9.6 U	9.6 U	19 U	9.6 U	NA	9.6 U
B128	04/05/2013	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B128	04/05/2013	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B128	04/10/2014	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B128	04/10/2014	NA	9.8 U	9.8 U	NA	9.8 U	9.8 U	9.8 U	NA	NA	NA	9.8 U	9.8 U	20 U	9.8 U	NA	9.8 U
B128	04/13/2015	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B128	04/13/2015	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B128	04/13/2015	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
B128	04/13/2015	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B150	09/08/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.8 U	1 U	1 U	1 U
B150	09/08/2010	0.048 U	NA	NA	0.048 U	NA	NA	NA	NA	0.048 U	0.048 U	NA	NA	NA	NA	0.048 U	NA
B150	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B150	04/13/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B150	10/05/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B150	10/05/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B150	10/05/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B150	10/05/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B150	04/04/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B150	04/04/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B150	04/04/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B150	04/04/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B158	09/08/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U
B158	09/08/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
B158	04/15/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B158	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B158	10/05/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B158	10/05/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B158	04/06/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B158	04/06/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

2015 Groundwater Sampling Results, Technical Memorandum
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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B163	09/02/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U
B163	09/02/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
B163	04/12/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B163	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B163	10/03/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B163	10/03/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B163	04/02/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B163	04/02/2012	NA	9.6 U	9.6 U	NA	9.6 U	9.6 U	9.6 U	NA	NA	NA	9.6 U	9.6 U	19 U	9.6 U	NA	9.6 U
B163	04/03/2013	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
B163	04/03/2013	NA	11 U	11 U	NA	11 U	11 U	11 U	NA	NA	NA	11 U	11 U	21 U	11 U	NA	11 U
B163	04/01/2014	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
B163	04/01/2014	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B163	04/14/2015	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B163	04/14/2015	NA	10 U	10 U	NA	10 U	10 U	10 U	NA	NA	NA	10 U	10 U	20 U	10 U	NA	10 U
B175S	09/03/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 U	0.9 U	0.9 U	0.9 U
B175S	09/03/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
B175S	04/13/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B175S	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B175S	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B175S	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B175S	04/04/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B175S	04/04/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B175W	09/08/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U
B175W	09/08/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B175W	04/13/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B175W	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B175W	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B175W	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B175W	04/04/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B175W	04/04/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B177	09/23/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	4.7 UJ	0.9 U	0.9 U	0.9 U
B177	09/23/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
B177	04/18/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B177	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B177	10/05/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B177	10/05/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B177	04/04/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B177	04/04/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B178	09/02/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B178	09/02/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1 U
B178	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B178	04/15/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B178	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B178	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B178	04/03/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B178	04/03/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B180	09/15/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.8 UJ	1 U	1 U	1 U
B180	09/15/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B180	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B180	04/13/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B180	10/06/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B180	10/06/2011	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
B180	10/06/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B180	10/06/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B180	04/04/2012	NA	9.7 U	9.7 U	NA	9.7 U	9.7 U	9.7 U	NA	NA	NA	9.7 U	9.7 U	19 U	9.7 U	NA	9.7 U
B180	04/04/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B180	04/08/2013	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B180	04/08/2013	NA	9.3 U	9.3 U	NA	9.3 U	9.3 U	9.3 U	NA	NA	NA	9.3 U	9.3 U	19 U	9.3 U	NA	9.3 U
B180	04/08/2014	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B180	04/08/2014	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B180	04/14/2015	NA	9.6 U	9.6 U	NA	9.6 U	9.6 U	9.6 U	NA	NA	NA	9.6 U	9.6 U	19 U	9.6 U	NA	9.6 U
B180	04/14/2015	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B185	09/02/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 U	0.9 U	0.9 U	0.9 U
B185	09/02/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B185	04/15/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B185	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B185	04/15/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B185	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B185	10/03/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B185	10/03/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B185	10/03/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B185	10/03/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B185	04/02/2012	NA	9.6 U	9.6 U	NA	9.6 U	9.6 U	9.6 U	NA	NA	NA	9.6 U	9.6 U	19 U	9.6 U	NA	9.6 U
B185	04/02/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B194	09/09/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 UJ	0.9 U	0.9 U	0.9 U
B194	09/09/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
B194	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B194	04/13/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B194	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B194	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B194	04/04/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B194	04/04/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B195	09/09/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 UJ	0.9 U	0.9 U	0.9 U
B195	09/09/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
B195	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B195	04/13/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B195	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B195	04/13/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B195	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B195	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 UJ	0.09 U	NA	NA	NA	NA	0.09 U	NA
B195	04/03/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B195	04/03/2012	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U
B197	09/09/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 UJ	0.9 U	0.9 U	0.9 U
B197	09/09/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
B197	09/09/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
B197	09/09/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.8 UJ	1 U	1 U	1 U
B197	04/13/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B197	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B197	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B197	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B197	04/03/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B197	04/03/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B197	04/03/2012	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
B197	04/03/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B277	09/15/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B277	09/15/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B277	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B277	04/18/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B277	10/05/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B277	10/05/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B277	04/03/2012	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U
B277	04/03/2012	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
B278	09/16/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B278	09/16/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B278	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B278	04/19/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B278	10/05/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B278	10/05/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B278	04/05/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B278	04/05/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B280A	09/16/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B280A	09/16/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B280A	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B280A	04/14/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B280A	10/06/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B280A	10/06/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B280A	04/03/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B280A	04/03/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B280A	04/04/2013	NA	10 U	10 U	NA	10 U	10 U	10 U	NA	NA	NA	10 U	10 U	20 UJ	10 U	NA	10 U
B280A	04/04/2013	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B280A	04/09/2014	NA	9.3 U	9.3 U	NA	9.3 U	9.3 U	9.3 U	NA	NA	NA	9.3 U	9.3 U	19 U	9.3 U	NA	9.3 U
B280A	04/09/2014	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
B280A	04/17/2015	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
B280A	04/17/2015	NA	9.8 U	9.8 U	NA	9.8 U	9.8 U	9.8 U	NA	NA	NA	9.8 U	9.8 U	20 U	9.8 U	NA	9.8 U
B280B	10/01/2010	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B280B	10/01/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B280B	04/14/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B280B	04/14/2011	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U	20 U	10 U	10 U	10 U
B280B	10/06/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B280B	10/06/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B280B	04/03/2012	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U
B280B	04/03/2012	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B300	09/09/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
B300	09/09/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 UJ	0.9 U	0.9 U	0.9 U
B300	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B300	04/15/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B300	10/06/2011	NA	97 U	97 U	NA	97 U	97 U	97 U	NA	NA	NA	97 U	97 U	190 U	97 U	NA	97 U
B300	10/06/2011	0.5 U	NA	NA	0.5 U	NA	NA	NA	NA	0.5 U	0.5 U	NA	NA	NA	NA	0.5 U	NA
B300	04/09/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B300	04/09/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B38	09/15/2010	0.05 UJ	NA	NA	0.05 UJ	NA	NA	NA	NA	0.05 UJ	0.05 UJ	NA	NA	NA	NA	0.05 UJ	NA
B38	09/15/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B38	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B38	04/19/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B38	04/19/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B38	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B38	10/06/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B38	10/06/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B38	04/04/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B38	04/04/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B450	04/19/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B450	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B450	10/10/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B450	10/10/2011	NA	9.6 UJ	9.6 UJ	NA	9.6 UJ	9.6 UJ	9.6 UJ	NA	NA	NA	9.6 UJ	9.6 UJ	19 UJ	9.6 UJ	NA	9.6 UJ
B450	04/06/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B450	04/06/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA

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University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B460	09/15/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B460	09/15/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B460	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B460	04/20/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B460	10/07/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B460	10/07/2011	NA	9.6 U	9.6 U	NA	9.6 U	9.6 U	9.6 U	NA	NA	NA	9.6 U	9.6 U	19 U	9.6 U	NA	9.6 U
B460	04/06/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B460	04/06/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B473	09/24/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B473	09/24/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B473	04/20/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B473	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B473	10/07/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B473	10/07/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B473	04/06/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B473	04/06/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B474	09/23/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B474	09/23/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B474	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B474	04/20/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B474	10/07/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B474	10/07/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B474	04/09/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B474	04/09/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
B480	09/24/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B480	09/24/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B480	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B480	04/19/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B480	10/07/2011	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
B480	10/07/2011	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U
B480	04/09/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B480	04/09/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B490	09/16/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
B490	09/16/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
B490	04/20/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B490	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B490	10/10/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B490	10/10/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
B490	04/09/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
B490	04/09/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
BULB1	10/19/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
BULB1	10/19/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 UJ	0.9 U	0.9 U	0.9 U
BULB1	04/12/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
BULB1	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
BULB1	09/30/2011	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U
BULB1	09/30/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
BULB1	04/05/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
BULB1	04/05/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
BULB2	10/19/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
BULB2	10/19/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
BULB2	04/12/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
BULB2	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
BULB2	09/30/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
BULB2	09/30/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
BULB2	04/05/2012	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
BULB2	04/05/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
BULB2	04/05/2013	NA	10 U	10 U	NA	10 U	10 U	10 U	NA	NA	NA	10 U	10 U	20 U	10 U	NA	10 U
BULB2	04/05/2013	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
BULB2	04/10/2014	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
BULB2	04/10/2014	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
BULB2	04/13/2015	NA	9.6 U	9.6 U	NA	9.6 U	9.6 U	9.6 U	NA	NA	NA	9.6 U	9.6 U	19 U	9.6 U	NA	9.6 U
BULB2	04/13/2015	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
CCC1	09/08/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
CCC1	09/08/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 U	0.9 U	0.9 U	0.9 U
CCC1	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC1	04/14/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCC1	10/05/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCC1	10/05/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
CCC1	04/10/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCC1	04/10/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
CCC2	09/08/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
CCC2	09/08/2010	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.8 U	1 U	1 U	1 U
CCC2	04/14/2011	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
CCC2	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC2	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCC2	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
CCC2	04/10/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
CCC2	04/10/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCC2	04/02/2013	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCC2	04/02/2013	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U
CCC2	04/02/2013	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCC2	04/02/2013	NA	9.3 U	9.3 U	NA	9.3 U	9.3 U	9.3 U	NA	NA	NA	9.3 U	9.3 U	19 U	9.3 U	NA	9.3 U
CCC2	04/02/2014	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
CCC2	04/02/2014	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
CCC2	04/15/2015	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
CCC2	04/15/2015	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
CCC3	09/03/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 U	0.9 U	0.9 U	0.9 U
CCC3	09/03/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
CCC3	09/03/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
CCC3	09/03/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 U	0.9 U	0.9 U	0.9 U
CCC3	04/12/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCC3	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC3	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCC3	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
CCC3	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCC3	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
CCC3	04/10/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
CCC3	04/10/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCCT	09/03/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 U	0.9 U	0.9 U	0.9 U
CCCT	09/03/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
CCCT	04/18/2011	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
CCCT	04/18/2011	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
CCCT	10/03/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCCT	10/03/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
CCCT	04/04/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CCCT	04/04/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
CTP	09/30/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
CTP	09/30/2010	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
CTP	09/30/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
CTP	09/30/2010	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
CTP	04/14/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CTP	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CTP	10/06/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CTP	10/06/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
CTP	04/03/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CTP	04/03/2012	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U
CTP	04/04/2013	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
CTP	04/04/2013	NA	10 U	10 U	NA	10 U	10 U	10 U	NA	NA	NA	10 U	10 U	20 UJ	10 U	NA	10 U
CTP	04/03/2014	NA	9.3 U	9.3 U	NA	9.3 U	9.3 U	9.3 U	NA	NA	NA	9.3 U	9.3 U	19 U	9.3 U	NA	9.3 U
CTP	04/03/2014	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
CTP	04/03/2014	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CTP	04/03/2014	NA	10 U	10 U	NA	10 U	10 U	10 U	NA	NA	NA	10 U	10 U	20 U	10 U	NA	10 U
CTP	04/17/2015	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
CTP	04/17/2015	NA	9.3 U	9.3 U	NA	9.3 U	9.3 U	9.3 U	NA	NA	NA	9.3 U	9.3 U	19 U	9.3 U	NA	9.3 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
CTPS	10/01/2010	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	6 UJ	1.2 U	1.2 U	1.2 U
CTPS	10/18/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
CTPS	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CTPS	04/19/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
CTPS	10/07/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
CTPS	10/10/2011	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
CTPS	04/05/2012	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U
CTPS	04/05/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
DH	09/30/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
DH	09/30/2010	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
DH	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
DH	04/14/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
DH	10/05/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
DH	10/05/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
DH	04/05/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
DH	04/06/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
EERC	10/01/2010	1 U	1 U	1 U	1 U	1 U	0.6 J	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
EERC	10/15/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
EERC	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
EERC	04/20/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
EERC	10/07/2011	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
EERC	10/07/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
EERC	04/06/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
EERC	04/06/2012	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
EPA	09/16/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
EPA	09/16/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
EPA	04/19/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
EPA	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
EPA	10/06/2011	NA	9.8 U	9.8 U	NA	9.8 U	9.8 U	9.8 U	NA	NA	NA	9.8 U	9.8 U	20 U	9.8 U	NA	9.8 U
EPA	10/06/2011	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
EPA	04/06/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.04 J	0.03 J	NA	NA	NA	NA	0.09 U	NA
EPA	04/06/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
EPA	04/06/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
EPA	04/06/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
EPA	04/04/2013	NA	9.3 U	9.3 U	NA	9.3 U	9.3 U	9.3 U	NA	NA	NA	9.3 U	9.3 U	19 UJ	9.3 U	NA	9.3 U
EPA	04/04/2013	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
EPA	04/10/2014	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
EPA	04/10/2014	NA	9.6 U	9.6 U	NA	9.6 U	9.6 U	9.6 U	NA	NA	NA	9.6 U	9.6 U	19 U	9.6 U	NA	9.6 U
EPA	04/17/2015	NA	9.6 U	9.6 U	NA	9.6 U	9.6 U	9.6 U	NA	NA	NA	9.6 U	9.6 U	19 U	9.6 U	NA	9.6 U
EPA	04/17/2015	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
ETA	09/24/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.041 J	0.17	NA	NA	NA	NA	0.05 U	NA
ETA	09/24/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 UJ	0.9 U	0.9 U	0.9 U
ETA	09/24/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
ETA	09/24/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.035 J	0.16	NA	NA	NA	NA	0.05 U	NA
ETA	04/12/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
ETA	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
ETA	09/30/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
ETA	09/30/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
ETA	04/10/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
ETA	04/10/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
ETA	04/10/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
ETA	04/10/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
EXT	09/30/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
EXT	09/30/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
FG	09/23/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
FG	09/23/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
FG	04/19/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
FG	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
FG	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
FG	04/19/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
FG	10/10/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
FG	10/10/2011	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U
FG	04/09/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
FG	04/09/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
GEO	09/03/2010	0.047 U	NA	NA	0.047 U	NA	NA	NA	NA	0.047 U	0.047 U	NA	NA	NA	NA	0.047 U	NA
GEO	09/03/2010	0.9 U	0.9 U	0.9 UJ	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	4.7 U	0.9 U	0.9 U	0.9 U
GEO	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
GEO	04/20/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
GEO	10/06/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
GEO	10/06/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
GEO	04/06/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
GEO	04/06/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
MFA	09/24/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
MFA	09/24/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
MFA	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
MFA	04/12/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
MFA	10/03/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
MFA	10/03/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
MFA	04/05/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
MFA	04/05/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
MFA	04/05/2013	NA	10 U	10 U	NA	10 U	10 U	10 U	NA	NA	NA	10 U	10 U	20 U	10 U	NA	10 U
MFA	04/05/2013	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
MFA	04/08/2014	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
MFA	04/08/2014	NA	9.3 U	9.3 U	NA	9.3 U	9.3 U	9.3 U	NA	NA	NA	9.3 U	9.3 U	19 U	9.3 U	NA	9.3 U
MFA	04/13/2015	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
MFA	04/13/2015	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
NRLF	09/16/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.8 UJ	1 U	1 U	1 U
NRLF	09/16/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
NRLF	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
NRLF	04/20/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
NRLF	10/06/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
NRLF	10/06/2011	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U
NRLF	04/09/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
NRLF	04/09/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
OBS6	09/30/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
OBS6	09/30/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
PZ11	10/01/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
PZ11	10/01/2010	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
PZ11	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ11	04/20/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
PZ11	10/10/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
PZ11	10/10/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
PZ11	04/05/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
PZ11	04/05/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U

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University of California, Berkeley, Richmond Field Station Site

SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
PZ8	10/15/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
PZ8	10/15/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
PZ8	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ8	04/18/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
PZ8	10/04/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
PZ8	10/04/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
PZ8	04/03/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
PZ8	04/03/2012	NA	9.7 UJ	9.7 UJ	NA	9.7 UJ	9.7 UJ	9.7 UJ	NA	NA	NA	9.7 UJ	9.7 UJ	19 UJ	9.7 UJ	NA	9.7 UJ
PZ9	09/24/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
PZ9	09/24/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
PZ9	04/20/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
PZ9	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ9	10/07/2011	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
PZ9	10/07/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
PZ9	10/07/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
PZ9	10/07/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
PZ9	04/06/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
PZ9	04/06/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
RWF	09/15/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
RWF	09/15/2010	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
RWF	04/18/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
RWF	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
RWF	10/06/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
RWF	10/06/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
RWF	04/04/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
RWF	04/04/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
TP1	09/29/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
TP1	09/29/2010	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
TP1	04/18/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
TP1	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
TP1	10/07/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
TP1	10/07/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
TP1	04/05/2012	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
TP1	04/05/2012	NA	9.5 U	9.5 U	NA	9.5 U	9.5 U	9.5 U	NA	NA	NA	9.5 U	9.5 U	19 U	9.5 U	NA	9.5 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
TP2	09/29/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
TP2	09/29/2010	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
TP2	04/18/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
TP2	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
TP2	10/07/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
TP2	10/07/2011	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA
TP2	04/09/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
TP2	04/09/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
TP2	04/09/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
TP2	04/09/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	Chrysene	Di-N-Butylphthalate	Di-N-Octylphthalate	Dibenz(A,H)Anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Diphenyl Amine	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-Cd)Pyrene	Isophorone
California MCLs																	
Federal MCLs																	
WTA	09/30/2010	0.05 U	NA	NA	0.05 U	NA	NA	NA	NA	0.05 U	0.05 U	NA	NA	NA	NA	0.05 U	NA
WTA	09/30/2010	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 UJ	1 U	1 U	1 U
WTA	04/14/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
WTA	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
WTA	04/14/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
WTA	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
WTA	10/05/2011	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
WTA	10/05/2011	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
WTA	04/05/2012	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
WTA	04/05/2012	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
WTA	04/05/2013	NA	9.8 U	9.8 U	NA	9.8 U	9.8 U	9.8 U	NA	NA	NA	9.8 U	9.8 U	20 U	9.8 U	NA	9.8 U
WTA	04/05/2013	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
WTA	04/10/2014	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
WTA	04/10/2014	0.09 U	NA	NA	0.09 U	NA	NA	NA	NA	0.09 U	0.09 U	NA	NA	NA	NA	0.09 U	NA
WTA	04/13/2015	NA	9.4 U	9.4 U	NA	9.4 U	9.4 U	9.4 U	NA	NA	NA	9.4 U	9.4 U	19 U	9.4 U	NA	9.4 U
WTA	04/13/2015	0.1 U	NA	NA	0.1 U	NA	NA	NA	NA	0.1 U	0.1 U	NA	NA	NA	NA	0.1 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B120	09/09/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
B120	09/09/2010	0.9 U	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
B120	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B120	04/15/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B120	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B120	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B120	04/03/2012	9.6 U	9.6 U	9.6 U	NA	9.6 U	19 U	NA	9.6 U	NA
B120	04/03/2012	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
B121	09/08/2010	0.9 U	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
B121	09/08/2010	NA	NA	NA	0.048 U	NA	NA	0.048 U	NA	0.048 U
B121	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B121	04/13/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B121	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B121	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B121	04/04/2012	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
B121	04/04/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B128	09/23/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
B128	09/23/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B128	09/23/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B128	09/23/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B128	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B128	04/18/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B128	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B128	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B128	04/02/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B128	04/02/2012	9.6 U	9.6 U	9.6 U	NA	9.6 U	19 U	NA	9.6 U	NA
B128	04/05/2013	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B128	04/05/2013	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B128	04/10/2014	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B128	04/10/2014	9.8 U	9.8 U	9.8 U	NA	9.8 U	20 U	NA	9.8 U	NA
B128	04/13/2015	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B128	04/13/2015	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B128	04/13/2015	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
B128	04/13/2015	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B150	09/08/2010	1 U	NA	NA	1 U	1 U	4.8 U	1 U	4.8 U	1 U
B150	09/08/2010	NA	NA	NA	0.048 U	NA	NA	0.048 U	NA	0.048 U
B150	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B150	04/13/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B150	10/05/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B150	10/05/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B150	10/05/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B150	10/05/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B150	04/04/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B150	04/04/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B150	04/04/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B150	04/04/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B158	09/08/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B158	09/08/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
B158	04/15/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B158	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B158	10/05/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B158	10/05/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B158	04/06/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B158	04/06/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B163	09/02/2010	1 UJ	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B163	09/02/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
B163	04/12/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B163	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B163	10/03/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B163	10/03/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B163	04/02/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B163	04/02/2012	9.6 U	9.6 U	9.6 U	NA	9.6 U	19 U	NA	9.6 U	NA
B163	04/03/2013	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
B163	04/03/2013	11 U	11 U	11 U	NA	11 U	21 U	NA	11 U	NA
B163	04/01/2014	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
B163	04/01/2014	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B163	04/14/2015	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B163	04/14/2015	10 U	10 U	10 U	NA	10 U	20 U	NA	10 U	NA
B175S	09/03/2010	0.9 UJ	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
B175S	09/03/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
B175S	04/13/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B175S	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B175S	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B175S	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B175S	04/04/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B175S	04/04/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B175W	09/08/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B175W	09/08/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B175W	04/13/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B175W	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B175W	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B175W	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B175W	04/04/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B175W	04/04/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B177	09/23/2010	0.9 U	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
B177	09/23/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
B177	04/18/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B177	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B177	10/05/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B177	10/05/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B177	04/04/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B177	04/04/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B178	09/02/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B178	09/02/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B178	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B178	04/15/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B178	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B178	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B178	04/03/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B178	04/03/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B180	09/15/2010	1 U	NA	NA	1 U	1 U	4.8 U	1 U	4.8 U	1 U
B180	09/15/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B180	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B180	04/13/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B180	10/06/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B180	10/06/2011	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
B180	10/06/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B180	10/06/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B180	04/04/2012	9.7 U	9.7 U	9.7 U	NA	9.7 U	19 U	NA	9.7 U	NA
B180	04/04/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B180	04/08/2013	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B180	04/08/2013	9.3 U	9.3 U	9.3 U	NA	9.3 U	19 U	NA	9.3 U	NA
B180	04/08/2014	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B180	04/08/2014	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B180	04/14/2015	9.6 U	9.6 U	9.6 U	NA	9.6 U	19 U	NA	9.6 U	NA
B180	04/14/2015	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B185	09/02/2010	0.9 UJ	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
B185	09/02/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B185	04/15/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.02 J
B185	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B185	04/15/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B185	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B185	10/03/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B185	10/03/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B185	10/03/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B185	10/03/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B185	04/02/2012	9.6 U	9.6 U	9.6 U	NA	9.6 U	19 U	NA	9.6 U	NA
B185	04/02/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B194	09/09/2010	0.9 U	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
B194	09/09/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
B194	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B194	04/13/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B194	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B194	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B194	04/04/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B194	04/04/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B195	09/09/2010	0.9 U	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
B195	09/09/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
B195	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B195	04/13/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B195	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B195	04/13/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B195	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B195	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B195	04/03/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B195	04/03/2012	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA
B197	09/09/2010	0.9 U	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
B197	09/09/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
B197	09/09/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
B197	09/09/2010	1 U	NA	NA	1 U	1 U	4.8 U	1 U	4.8 U	1 U
B197	04/13/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B197	04/13/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B197	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B197	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B197	04/03/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B197	04/03/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B197	04/03/2012	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
B197	04/03/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B277	09/15/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B277	09/15/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B277	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B277	04/18/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B277	10/05/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B277	10/05/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B277	04/03/2012	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA
B277	04/03/2012	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
B278	09/16/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B278	09/16/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B278	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B278	04/19/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B278	10/05/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B278	10/05/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B278	04/05/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B278	04/05/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B280A	09/16/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B280A	09/16/2010	NA	NA	NA	0.035 J	NA	NA	0.05 U	NA	0.05 U
B280A	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B280A	04/14/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B280A	10/06/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B280A	10/06/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B280A	04/03/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B280A	04/03/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B280A	04/04/2013	10 U	10 U	10 U	NA	10 U	20 U	NA	10 U	NA
B280A	04/04/2013	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B280A	04/09/2014	9.3 U	9.3 U	9.3 U	NA	9.3 U	19 U	NA	9.3 U	NA
B280A	04/09/2014	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
B280A	04/17/2015	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
B280A	04/17/2015	9.8 U	9.8 U	9.8 U	NA	9.8 U	20 U	NA	9.8 U	NA
B280B	10/01/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B280B	10/01/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B280B	04/14/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B280B	04/14/2011	10 U	10 U	10 U	10 U	10 U	20 U	10 U	10 U	10 U
B280B	10/06/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B280B	10/06/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B280B	04/03/2012	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA
B280B	04/03/2012	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B300	09/09/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
B300	09/09/2010	0.9 U	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
B300	04/15/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B300	04/15/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B300	10/06/2011	97 U	97 U	97 U	NA	97 U	190 U	NA	97 U	NA
B300	10/06/2011	NA	NA	NA	0.5 U	NA	NA	0.5 U	NA	0.5 U
B300	04/09/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B300	04/09/2012	NA	NA	NA	0.02 J	NA	NA	0.09 U	NA	0.09 U
B38	09/15/2010	NA	NA	NA	0.05 UJ	NA	NA	0.05 UJ	NA	0.05 UJ
B38	09/15/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B38	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B38	04/19/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B38	04/19/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B38	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B38	10/06/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B38	10/06/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B38	04/04/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B38	04/04/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B450	04/19/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B450	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B450	10/10/2011	NA	NA	NA	0.02 J	NA	NA	0.09 U	NA	0.09 U
B450	10/10/2011	9.6 UJ	9.6 UJ	9.6 UJ	NA	9.6 UJ	19 UJ	NA	9.6 UJ	NA
B450	04/06/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B450	04/06/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B460	09/15/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B460	09/15/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B460	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B460	04/20/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B460	10/07/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B460	10/07/2011	9.6 U	9.6 U	9.6 U	NA	9.6 U	19 U	NA	9.6 U	NA
B460	04/06/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B460	04/06/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B473	09/24/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B473	09/24/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B473	04/20/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B473	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B473	10/07/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B473	10/07/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B473	04/06/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B473	04/06/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B474	09/23/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B474	09/23/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B474	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B474	04/20/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B474	10/07/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B474	10/07/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B474	04/09/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B474	04/09/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
B480	09/24/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B480	09/24/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B480	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B480	04/19/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B480	10/07/2011	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
B480	10/07/2011	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA
B480	04/09/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B480	04/09/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B490	09/16/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
B490	09/16/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
B490	04/20/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B490	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
B490	10/10/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B490	10/10/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
B490	04/09/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
B490	04/09/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
BULB1	10/19/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
BULB1	10/19/2010	0.9 U	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
BULB1	04/12/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
BULB1	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
BULB1	09/30/2011	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA
BULB1	09/30/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
BULB1	04/05/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
BULB1	04/05/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
BULB2	10/19/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
BULB2	10/19/2010	NA	NA	NA	0.19	NA	NA	0.05 U	NA	0.05 U
BULB2	04/12/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
BULB2	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
BULB2	09/30/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
BULB2	09/30/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
BULB2	04/05/2012	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
BULB2	04/05/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
BULB2	04/05/2013	10 U	10 U	10 U	NA	10 U	20 U	NA	10 U	NA
BULB2	04/05/2013	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
BULB2	04/10/2014	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
BULB2	04/10/2014	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
BULB2	04/13/2015	9.6 U	9.6 U	9.6 U	NA	9.6 U	19 U	NA	9.6 U	NA
BULB2	04/13/2015	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
CCC1	09/08/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
CCC1	09/08/2010	0.9 U	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
CCC1	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC1	04/14/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCC1	10/05/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCC1	10/05/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
CCC1	04/10/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCC1	04/10/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA

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Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
CCC2	09/08/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
CCC2	09/08/2010	1 U	NA	NA	1 U	1 U	4.8 U	1 U	4.8 U	1 U
CCC2	04/14/2011	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
CCC2	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC2	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCC2	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
CCC2	04/10/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
CCC2	04/10/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCC2	04/02/2013	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCC2	04/02/2013	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA
CCC2	04/02/2013	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCC2	04/02/2013	9.3 U	9.3 U	9.3 U	NA	9.3 U	19 U	NA	9.3 U	NA
CCC2	04/02/2014	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
CCC2	04/02/2014	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
CCC2	04/15/2015	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
CCC2	04/15/2015	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
CCC3	09/03/2010	0.9 UJ	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
CCC3	09/03/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
CCC3	09/03/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
CCC3	09/03/2010	0.9 UJ	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
CCC3	04/12/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCC3	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CCC3	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCC3	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
CCC3	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCC3	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
CCC3	04/10/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
CCC3	04/10/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCCT	09/03/2010	0.9 UJ	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
CCCT	09/03/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
CCCT	04/18/2011	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
CCCT	04/18/2011	9.5 U	9.5 U	9.5 U	9.5 U	9.5 U	19 U	9.5 U	9.5 U	9.5 U
CCCT	10/03/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCCT	10/03/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
CCCT	04/04/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CCCT	04/04/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
CTP	09/30/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
CTP	09/30/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
CTP	09/30/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
CTP	09/30/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
CTP	04/14/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CTP	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CTP	10/06/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CTP	10/06/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
CTP	04/03/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CTP	04/03/2012	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA
CTP	04/04/2013	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
CTP	04/04/2013	10 U	10 U	10 U	NA	10 U	20 U	NA	10 U	NA
CTP	04/03/2014	9.3 U	9.3 U	9.3 U	NA	9.3 U	19 U	NA	9.3 U	NA
CTP	04/03/2014	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
CTP	04/03/2014	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CTP	04/03/2014	10 U	10 U	10 U	NA	10 U	20 U	NA	10 U	NA
CTP	04/17/2015	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
CTP	04/17/2015	9.3 U	9.3 U	9.3 U	NA	9.3 U	19 U	NA	9.3 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
CTPS	10/01/2010	1.2 U	NA	NA	1.2 U	1.2 U	6 U	1.2 U	6 U	1.2 U
CTPS	10/18/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
CTPS	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
CTPS	04/19/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
CTPS	10/07/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
CTPS	10/10/2011	NA	NA	NA	0.02 J	NA	NA	0.1 U	NA	0.1 U
CTPS	04/05/2012	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA
CTPS	04/05/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
DH	09/30/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
DH	09/30/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
DH	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
DH	04/14/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
DH	10/05/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
DH	10/05/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
DH	04/05/2012	NA	NA	NA	0.03 J	NA	NA	0.09 U	NA	0.09 U
DH	04/06/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
EERC	10/01/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
EERC	10/15/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
EERC	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
EERC	04/20/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
EERC	10/07/2011	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
EERC	10/07/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
EERC	04/06/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
EERC	04/06/2012	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA

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Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
EPA	09/16/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
EPA	09/16/2010	NA	NA	NA	0.042 J	NA	NA	0.05 U	NA	0.05 U
EPA	04/19/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
EPA	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
EPA	10/06/2011	9.8 U	9.8 U	9.8 U	NA	9.8 U	20 U	NA	9.8 U	NA
EPA	10/06/2011	NA	NA	NA	0.02 J	NA	NA	0.1 U	NA	0.1 U
EPA	04/06/2012	NA	NA	NA	0.4	NA	NA	0.02 J	NA	0.02 J
EPA	04/06/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
EPA	04/06/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
EPA	04/06/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
EPA	04/04/2013	9.3 U	9.3 U	9.3 U	NA	9.3 U	19 U	NA	9.3 U	NA
EPA	04/04/2013	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
EPA	04/10/2014	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
EPA	04/10/2014	9.6 U	9.6 U	9.6 U	NA	9.6 U	19 U	NA	9.6 U	NA
EPA	04/17/2015	9.6 U	9.6 U	9.6 U	NA	9.6 U	19 U	NA	9.6 U	NA
EPA	04/17/2015	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U

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Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
ETA	09/24/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.088
ETA	09/24/2010	0.9 U	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
ETA	09/24/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
ETA	09/24/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.074
ETA	04/12/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
ETA	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
ETA	09/30/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.04 J
ETA	09/30/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
ETA	04/10/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.03 J
ETA	04/10/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
ETA	04/10/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
ETA	04/10/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.03 J
EXT	09/30/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
EXT	09/30/2011	NA	NA	NA	0.04 J	NA	NA	0.09 U	NA	0.09 U
FG	09/23/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
FG	09/23/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
FG	04/19/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
FG	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
FG	04/19/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
FG	04/19/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
FG	10/10/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
FG	10/10/2011	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA
FG	04/09/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
FG	04/09/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U

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Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
GEO	09/03/2010	NA	NA	NA	0.047 U	NA	NA	0.047 U	NA	0.047 U
GEO	09/03/2010	0.9 UJ	NA	NA	0.9 U	0.9 U	4.7 U	0.9 U	4.7 U	0.9 U
GEO	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
GEO	04/20/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 UJ
GEO	10/06/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
GEO	10/06/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
GEO	04/06/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
GEO	04/06/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
MFA	09/24/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
MFA	09/24/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
MFA	04/12/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
MFA	04/12/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
MFA	10/03/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
MFA	10/03/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
MFA	04/05/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
MFA	04/05/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
MFA	04/05/2013	10 U	10 U	10 U	NA	10 U	20 U	NA	10 U	NA
MFA	04/05/2013	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
MFA	04/08/2014	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 UJ
MFA	04/08/2014	9.3 U	9.3 U	9.3 U	NA	9.3 U	19 U	NA	9.3 U	NA
MFA	04/13/2015	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
MFA	04/13/2015	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
NRLF	09/16/2010	1 U	NA	NA	1 U	1 U	4.8 U	1 U	4.8 U	1 U
NRLF	09/16/2010	NA	NA	NA	0.029 J	NA	NA	0.05 U	NA	0.05 U
NRLF	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
NRLF	04/20/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 UJ
NRLF	10/06/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
NRLF	10/06/2011	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA
NRLF	04/09/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
NRLF	04/09/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
OBS6	09/30/2011	NA	NA	NA	0.04 J	NA	NA	0.09 U	NA	0.09 U
OBS6	09/30/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
PZ11	10/01/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
PZ11	10/01/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
PZ11	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ11	04/20/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
PZ11	10/10/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
PZ11	10/10/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
PZ11	04/05/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
PZ11	04/05/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
PZ8	10/15/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
PZ8	10/15/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
PZ8	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ8	04/18/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
PZ8	10/04/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
PZ8	10/04/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
PZ8	04/03/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
PZ8	04/03/2012	9.7 UJ	9.7 UJ	9.7 UJ	NA	9.7 UJ	19 UJ	NA	9.7 UJ	NA
PZ9	09/24/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
PZ9	09/24/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
PZ9	04/20/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 UJ
PZ9	04/20/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
PZ9	10/07/2011	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
PZ9	10/07/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
PZ9	10/07/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
PZ9	10/07/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
PZ9	04/06/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
PZ9	04/06/2012	9.4 U	9.4 U	9.4 U	NA	9.4 UJ	19 U	NA	9.4 U	NA

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Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
RWF	09/15/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
RWF	09/15/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
RWF	04/18/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
RWF	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
RWF	10/06/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
RWF	10/06/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
RWF	04/04/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
RWF	04/04/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
TP1	09/29/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.036 UJ
TP1	09/29/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
TP1	04/18/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
TP1	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
TP1	10/07/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
TP1	10/07/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
TP1	04/05/2012	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
TP1	04/05/2012	9.5 U	9.5 U	9.5 U	NA	9.5 U	19 U	NA	9.5 U	NA

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
TP2	09/29/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
TP2	09/29/2010	1 U	NA	NA	1 U	1 U	5 U	1 U	5 U	1 U
TP2	04/18/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
TP2	04/18/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
TP2	10/07/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
TP2	10/07/2011	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U
TP2	04/09/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
TP2	04/09/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
TP2	04/09/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
TP2	04/09/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U

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SVOC AND PAH (µg/L)

Location ID	Sample Date	N-Nitroso-Di-N-Propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine(1)	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
California MCLs										
Federal MCLs										
WTA	09/30/2010	NA	NA	NA	0.05 U	NA	NA	0.05 U	NA	0.05 U
WTA	09/30/2010	1 U	NA	NA	1 U	1 UJ	5 U	1 U	5 U	1 U
WTA	04/14/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
WTA	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
WTA	04/14/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
WTA	04/14/2011	9.4 U	9.4 U	9.4 U	9.4 U	9.4 U	19 U	9.4 U	9.4 U	9.4 U
WTA	10/05/2011	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
WTA	10/05/2011	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
WTA	04/05/2012	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
WTA	04/05/2012	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
WTA	04/05/2013	9.8 U	9.8 U	9.8 U	NA	9.8 U	20 U	NA	9.8 U	NA
WTA	04/05/2013	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
WTA	04/10/2014	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
WTA	04/10/2014	NA	NA	NA	0.09 U	NA	NA	0.09 U	NA	0.09 U
WTA	04/13/2015	9.4 U	9.4 U	9.4 U	NA	9.4 U	19 U	NA	9.4 U	NA
WTA	04/13/2015	NA	NA	NA	0.1 U	NA	NA	0.1 U	NA	0.1 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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Location ID	Sample Date	PCBs (µg/L)										PESTICIDES (µg/L)					
		Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	Alpha-BHC	Alpha-Chlordane	Beta-BHC
B120	09/09/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.09 J	0.19 U	0.19 U	0.19 U	0.19 U	0.09 U	0.09 U	0.09 U	0.05 UJ	0.05 U	0.05 U	0.05 U
B121	09/08/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B128	09/23/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B128	09/23/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B150	09/08/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B158	09/08/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U
B163	09/02/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B175S	09/03/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B175W	09/08/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B177	09/23/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U
B178	09/02/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B180	09/15/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B185	09/02/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B194	09/09/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.09 U	0.09 U	0.09 U	0.05 UJ	0.05 U	0.05 U	0.05 U
B195	09/09/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.1 U	0.1 U	0.1 U	0.05 UJ	0.05 U	0.05 U	0.05 U
B197	09/09/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.1 U	0.1 U	0.1 U	0.05 UJ	0.05 U	0.05 U	0.05 U
B197	09/09/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.09 U	0.09 U	0.09 U	0.05 UJ	0.05 U	0.05 U	0.05 U
B277	09/15/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B278	09/16/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B280A	09/16/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B280B	10/01/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B300	09/09/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 UJ	0.05 U	0.05 U	0.05 U
B38	09/15/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B460	09/15/2010	0.2 UJ	0.4 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B473	09/24/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B474	09/23/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U

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Location ID	Sample Date	PCBs (µg/L)										PESTICIDES (µg/L)					
		Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	Alpha-BHC	Alpha-Chlordane	Beta-BHC
B480	09/24/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
B490	09/16/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
BULB1	10/19/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U
BULB2	10/19/2010	0.19 UJ	0.38 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U
CCC1	09/08/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
CCC2	09/08/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
CCC3	09/03/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U
CCC3	09/03/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U
CCCT	09/03/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U
CTP	09/30/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
CTP	09/30/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
CTPS	09/30/2010	0.22 UJ	0.44 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	NA	NA	NA	NA	NA	NA	NA
CTPS	10/18/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.11 U	0.11 U	0.11 U	0.05 U	0.05 U	0.05 U	0.05 U
DH	09/30/2010	0.2 UJ	0.4 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
EERC	10/01/2010	0.2 UJ	0.4 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	NA	NA	NA	NA	NA	NA	NA
EERC	10/15/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
EPA	09/16/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U
ETA	09/24/2010	0.2 UJ	0.4 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
ETA	09/24/2010	0.2 UJ	0.4 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
EXT	09/30/2011	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
FG	09/23/2010	0.2 UJ	0.4 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
GEO	09/03/2010	0.19 U	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U
MFA	09/24/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
NRLF	09/16/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
OBS6	09/30/2011	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA	NA	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U
PZ11	10/01/2010	0.19 UJ	0.38 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.19 UJ	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U

APPENDIX B: COMPLETE ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

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Location ID	Sample Date	PCBs (µg/L)									PESTICIDES (µg/L)						
		Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	Alpha-BHC	Alpha-Chlordane	Beta-BHC
PZ8	10/15/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
PZ9	09/24/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
RWF	09/15/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
TP1	09/29/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U
TP2	09/29/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U
WTA	09/30/2010	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U

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PESTICIDES (µg/L)

Location ID	Sample Date	Chlordane	Delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Gamma-BHC (Lindane)	Gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
B120	09/09/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
B121	09/08/2010	4.8 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.48 U	4.8 U
B128	09/23/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B128	09/23/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B150	09/08/2010	4.8 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.48 U	4.8 U
B158	09/08/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
B163	09/02/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B175S	09/03/2010	4.8 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.48 U	4.8 U
B175W	09/08/2010	4.8 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.48 U	4.8 U
B177	09/23/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
B178	09/02/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B180	09/15/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B185	09/02/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B194	09/09/2010	NA	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	NA
B195	09/09/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B197	09/09/2010	4.8 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.48 U	4.8 U
B197	09/09/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
B277	09/15/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B278	09/16/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B280A	09/16/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B280B	10/01/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B300	09/09/2010	NA	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	NA
B38	09/15/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B460	09/15/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B473	09/24/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U

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PESTICIDES (µg/L)

Location ID	Sample Date	Chlordane	Delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Gamma-BHC (Lindane)	Gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
B474	09/23/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B480	09/24/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
B490	09/16/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
BULB1	10/19/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
BULB2	10/19/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
CCC1	09/08/2010	4.8 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.48 U	4.8 U
CCC2	09/08/2010	4.8 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.48 U	4.8 U
CCC3	09/03/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
CCC3	09/03/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
CCCT	09/03/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
CTP	09/30/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
CTP	09/30/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
CTPS	09/30/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CTPS	10/18/2010	5.5 U	0.05 U	0.11 U	0.05 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.05 U	0.05 U	0.05 U	0.05 U	0.55 U	5.5 U
DH	09/30/2010	4.8 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.48 U	4.8 U
EERC	10/01/2010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EERC	10/15/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
EPA	09/16/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
ETA	09/24/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
ETA	09/24/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
EXT	09/30/2011	NA	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	1 U
FG	09/23/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
GEO	09/03/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
MFA	09/24/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
NRLF	09/16/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U

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PESTICIDES (µg/L)

Location ID	Sample Date	Chlordane	Delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Gamma-BHC (Lindane)	Gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
OBS6	09/30/2011	NA	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	0.9 U
PZ11	10/01/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
PZ8	10/15/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
PZ9	09/24/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
RWF	09/15/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
TP1	09/29/2010	4.7 U	0.05 U	0.09 U	0.05 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47 U	4.7 U
TP2	09/29/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U
WTA	09/30/2010	5 U	0.05 U	0.1 U	0.05 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.05 U	0.05 U	0.05 U	0.05 U	0.5 U	5 U

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Location ID	Sample Date	TPH (mg/L)			MISCELLANEOUS (mg/L)		
		Diesel Range Organic	Motor Oil Range Organic	Gasoline Range Organic	Perchlorate	Hardness	Total Dissolved Solids
B120	09/09/2010	0.24 U	0.95 U	0.07 Z	2 U	1000	1900
B120	04/15/2011	0.05 U	0.3 U	0.086	NA	NA	2510
B120	10/04/2011	0.013 J	0.3 U	0.1 YZ	NA	NA	2230
B120	04/03/2012	0.05 U	0.3 U	0.097 UJ	NA	NA	2190
B121	09/08/2010	0.25 U	1 U	0.05 U	2 U	280	520
B121	04/13/2011	0.05 UJ	0.3 U	0.05 UJ	NA	NA	520
B121	10/04/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	530
B121	04/04/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	510
B128	09/23/2010	0.25 U	1 U	0.05 U	2 U	360	800
B128	09/23/2010	0.25 U	1 U	0.05 U	2 U	320	970
B128	04/18/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	500
B128	10/04/2011	0.028 J	0.3 U	0.05 UJ	NA	NA	560
B128	04/02/2012	0.05 UJ	0.3 U	0.05 UJ	NA	NA	440
B128DEEP	10/15/2010	NA	NA	NA	2 U	NA	440
B150	09/08/2010	0.24 U	0.95 U	0.05 U	2 U	150	290
B150	04/13/2011	0.05 UJ	0.3 U	0.05 UJ	NA	NA	220
B150	10/05/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	290
B150	10/05/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	280
B150	04/04/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	150
B150	04/04/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	190
B158	09/08/2010	0.24 U	0.95 U	0.05 U	2 U	21	200
B158	04/15/2011	0.05 U	0.3 U	0.05 U	NA	NA	180
B158	10/05/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	310
B158	04/06/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	200
B163	09/02/2010	0.2 ZJ	1 U	0.046 ZJ	2 U	1500	2900
B163	04/12/2011	0.05 U	0.3 U	0.064 Y	NA	NA	2820
B163	10/03/2011	0.011 J	0.3 U	0.062 Z	NA	NA	2860
B163	04/02/2012	0.05 UJ	0.3 U	0.05 UJ	NA	NA	2700

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Location ID	Sample Date	TPH (mg/L)			MISCELLANEOUS (mg/L)		
		Diesel Range Organic	Motor Oil Range Organic	Gasoline Range Organic	Perchlorate	Hardness	Total Dissolved Solids
B175S	09/03/2010	0.24 U	0.95 U	0.05 U	2 U	310	590
B175S	04/13/2011	0.053 UJ	0.3 U	0.05 UJ	NA	NA	580
B175S	10/04/2011	0.017 J	0.3 U	0.05 UJ	NA	NA	540
B175S	04/04/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	550
B175W	09/08/2010	0.25 U	1 U	0.05 U	2 U	92	270
B175W	04/13/2011	0.052 UJ	0.3 U	0.012 UJ	NA	NA	270
B175W	10/04/2011	0.051 Y	0.091 J	0.05 UJ	NA	NA	290
B175W	04/04/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	210
B177	09/23/2010	0.24 U	0.95 U	0.05 U	2 U	71	190
B177	04/18/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	250
B177	10/05/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	200
B177	04/04/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	270
B178	09/02/2010	0.25 U	1 U	0.063 Z	1.9 J	990	1800
B178	04/15/2011	0.05 U	0.3 U	0.073 UJ	NA	NA	2050
B178	10/04/2011	0.05 U	0.3 U	0.12 YZ	NA	NA	1810
B178	04/03/2012	0.011 J	0.3 U	0.094 UJ	NA	NA	2190
B180	09/15/2010	0.25 U	1 U	0.05 U	2 U	35	360
B180	04/13/2011	0.05 UJ	0.3 U	0.05 UJ	NA	NA	330
B180	10/06/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	350
B180	10/06/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	350
B180	04/04/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	260
B185	09/02/2010	0.12 ZJ	0.95 U	0.036 ZJ	3.1	920	1700
B185	04/15/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	1630
B185	04/15/2011	0.05 U	0.3 U	0.062 UJ	NA	NA	1610
B185	10/03/2011	0.05 U	0.3 U	0.055 YZ	NA	NA	1670
B185	10/03/2011	0.05 U	0.3 U	0.048 J	NA	NA	1630
B185	04/02/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	1670

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Location ID	Sample Date	TPH (mg/L)			MISCELLANEOUS (mg/L)		
		Diesel Range Organic	Motor Oil Range Organic	Gasoline Range Organic	Perchlorate	Hardness	Total Dissolved Solids
B194	09/09/2010	0.24 U	0.95 U	0.05 U	2 U	300	670
B194	04/13/2011	0.05 UJ	0.3 U	0.05 UJ	NA	NA	660
B194	10/04/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	630
B194	04/04/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	570
B195	09/09/2010	0.24 U	0.95 U	0.059 ZJ	2 U	830	1600
B195	04/13/2011	0.05 UJ	0.3 U	0.05 UJ	NA	NA	570
B195	04/13/2011	0.05 UJ	0.3 U	0.051 Z	NA	NA	550
B195	10/04/2011	0.05 U	0.3 U	0.15 YZ	NA	NA	1610
B195	04/03/2012	0.05 U	0.3 U	0.088 UJ	NA	NA	790
B197	09/09/2010	0.25 U	1 U	0.073 Z	2 U	830	1500
B197	09/09/2010	0.24 U	0.95 U	0.074 Z	2 U	830	1500
B197	04/13/2011	0.05 UJ	0.3 U	0.1 YZ	NA	NA	2170
B197	10/04/2011	0.05 U	0.3 U	0.11 YZ	NA	NA	1560
B197	04/03/2012	0.05 U	0.3 U	0.092 UJ	NA	NA	2290
B197	04/03/2012	0.05 U	0.3 U	0.095 UJ	NA	NA	2240
B277	09/15/2010	0.25 U	1 U	0.05 U	2 U	230	400
B277	04/18/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	450
B277	10/05/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	400
B277	04/03/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	420
B278	09/16/2010	0.25 U	1 U	0.05 U	2 U	1300	2300
B278	04/19/2011	0.05 U	0.3 U	0.019 J	NA	NA	2050 J
B278	10/05/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	2250
B278	04/05/2012	0.01 J	0.3 U	0.05 UJ	NA	NA	NA
B280A	09/16/2010	0.25 U	1 U	0.05 U	2 U	290	510
B280A	04/14/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	430
B280A	10/06/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	510
B280A	04/03/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	540

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Location ID	Sample Date	TPH (mg/L)			MISCELLANEOUS (mg/L)		
		Diesel Range Organic	Motor Oil Range Organic	Gasoline Range Organic	Perchlorate	Hardness	Total Dissolved Solids
B280B	10/01/2010	0.25 U	1 U	0.05 U	2 U	230	650
B280B	04/14/2011	0.05 U	0.3 U	0.05 U	NA	NA	580
B280B	10/06/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	530
B280B	04/03/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	490
B300	09/09/2010	0.24 U	0.95 U	0.05 U	2 U	720	1100
B300	04/15/2011	0.05 U	0.3 U	0.05 U	NA	NA	2480
B300	10/06/2011	0.33 Y	0.3 U	0.21 YZ	NA	NA	580
B300	04/09/2012	0.0086 J	0.3 U	0.05 UJ	NA	NA	1680
B38	09/15/2010	0.25 U	1 U	0.05 U	2 U	170	310
B38	04/19/2011	0.05 U	0.3 U	0.05 U	NA	NA	350
B38	04/19/2011	0.05 U	0.3 U	0.05 U	NA	NA	350
B38	10/06/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	290
B38	04/04/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	240
B38DEEP	10/18/2010	NA	NA	NA	2 U	NA	350
B450	04/19/2011	0.013 J	0.3 U	0.018 J	NA	NA	610
B450	10/10/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	120
B450	04/06/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	770
B460	09/15/2010	0.25 U	1 U	0.05 U	2 U	150	290
B460	04/20/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	320
B460	10/07/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	320
B460	04/06/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	270
B473	09/24/2010	0.25 U	1 U	0.05 U	2 U	170	460
B473	04/20/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	590
B473	10/07/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	350
B473	04/06/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	300

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Location ID	Sample Date	TPH (mg/L)			MISCELLANEOUS (mg/L)		
		Diesel Range Organic	Motor Oil Range Organic	Gasoline Range Organic	Perchlorate	Hardness	Total Dissolved Solids
B474	09/23/2010	0.37 ZJ	1 U	0.049 ZJ	2 U	160	430
B474	04/20/2011	0.05 U	0.3 U	0.05 U	NA	NA	420
B474	10/07/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	130
B474	04/09/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	250
B480	09/24/2010	0.25 U	1 U	0.05 U	2 U	320	670
B480	04/19/2011	0.014 J	0.3 U	0.019 J	NA	NA	620
B480	10/07/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	490
B480	04/09/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	640
B480DEEP	10/15/2010	NA	NA	NA	2 U	NA	360
B490	09/16/2010	0.25 U	1 U	0.05 U	2 U	350	540
B490	04/20/2011	0.05 U	0.3 U	0.05 U	NA	NA	560
B490	10/10/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	270
B490	04/09/2012	0.008 J	0.3 U	0.05 UJ	NA	NA	550
BULB1	10/19/2010	0.24 U	0.94 U	0.038 J	40 U	4400	25000
BULB1	04/12/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	22800
BULB1	09/30/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	27600
BULB1	04/05/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	NA
BULB2	10/19/2010	0.17 ZJ	1 U	0.077	10 U	1100	5900
BULB2	04/12/2011	0.0078 J	0.3 U	0.05 UJ	NA	NA	1530
BULB2	09/30/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	930
BULB2	04/05/2012	0.013 J	0.3 U	0.05 UJ	NA	NA	NA
CCC1	09/08/2010	0.24 U	0.95 U	0.05 U	2 U	140	440
CCC1	04/14/2011	0.05 UJ	0.3 U	0.05 U	NA	NA	520
CCC1	10/05/2011	0.012 J	0.3 U	0.05 UJ	NA	NA	510
CCC1	04/10/2012	0.049 U	0.29 U	0.05 UJ	NA	NA	640

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Location ID	Sample Date	TPH (mg/L)			MISCELLANEOUS (mg/L)		
		Diesel Range Organic	Motor Oil Range Organic	Gasoline Range Organic	Perchlorate	Hardness	Total Dissolved Solids
CCC2	09/08/2010	0.25 U	1 U	0.05 U	2 U	250	630
CCC2	04/14/2011	0.05 UJ	0.3 U	0.05 U	NA	NA	1990
CCC2	10/04/2011	0.014 J	0.3 U	0.05 UJ	NA	NA	770
CCC2	04/10/2012	0.049 U	0.29 U	0.05 UJ	NA	NA	1140
CCC3	09/03/2010	0.24 U	0.95 U	0.05 U	2 U	360	730
CCC3	09/03/2010	0.25 U	1 U	0.05 U	2 U	350	710
CCC3	04/12/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	720
CCC3	10/04/2011	0.018 J	0.3 U	0.05 UJ	NA	NA	700
CCC3	10/04/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	710
CCC3	04/10/2012	0.049 U	0.29 U	0.05 UJ	NA	NA	740
CCCT	09/03/2010	0.24 U	0.94 U	0.038 ZJ	1.6 J	590	1100
CCCT	04/18/2011	0.05 U	0.3 U	0.055 UJ	NA	NA	1110
CCCT	10/03/2011	0.05 U	0.3 U	0.046 JYZ	NA	NA	1120
CCCT	04/04/2012	0.05 U	0.3 U	0.054 UJ	NA	NA	1240
CTP	09/30/2010	0.25 U	1 U	0.05 U	2 U	240	490
CTP	09/30/2010	0.25 U	1 U	0.05 U	2 U	240	500
CTP	04/14/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	480
CTP	10/06/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	480
CTP	04/03/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	540
CTPDEEP	10/15/2010	NA	NA	NA	2 U	NA	370
CTPS	09/30/2010	NA	NA	0.05 U	NA	610	NA
CTPS	04/19/2011	0.05 U	0.3 U	0.013 J	NA	NA	520
CTPS	10/07/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	500
CTPS	04/05/2012	0.013 J	0.3 U	0.05 UJ	NA	NA	NA

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Location ID	Sample Date	TPH (mg/L)			MISCELLANEOUS (mg/L)		
		Diesel Range Organic	Motor Oil Range Organic	Gasoline Range Organic	Perchlorate	Hardness	Total Dissolved Solids
DH	09/30/2010	0.25 U	1 U	0.05 U	4 U	2700	5500
DH	04/14/2011	0.05 UJ	0.3 U	0.05 UJ	NA	NA	5350
DH	10/05/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	7480
DH	04/05/2012	NA	NA	0.05 UJ	NA	NA	NA
DH	04/06/2012	0.0085 J	0.3 U	NA	NA	NA	4580
EERC	10/01/2010	0.16 J	1 U	0.05 U	NA	2500	NA
EERC	10/15/2010	NA	NA	NA	4 U	NA	4800
EERC	04/20/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	4260
EERC	10/07/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	3530
EERC	04/06/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	4190
EPA	09/16/2010	0.25 U	1 U	0.05 U	2 U	380	710
EPA	04/19/2011	0.05 U	0.3 U	0.013 J	NA	NA	950
EPA	10/06/2011	0.012 UJ	0.3 U	0.05 UJ	NA	NA	950
EPA	04/06/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	1050
EPA	04/06/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	1100
ETA	09/24/2010	0.12 J	1 U	0.05 U	2 U	630	1300
ETA	09/24/2010	0.12 J	1 U	0.05 U	2 U	620	1300
ETA	04/12/2011	0.014 J	0.3 U	0.05 UJ	NA	NA	1410
ETA	09/30/2011	0.014 J	0.3 U	0.05 UJ	NA	NA	1290
ETA	04/10/2012	0.049 U	0.29 U	0.05 UJ	NA	NA	1510
ETA	04/10/2012	0.049 U	0.29 U	0.05 UJ	NA	NA	1510
EXT	09/30/2011	0.014 J	0.3 U	0.05 UJ	NA	NA	240
FG	09/23/2010	0.25 U	1 U	0.05 U	2 U	820	1300
FG	04/19/2011	0.05 U	0.3 U	0.021 J	NA	NA	590
FG	04/19/2011	0.05 U	0.3 U	0.016 J	NA	NA	580
FG	10/10/2011	0.05 UJ	0.3 UJ	0.05 UJ	NA	NA	800
FG	04/09/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	500

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Location ID	Sample Date	TPH (mg/L)			MISCELLANEOUS (mg/L)		
		Diesel Range Organic	Motor Oil Range Organic	Gasoline Range Organic	Perchlorate	Hardness	Total Dissolved Solids
GEO	09/03/2010	0.24 U	0.95 U	0.05 U	2 U	270	510
GEO	04/20/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	560
GEO	10/06/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	520
GEO	04/06/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	570
MFA	09/24/2010	0.25 U	1 U	0.05 U	2 U	440	900
MFA	04/12/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	640
MFA	10/03/2011	0.036 J	0.3 U	0.05 UJ	NA	NA	930
MFA	04/05/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	NA
NRLF	09/16/2010	0.12 ZJ	1 U	0.041 ZJ	2 U	230	400
NRLF	04/20/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	560
NRLF	10/06/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	420
NRLF	04/09/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	430
OBS6	09/30/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	360
PZ11	10/01/2010	0.25 U	1 U	0.31 ZJ	2 U	1400	2500
PZ11	04/20/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	2930
PZ11	10/10/2011	0.05 U	0.3 U	0.21 YZJ	NA	NA	3090
PZ11	04/05/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	NA
PZ8	10/15/2010	0.25 U	1 U	0.05 U	2 UJ	270	510
PZ8	04/18/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	480
PZ8	10/04/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	540
PZ8	04/03/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	560
PZ9	09/24/2010	0.25 U	1 U	0.05 U	2 U	240	400
PZ9	04/20/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	370
PZ9	10/07/2011	0.05 U	0.13 J	0.05 UJ	NA	NA	340
PZ9	10/07/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	330
PZ9	04/06/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	450

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Location ID	Sample Date	TPH (mg/L)			MISCELLANEOUS (mg/L)		
		Diesel Range Organic	Motor Oil Range Organic	Gasoline Range Organic	Perchlorate	Hardness	Total Dissolved Solids
RWF	09/15/2010	0.24 U	0.95 U	0.05 U	2 U	430	720
RWF	04/18/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	780
RWF	10/06/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	760
RWF	04/04/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	720
TP1	09/29/2010	0.24 U	0.95 U	0.05 U	2 U	410	720
TP1	04/18/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	1770
TP1	10/07/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	750
TP1	04/05/2012	0.013 J	0.3 U	0.05 UJ	NA	NA	NA
TP2	09/29/2010	0.25 U	1 U	0.05 U	2 U	510	830
TP2	04/18/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	810
TP2	10/07/2011	0.031 J	0.3 U	0.05 UJ	NA	NA	800
TP2	04/09/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	820
TP2	04/09/2012	0.05 U	0.3 U	0.05 UJ	NA	NA	790
WTA	09/30/2010	0.25 U	1 U	0.05 U	2 U	550	1000
WTA	04/14/2011	0.05 UJ	0.3 U	0.05 U	NA	NA	1020
WTA	04/14/2011	0.05 UJ	0.3 U	0.05 UJ	NA	NA	1010
WTA	10/05/2011	0.05 U	0.3 U	0.05 UJ	NA	NA	1050
WTA	04/05/2012	0.0099 J	0.3 U	0.05 UJ	NA	NA	NA

Notes:  Gray highlights indicate the result equals or exceeds the Federal MCL.

BHC Hexachlorocyclohexane
 DDD Dichlorodiphenyldichloroethane
 DDE Dichlorodiphenyldichloroethene
 DDT Dichlorodiphenyltrichloroethane
 DMETAL Dissolved (filtered) metal
 J Estimated value

MCL Maximum Contaminant Level
 METAL Total (unfiltered) metal
 mg/L Milligrams per liter
 NA Not analyzed
 PAH Polycyclic aromatic hydrocarbon
 PCB Polychlorinated biphenyl

 Outlined boxes indicate the result equals or exceeds the California MCL.

SVOC Semivolatile Organic Compounds
 TPH Total Petroleum Hydrocarbons
 U Nondetect
 VOC Volatile Organic Compounds
 Z Chromatographic pattern does not resemble TPH fuel pattern (individual peaks)
 µg/L Micrograms per liter

APPENDIX C
CONCENTRATION-TIME GRAPHS FOR CARBON TETRACHLORIDE, MERCURY,
AND TRICHLOROETHYLENE

This appendix presents concentration-time graphs and trend lines for groundwater collected from 2010 through 2015 at the Richmond Field Station Site, located at the Berkeley Global Campus at Richmond Bay. Concentrations of carbon tetrachloride, trichloroethylene, and mercury were plotted because results of these analytes have consistently exceeded California and federal maximum contaminant levels (MCL) throughout the duration of the groundwater investigations. Other chemicals that have exceeded MCLs in at least one sampling event but are not presented include 1,2-dichloroethane, cis-1,2-dichloroethylene, tetrachloroethylene, trans-1,2-dichloroethylene, bis(2-ethylhexyl)phthalate, aluminum, arsenic, cadmium, chromium (unfiltered samples only), copper (unfiltered samples only), lead (unfiltered samples only), nickel, and selenium; these chemicals were excluded from the trend analysis because were not detected frequently above the MCLs.

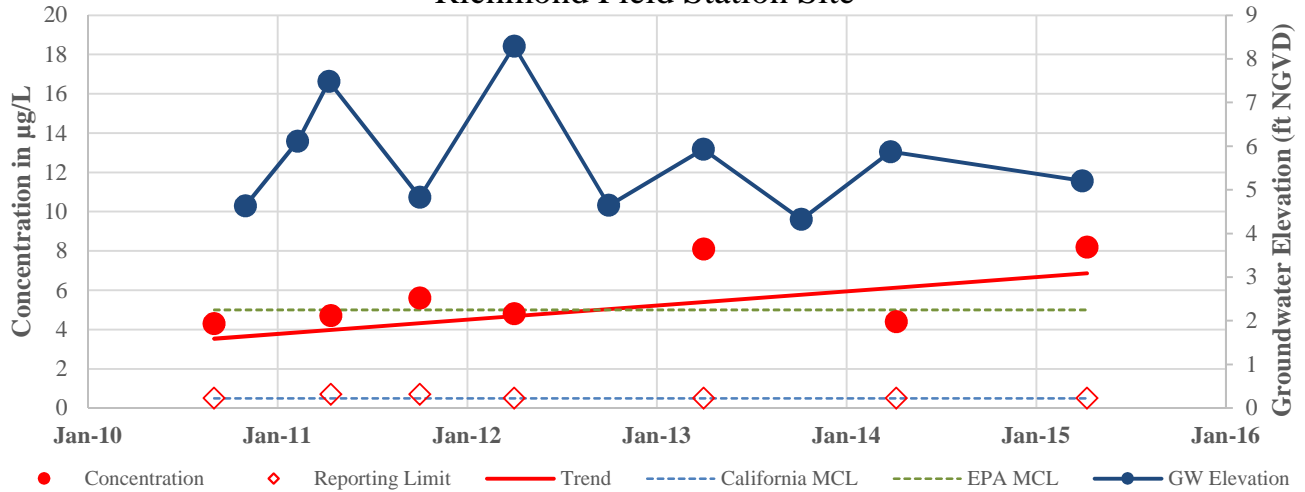
For piezometers with duplicate sample results, the maximum value of the duplicate is presented on the concentration-time graphs and used for calculation of the trend line. Where non-detects were present, the reporting limit value is presented on the graphs and used for the trend calculations.

Trend lines were calculated by importing the data into ProUCL 5.0 (EPA 2013) and calculating a Theil-Sen trend test at a 95 percent confidence level. The slope and intercept of the Thiel-Sen line were used to plot the Theil-Sen line.

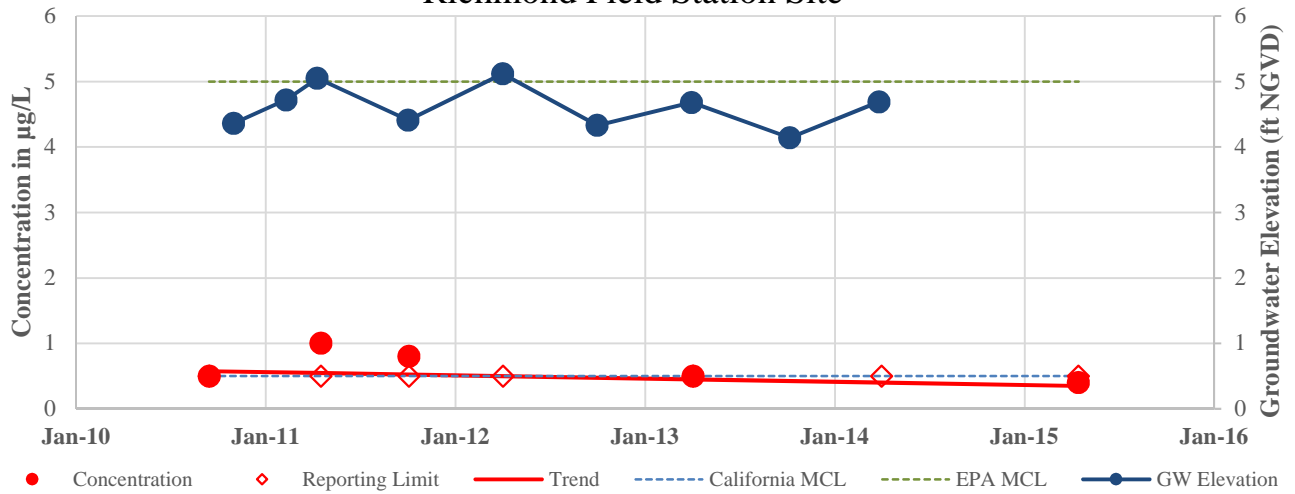
Reference:

EPA. 2013. ProUCL Version 5.0.00 Technical Guide: Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations. EPA/600/R-07/041. September.

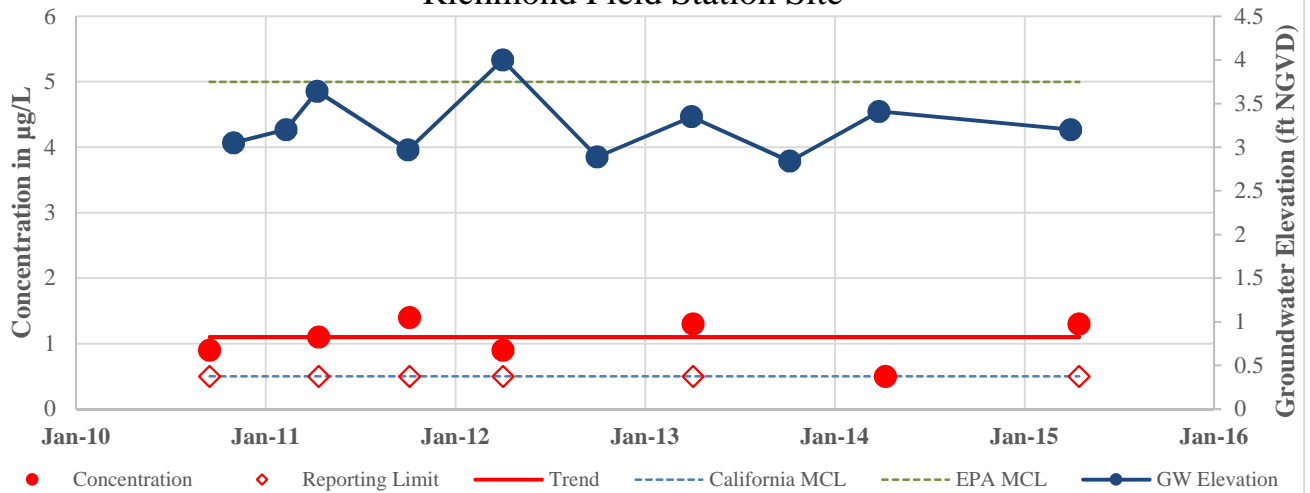
Carbon Tetrachloride Concentration in B185 Richmond Field Station Site

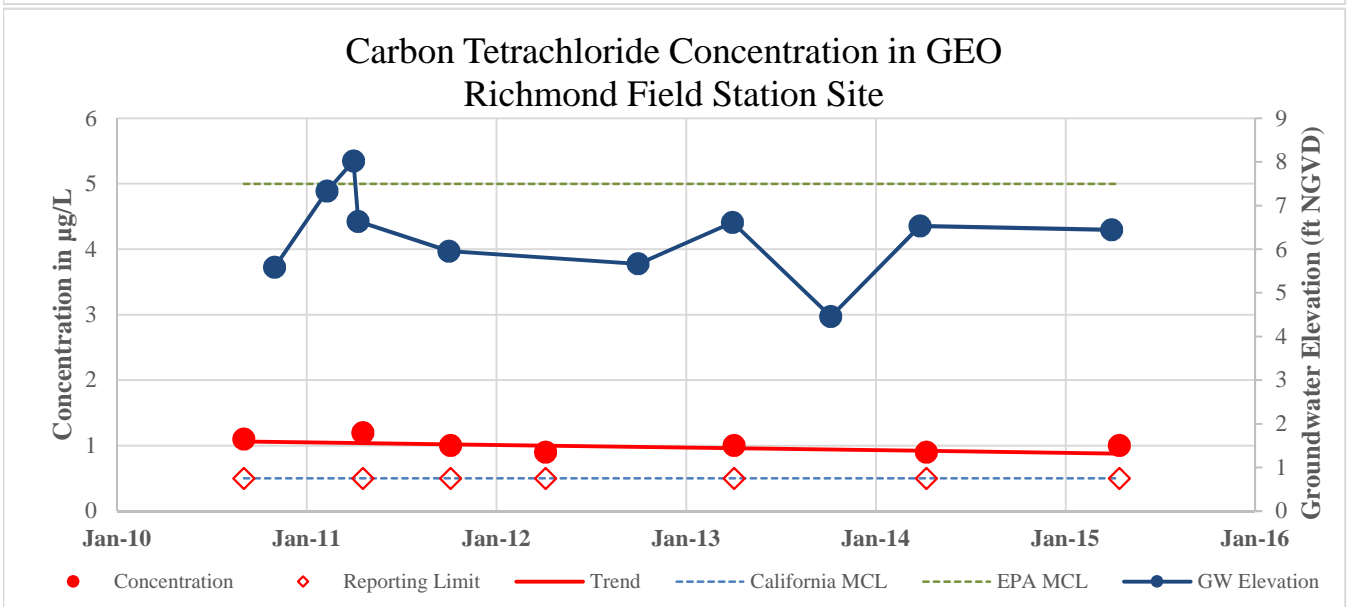
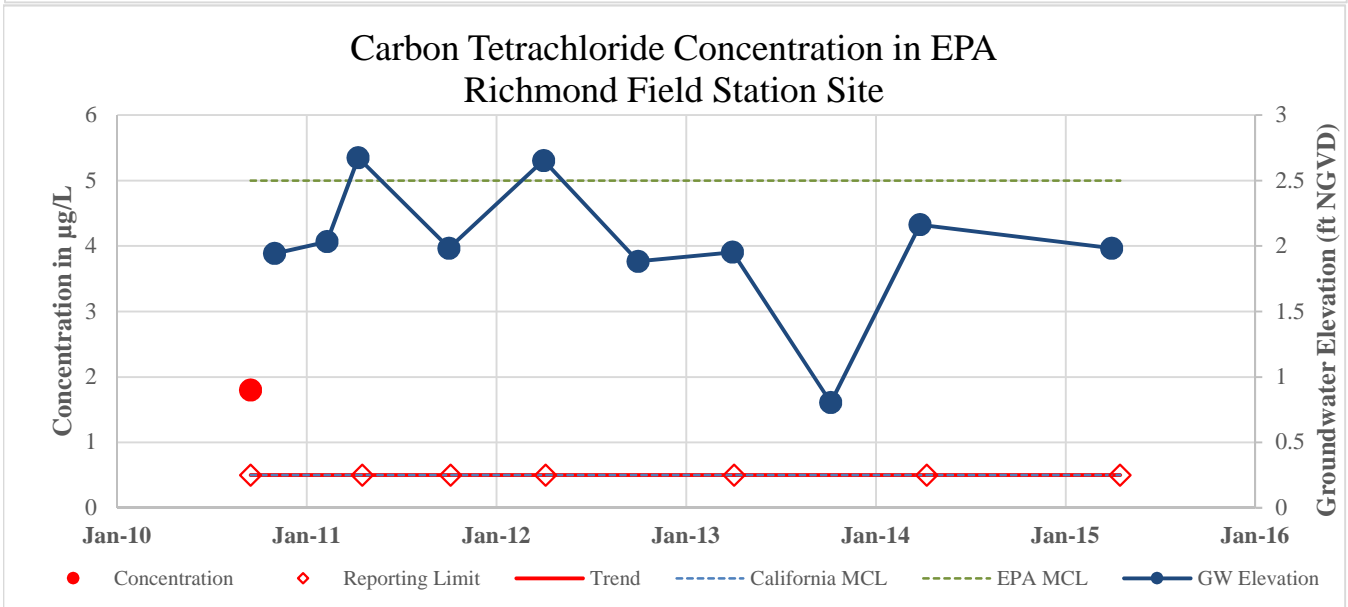
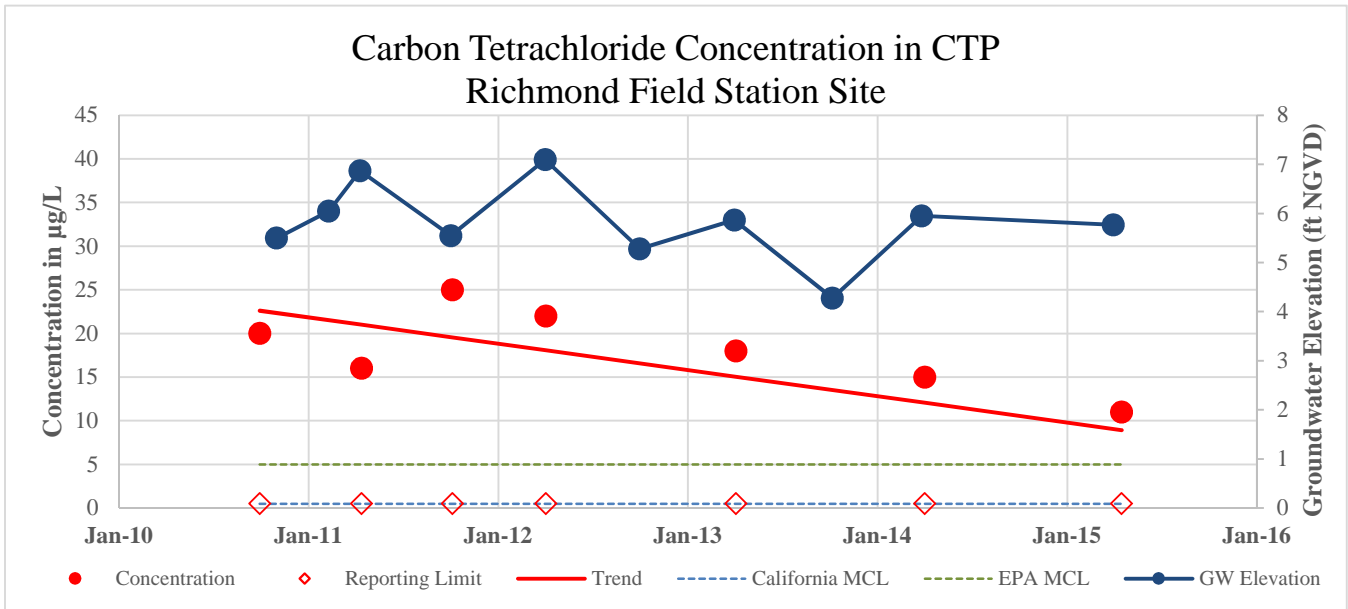


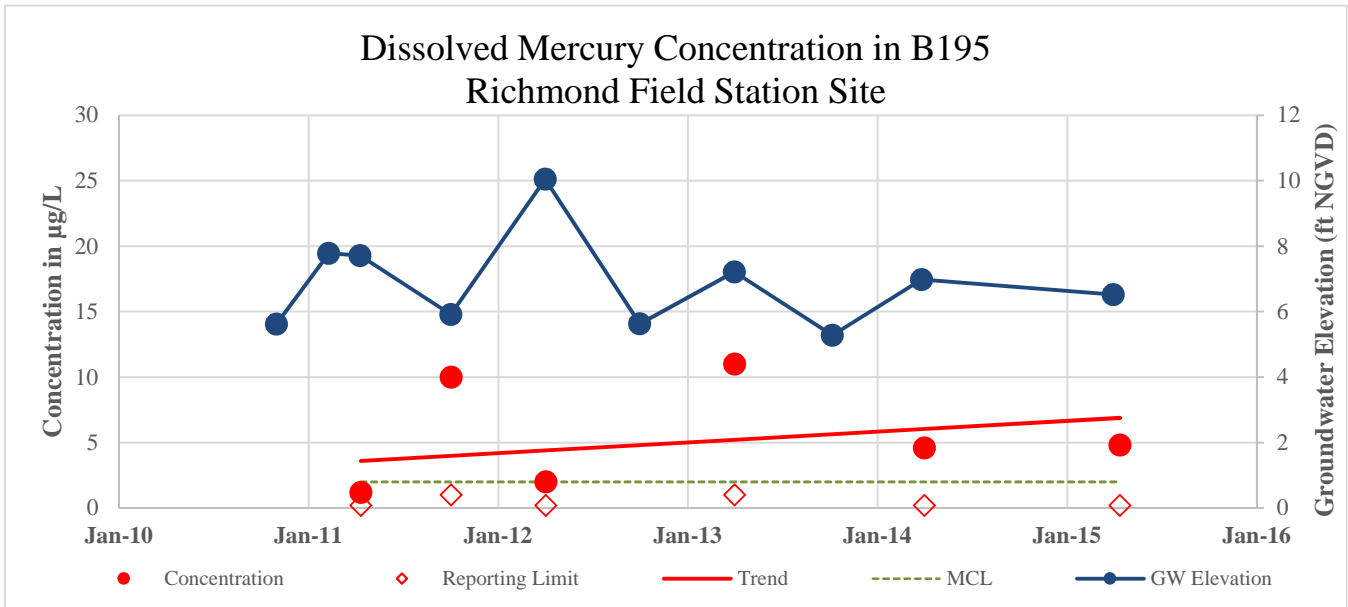
Carbon Tetrachloride Concentration in B277 Richmond Field Station Site



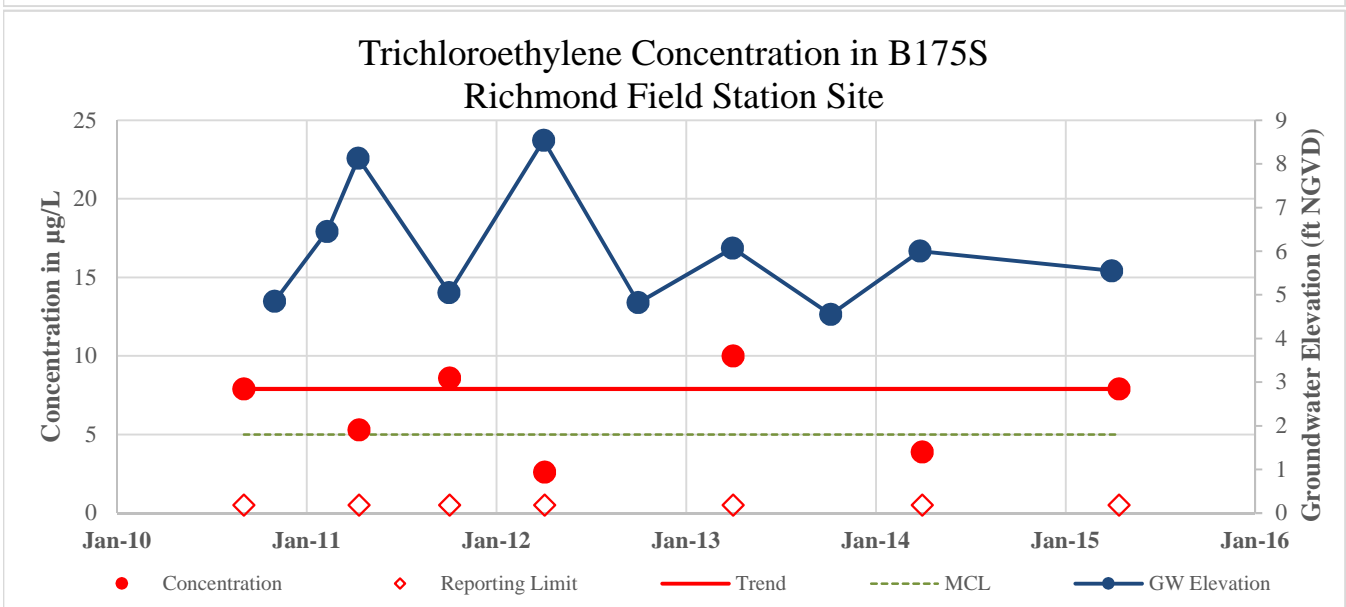
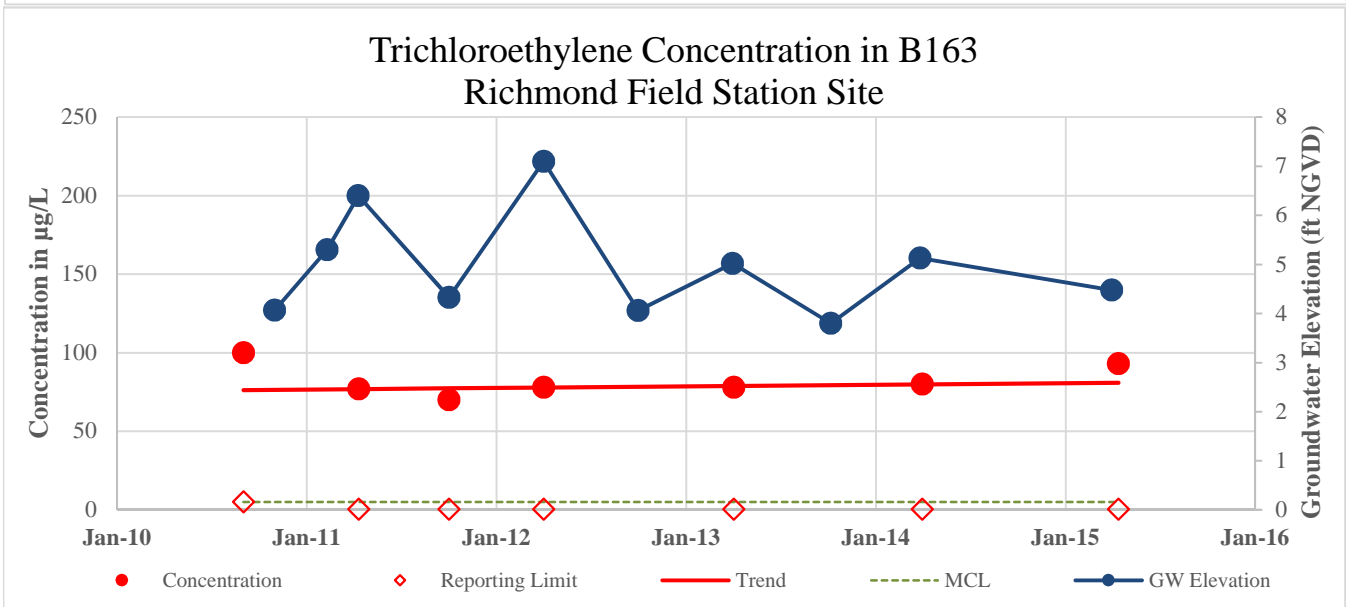
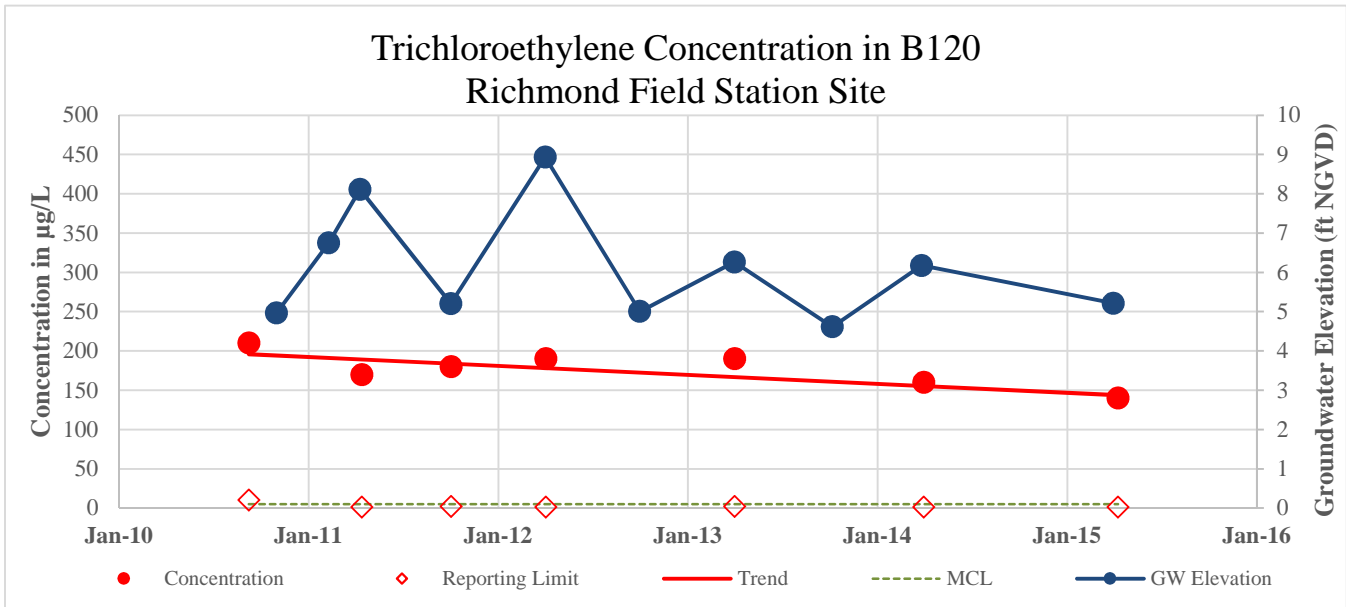
Carbon Tetrachloride Concentration in B280A Richmond Field Station Site

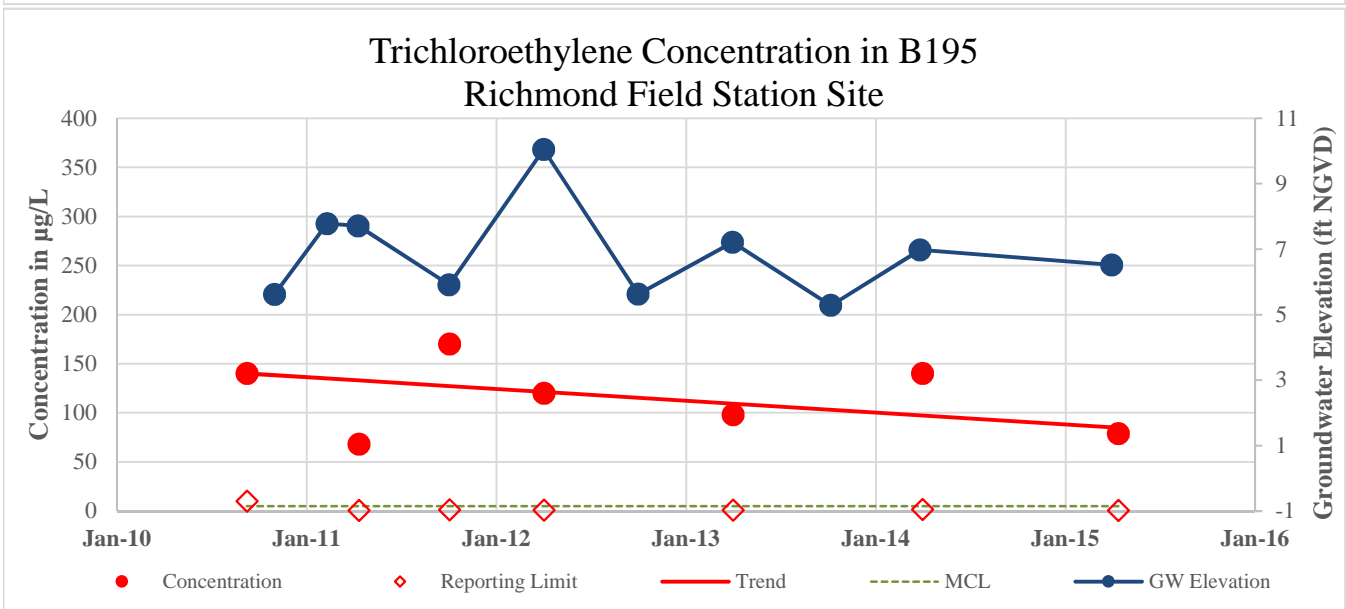
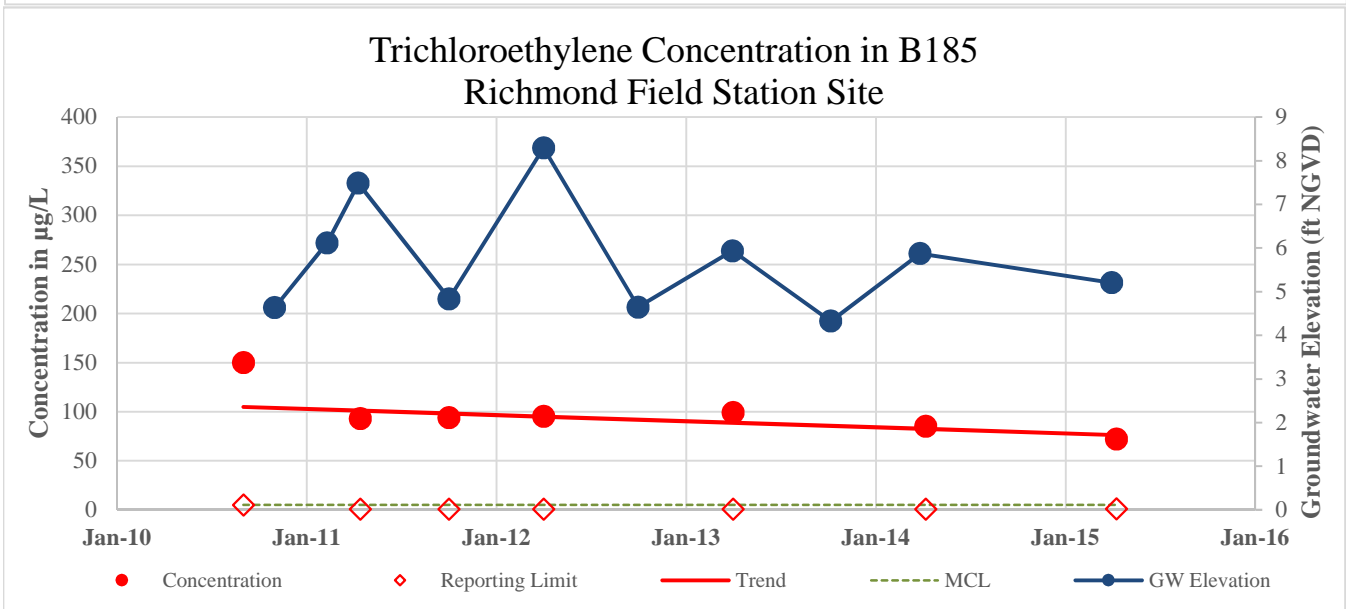
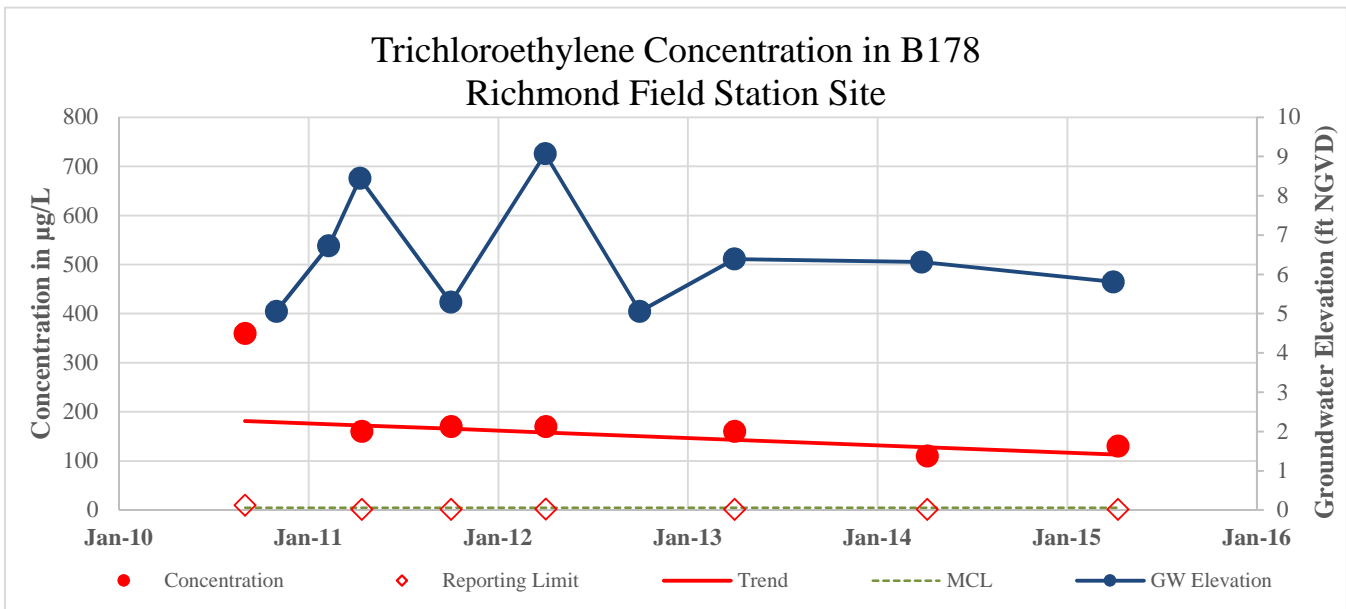




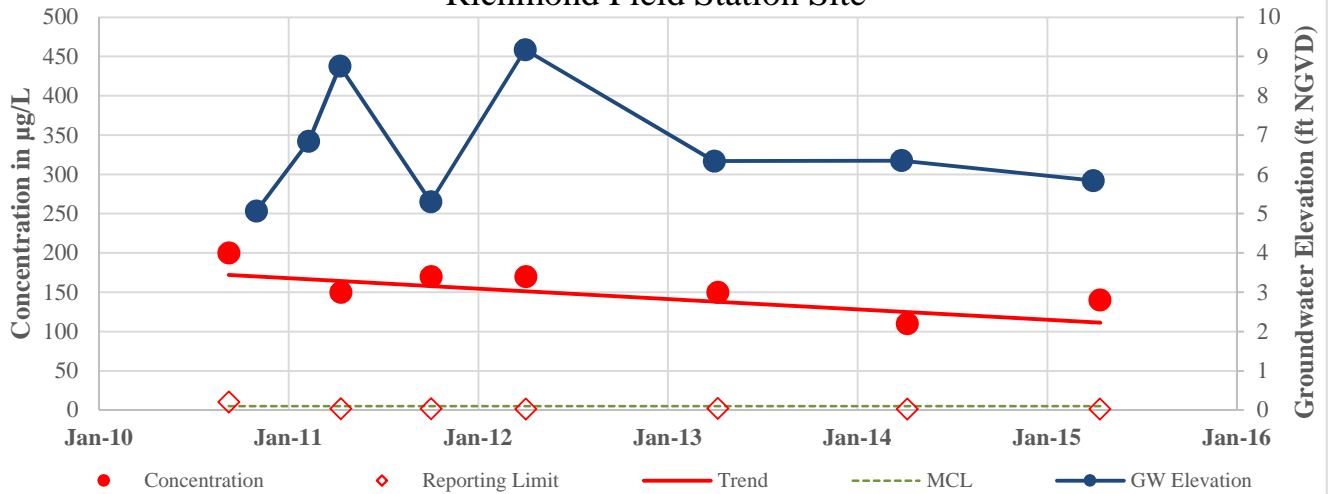


Note: Dissolved mercury concentrations were reported, as MCLs are based on dissolved concentrations of metals. Results for unfiltered mercury collected between 2010 and 2012 were not reported. See Appendix B for complete analytical results.

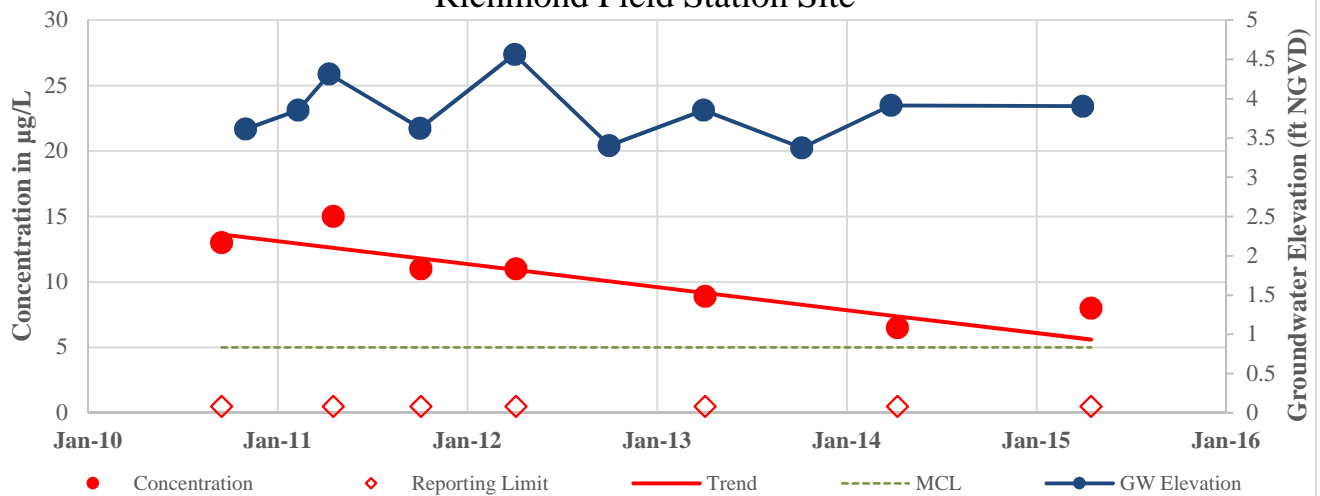




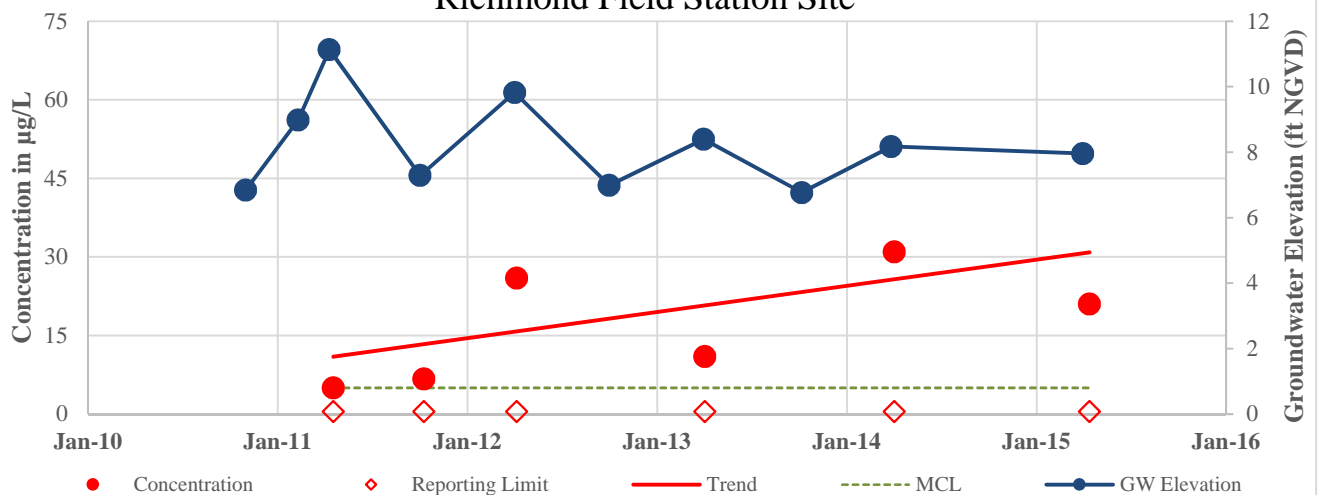
Trichloroethylene Concentration in B197/B197R Richmond Field Station Site

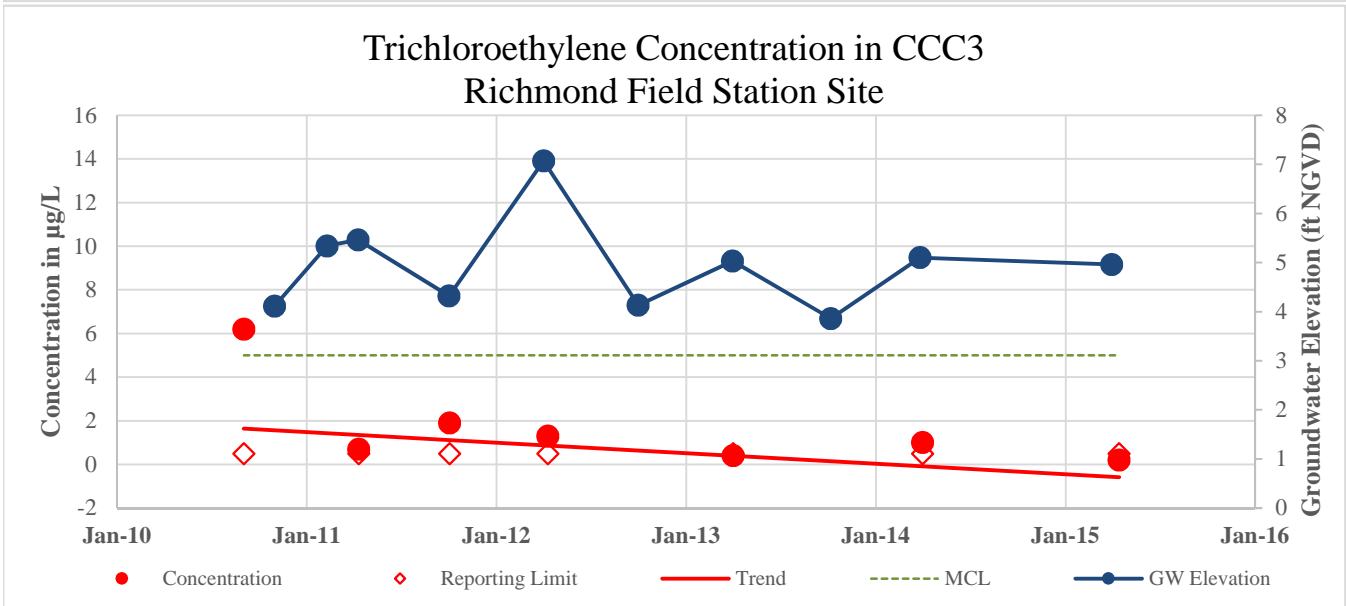
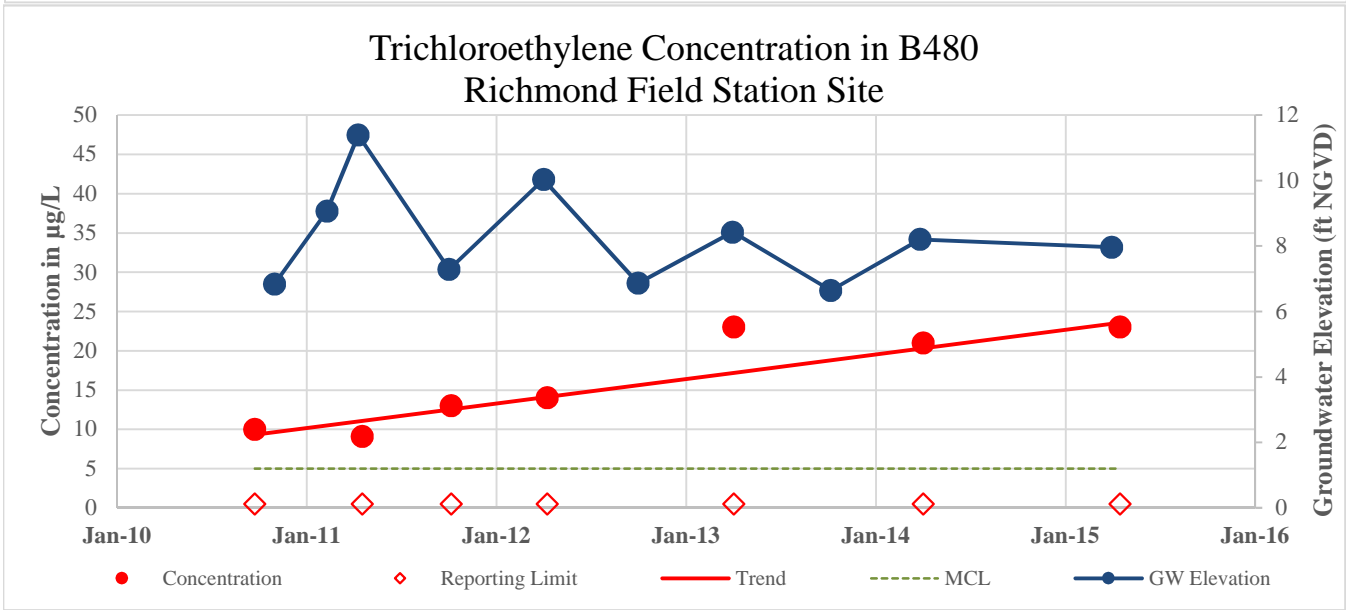
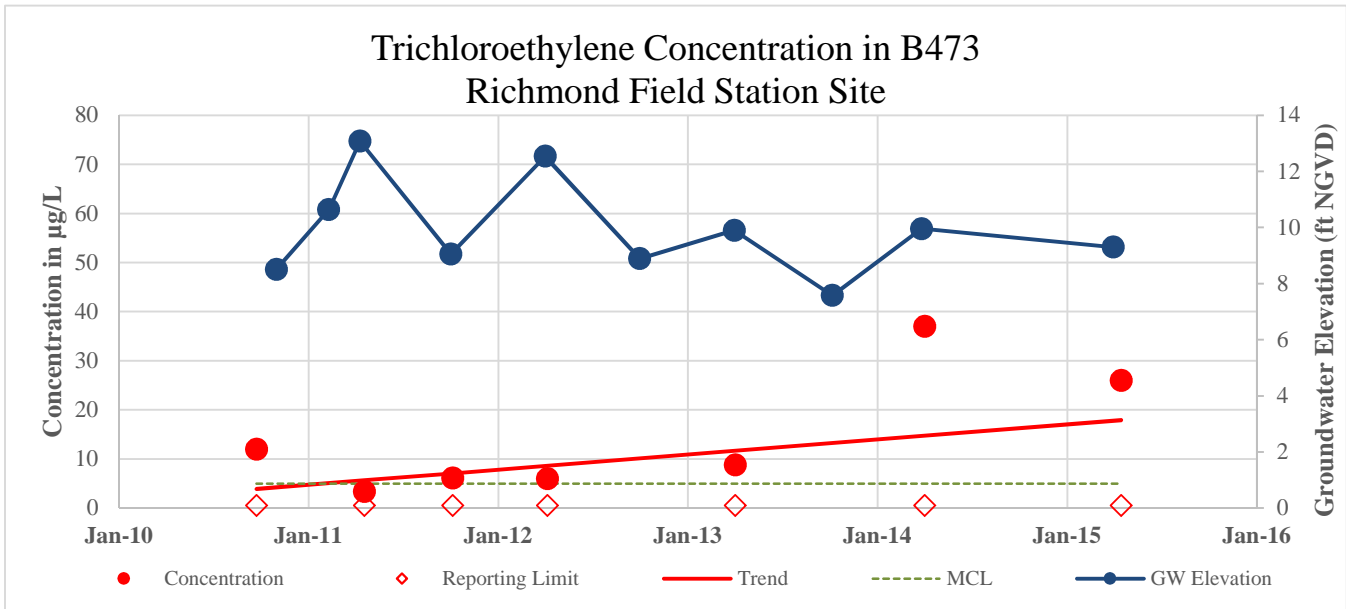


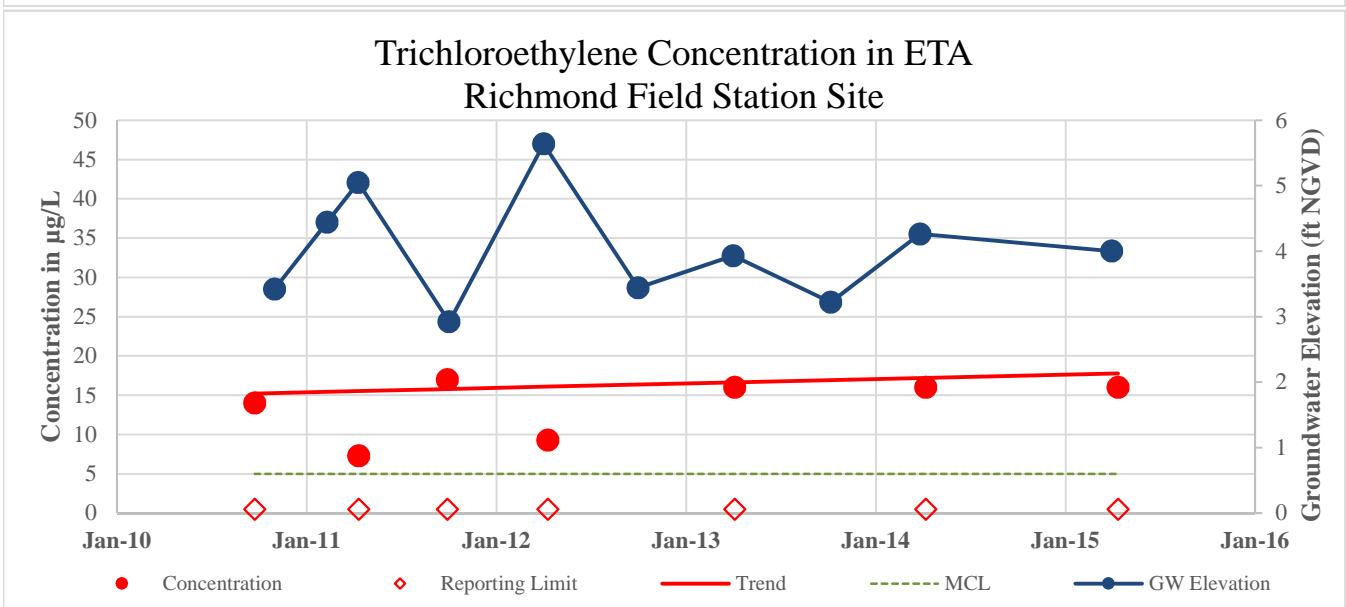
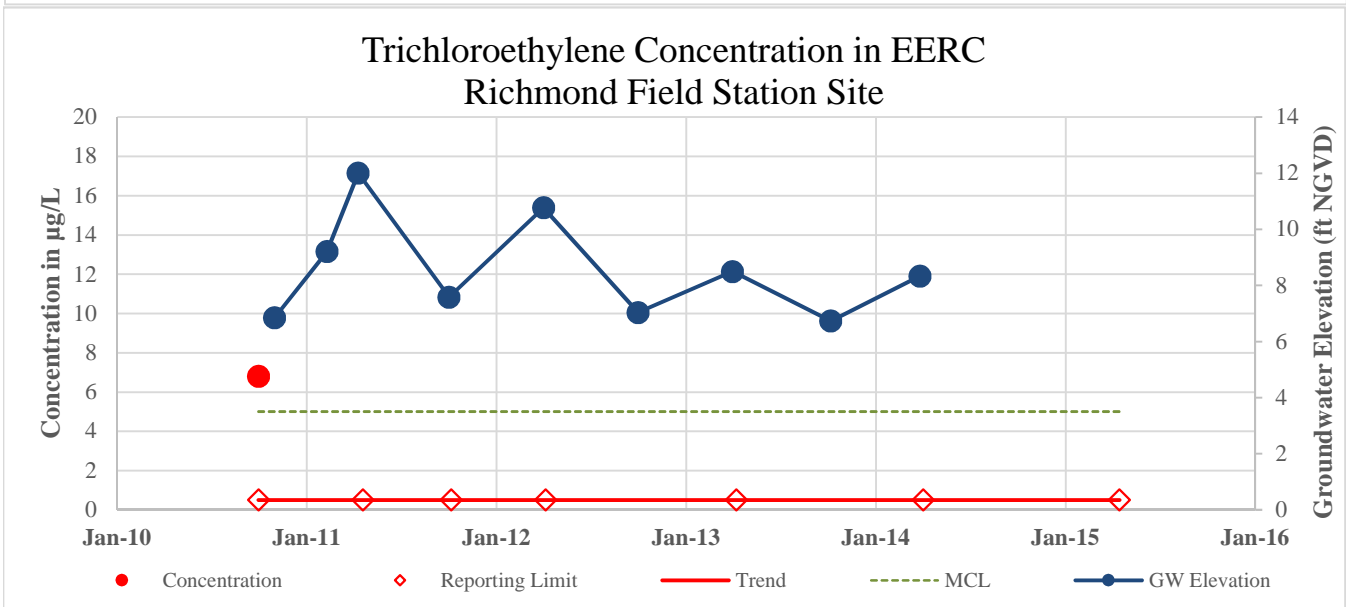
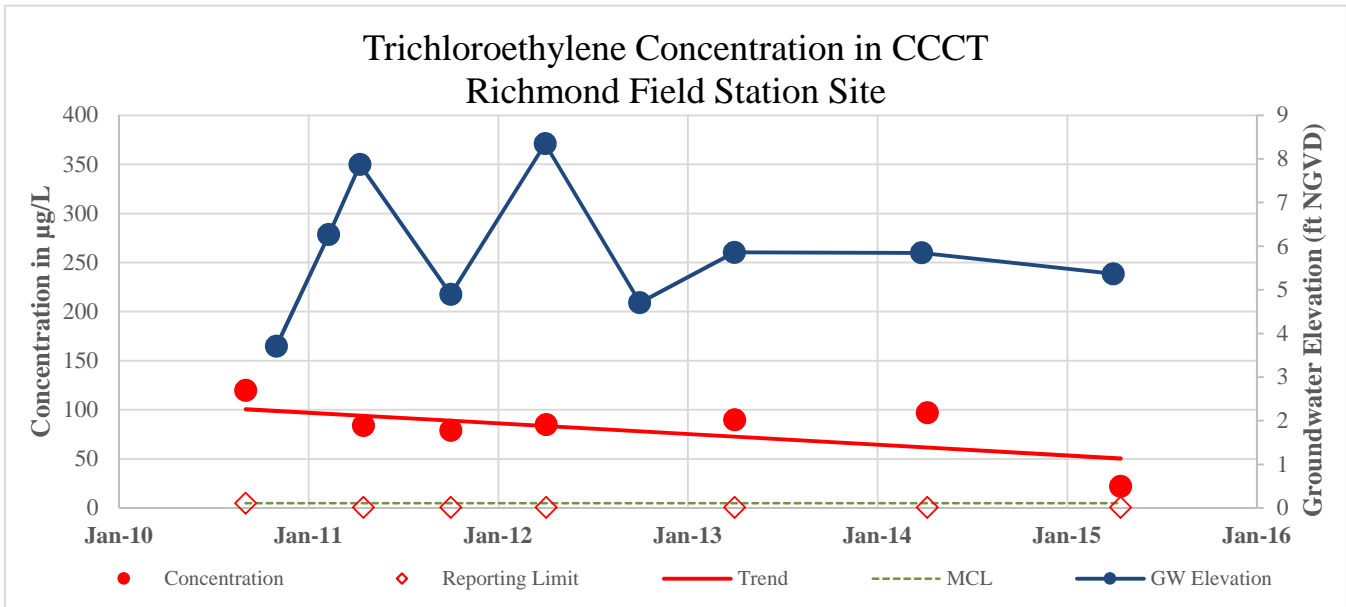
Trichloroethylene Concentration in B278 Richmond Field Station Site

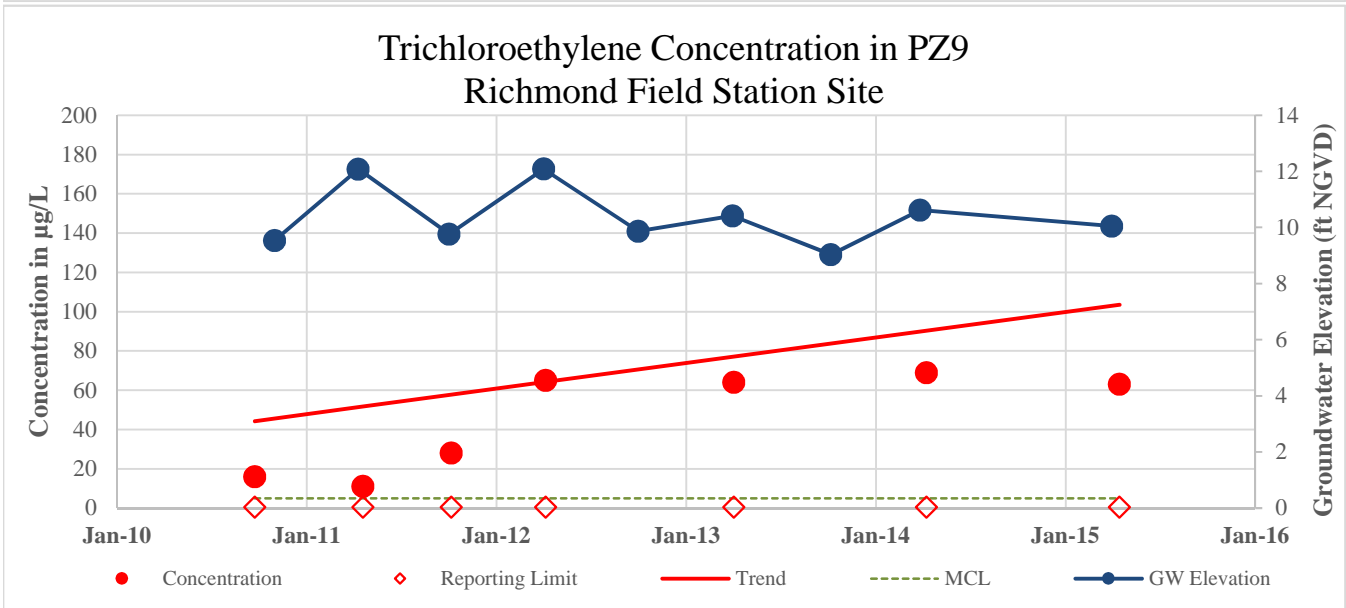
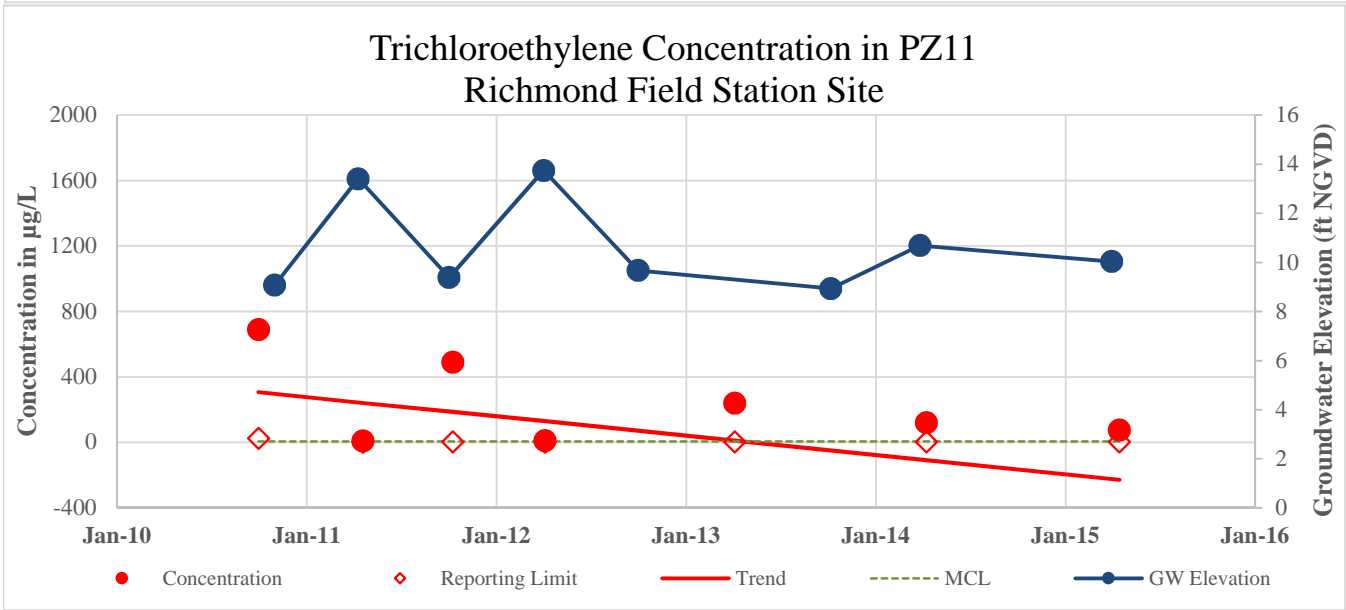
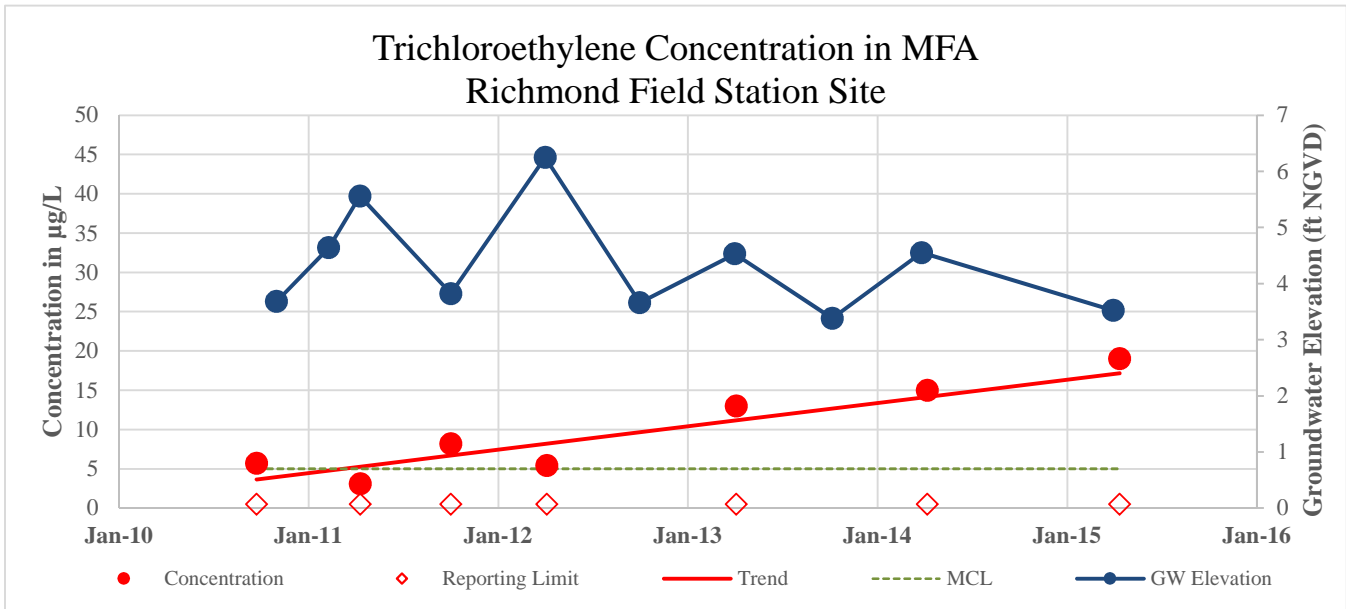


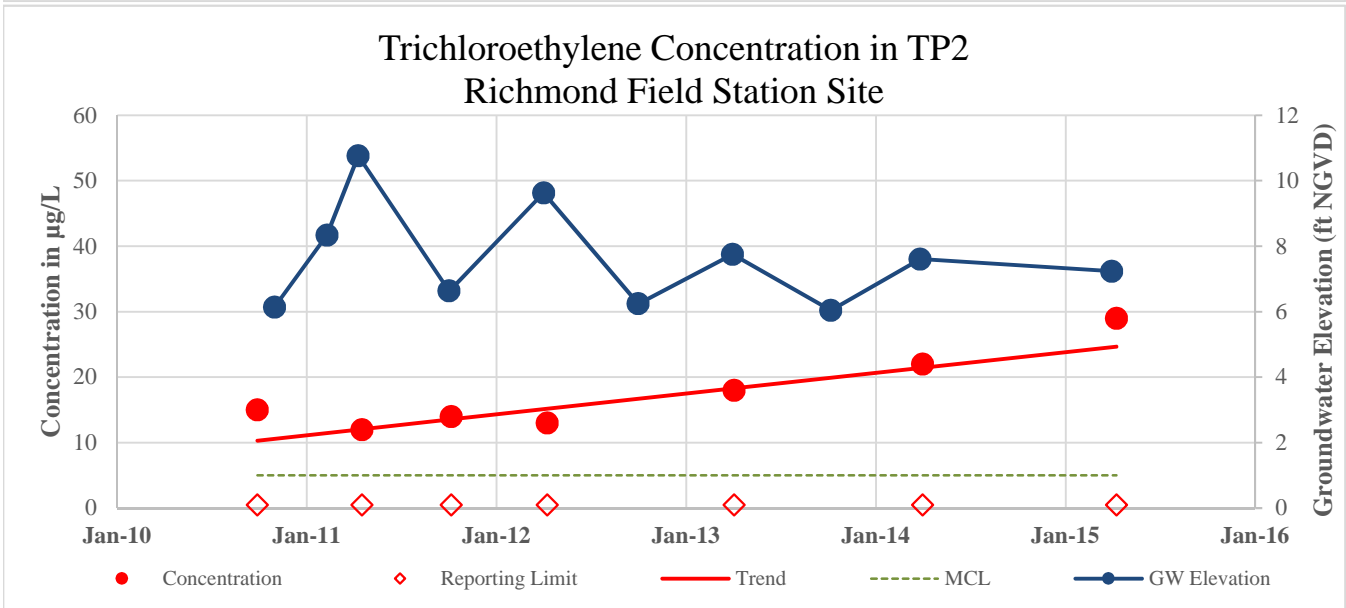
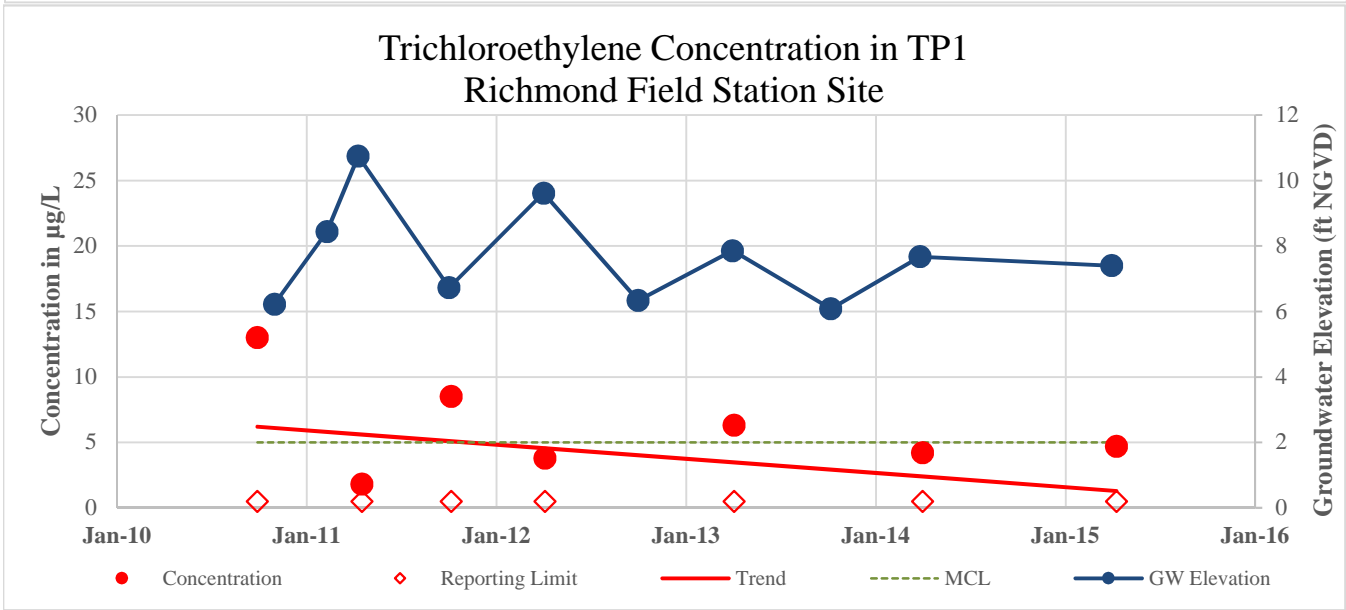
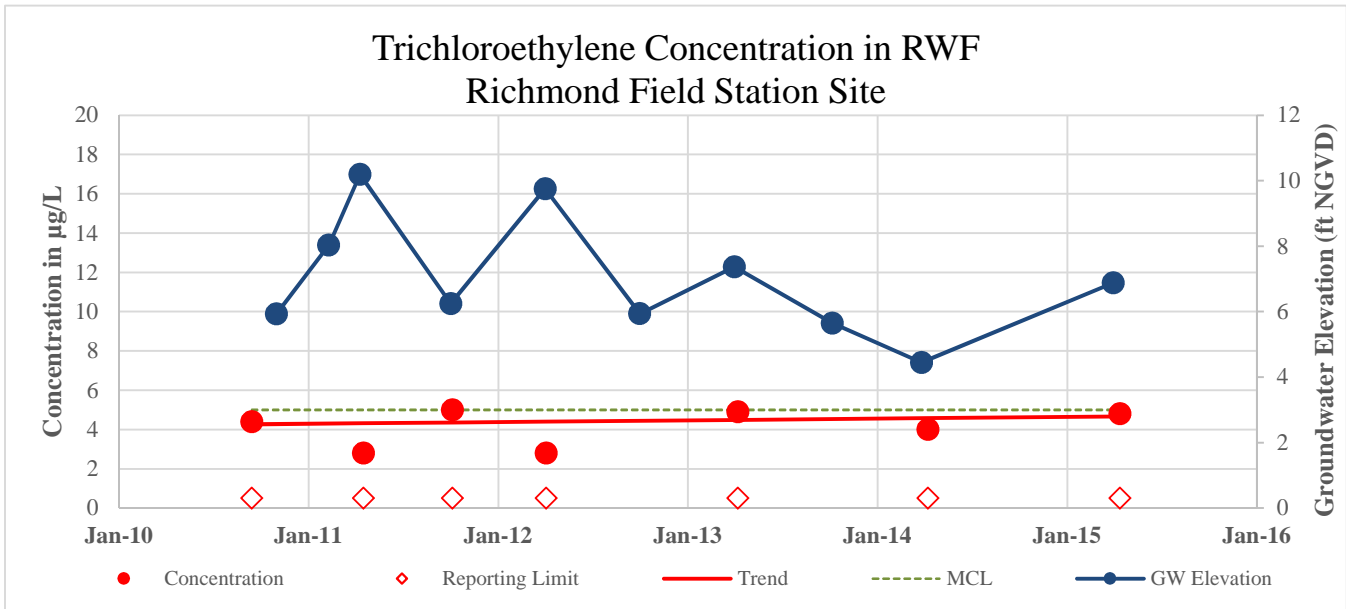
Trichloroethylene Concentration in B450 Richmond Field Station Site












APPENDIX D
WATER LEVEL MEASUREMENT SAMPLING FORMS


Water Level Information								Comments
Well previously equilibrated? (Yes/No)	If not previously equilibrated, pressure detected when cap removed? (NA/Yes/No)	Depth to Groundwater Information					Depth to Well Bottom from Top of PVC Casing ² (feet)	
		Time	Date	Depth to Groundwater ¹ from Pump Platform or Riser, if present (feet)	Thickness of Pump Platform or Riser, if present (feet)	Depth to Groundwater ¹ from Top of PVC Casing (feet)		
B185		9:09	10/1/14			5.76	13.80	screw mount on casing is rusted
B178		9:15				6.16	13.39	
B120		9:19				7.25	13.69	
B195		9:29				9.26	16.13	
P78		9:32 9:32				9.04	20.55	
CCC3		10:49				8.50	14.19	
B121		10:53				10.62	17.63	
CCC2		10:58				11.20	12.96	
B177 B178		11:03				12.29	18.75	missing casing screw "hole"
Bulb 7		11:16				14.33	18.09	

Sara Woolley, Colin Lee
 1 of 6

Field Staff Signature: 
 Date: 10/1/14

Water Level Information								Comments
Well previously equilibrated? (Yes/No)	If not previously equilibrated, pressure detected when cap removed? (NA/Yes/No)	Depth to Groundwater Information					Depth to Well Bottom from Top of PVC Casing ² (feet)	
		Time	Date	Depth to Groundwater ¹ from Pump Platform or Riser, if present (feet)	Thickness of Pump Platform or Riser, if present (feet)	Depth to Groundwater ¹ from Top of PVC Casing (feet)		
B162		11:21	10/1/14		4.5	4.58'	18.41	
MFA		11:26				4.80	13.71	
ETA		11:29				4.25	13.35	
B163		11:35				6.61	16.55	1 screw "hole"
CCCT		11:48				7.91	15.05	
B175S		12:10				10.81	14.77	
B175W		12:15				11.09	14.71	
B150		12:20				11.72	15.06	
B197R		12:26				8.65	13.16	
B180		13:40				9.71	15.99	

S. Woolley, C. Lee
2 of 6

Field Staff Signature: 
Date: 10/1/14

Water Level Information								Comments
Well previously equilibrated? (Yes/No)	If not previously equilibrated, pressure detected when cap removed? (NA/Yes/No)	Depth to Groundwater Information			Depth to Well Bottom from Top of PVC Casing ² (feet)	Depth to Groundwater ¹ from Top of PVC Casing (feet)	Thickness of Pump Platform or Riser, if present (feet)	
		Time	Date	Depth to Groundwater ¹ from Pump Platform or Riser, if present (feet)				
Q ←	B280 (shallow) ←	13:44	10/01/14			10.55	15.79	
	B280 (deep) ↓	13:45				10:22	40.86	
	B280B	1353				13.14	15.92	one bolt on casing
	CTP (shallow)	1359				12.00	17.10	
	CTP (deep)	1402				12.41	40.28	
	B280A	1410				11.21	13.51	No bolts, needs new casing top
	CTPS	1413				12.29	13.84	
	EPA	1419				8.63	14.13	Replace well cap
	B128	1458				7.63	40.20	
✓	WTA	1507				6.02	13.95	

S. Woolley, C. Lee

3 of 6

Field Staff Signature: 

Date: 10/01/14

Water Level Information								Comments
Well previously equilibrated? (Yes/No)	If not previously equilibrated, pressure detected when cap removed? (NA/Yes/No)	Depth to Groundwater Information					Depth to Well Bottom from Top of PVC Casing ² (feet)	
		Time	Date	Depth to Groundwater ¹ from Pump Platform or Riser, if present (feet)	Thickness of Pump Platform or Riser, if present (feet)	Depth to Groundwater ¹ from Top of PVC Casing (feet)		
DTP ←	DHR	1513	10/1/14			10.36	13.59	
	B278	1521				9.44	16.14	
	B277	1529				10.72	17.53	Cracked cement around well
	B158	1537				11.48	14.87	
	CCC1	1543				11.22	13.10	
	B300	1603				13.39	17.14	One bolt
	RWF	1613 ^{ex}				11.22	17.68	
	TP1	1620				13.52	16.00	
	TP2	16:24				13.22 13.52	17.06	One bolt missing
	NRLF	1631				17.06	18.80	One bolt missing

S. Woolley, Colm L.
4 of 6

Field Staff Signature: 

Date: 10/1/14

Water Level Information								Comments
Well previously equilibrated? (Yes/No)	If not previously equilibrated, pressure detected when cap removed? (NA/Yes/No)	Depth to Groundwater Information					Depth to Well Bottom from Top of PVC Casing ² (feet)	
		Time	Date	Depth to Groundwater ¹ from Pump Platform or Riser, if present (feet)	Thickness of Pump Platform or Riser, if present (feet)	Depth to Groundwater ¹ from Top of PVC Casing (feet)		
B450		4:40	10/1/14			14.83	15.59	
B460		4:44	↓			16.25	16.38	replaced well cap
B480 (deep)		4:51				10.51	40.31	
B480 (shallow)		4:55				14.50	15.88	
B490		5:00				15.71	18.00	
PZ9		5:08				14.49	19.55	
B473		5:18				14.51	16.95	
PZ-12		5:32				14.10	17.69	
PZ-11		5:37				13.14	18.75	
EERC		5:50	↓			15.46	16.80	

S. Woolley, C. Lee

5 of 6

Field Staff Signature:



Date:

10/1/14

Water Level Information								Comments
Well previously equilibrated? (Yes/No)	If not previously equilibrated, pressure detected when cap removed? (NA/Yes/No)	Depth to Groundwater Information					Depth to Well Bottom from Top of PVC Casing ² (feet)	
		Time	Date	Depth to Groundwater ¹ from Pump Platform or Riser, if present (feet)	Thickness of Pump Platform or Riser, if present (feet)	Depth to Groundwater ¹ from Top of PVC Casing (feet)		
FG		5:57	10/1/14			14.52	16.18	
GEO		6:30	↓			11.21	16.09	1 bolt on casing, top casing broken

S. Woolley, C. Lee
6 of 6

Field Staff Signature: 
Date: 10/1/14

RFS Monitoring Well WL Measurement and Maintenance Checklist

Water Level measurement conducted on April 1, 2015. All piezometers will have been equilibrated for 15 minutes prior to measuring water levels.

Piezometer Name	Screening Interval	Depth to Bottom (ft bgs)	Blockage?	2014 DTW from TOC (ft bgs)	2015 DTW from TOC (ft bgs)	Time Measured	Rubber Around Well Cap?	Water in Well Hole?	Is Locking Plug Tight?	Lock in Place?	Lock Functioning ?	Screw Missing?	Items Needed
B120	4-14	13.08	N	5.54	6.50	09:15	Y	N	N	Y	N	N	Locky Cap
B121	8-18	17.72	N	9.22	3.64	1631	Y	N	N	Y	N	N	lock
B128	6-16	15.98	N	7.15	7.56	16:22	Y	N	Y	Y	Y	N	1x Screw fistener
B128deep	30-40	40.16	N	7.61	8.17	16:29	Y	Y	Y	Y	Y	N	
B150	5.5-15.5	15.22 15.22	N	5.71	6.71	1640	Y	N	Y	Y	may work w/ WD-40	N	
B158	5-15	15.05	N	10.14	10.50	1645	N	Y	Y	Y	N	N	Rubber
B163	7-17	16.61	N	5.24	5.89	09:05	Y	N	Y	Y	N	N	lock, cap
B175S	5-15	14.71	N	9.16	9.61	1605	Y	Y, covering	Y	Y	N		plug, screw missing
B175W	5-15	14.90	N	8.94	9.48	1630	Y	N	Y	Y	N	N	
B177	9-19	18.89	N	10.34	10.91	1635	N	N	N	Y	Y	N	rubber seal plug
B178	4.5-14.5	4.9	Y	4.36	4.86	1400	Y	N	Y	Y	Y	N	-
B180	6-16	16.00	N	7.76	8.19	14:05	Y	Y	Y	Y	Y	N	-
B185	4-14	13.82	N	4.14	4.81	08:15	Y	Y	Y	N	N	N	replaced cap
B195	7-17 6-16	16.16	N N	10.24 7.30	7.76	10:01	Y	Y	N	Y	N	Y	Lock + Cap
B195	6-16	8.85	N	7.30	7.35	09:28	Y	Y	Y	N N	N	N	Lock

~~B197~~ 4-14
B197R

6.84

11:09

Piezometer Name	Screening Interval	Depth to Bottom (ft bgs)	Blockage?	2014 DTW from TOC (ft bgs)	2015 DTW from TOC (ft bgs)	Time Measured	Rubber Around Well Cap?	Water in Well Hole?	Is Locking Plug Tight?	Lock in Place?	Lock Functioning?	Screw Missing?	Items Needed
B197	6-16	17.06	N	6.84 10.24	10.96	9:48	Y	N	Y	Y	Y	N	Rubber
B277	7-17	17.57	N	10.13	10:26	10:39	N	N	Y	Y	N	N	Lock
B278	6-16	16.18	N	8.84	8.85	10:44	Y	N	N	Y	Y	N	
B280A	4-14	13.52	N	10.63	10:84	15:20	N	N	Y	Y	N	N	—
B280B	6-16	16.02	N	12.64	13.04	14:38	Y	N	Y	Y	Y	Y 1x	Rubber cap + close
B300	7-17	17.02	N	9.25	12.07	13:35	N	N	N	Y	Y	Y	1x screw fix plug
B38	7-17	15.82	N	8.60	9.01	13:46	Y	Y	Y	Y	Y	Y	replaced plug
B38deep	31-41	40.87	N	8.67	8.95	13:51	Y	Y	Y	Y	Y	N	—
B450	6-16	15.48	N	13.17	13.38	12:02	N	N	N	N	N	N	Rubber, plug, lock
B460	8-18	15.77	N	13.64	13.56	12:33	Y	N	Y	Y	X	N	Rubber
B473	7-17	17.09	N	12.33	12.99	10:27	Y	N	Y	Y	Y	N	Rubber
B474	6-16	18.12	N	11.95	14.65	11:41	Y	Y	Y	Y	Y	N	—
B480	6-16	15.91	N	12.64	12.88	11:29	Y	Y	N	N	N	Y	replaced plug & screws
B480deep	35-40	40.34	N	9.02	9.55	11:09	Y	N	Y	N	N	Y	Lock, screw
B490	8-18	18.06	N	13.44	14.82	10:48	Y	N	Y	Y	Y	N	—
Bulb1	8-18	18.15	N	4.19	4.47	16:42	X	N	Y	Y	Y	N	Rubber
Bulb2	9-19	18.47	N	4.03	4.38	16:48	Y	N	Y	Y	Y	N	—

Piezometer Name	Screening Interval	Depth to Bottom (ft bgs)	Blockage?	2014 DTW from TOC (ft bgs)	2015 DTW from TOC (ft bgs)	Time Measured	Rubber Around Well Cap?	Water in Well Hole?	Is Locking Plug Tight?	Lock in Place?	Lock Functioning ?	Screw Missing?	Items Needed
CCC1	3.5-13.5	13.00	N	9.81	10.22	16:45							
CCC2	4-14	14.20	N	9.15	9.53	16:27	N	Y	Y	Y	N	N	lock
CCC3	4-14	14.22	N	6.57	6.71	16:20	Y	N	N	Y	Y	N	rubber plug
CCC4	5.5-15.5	15.00	N	6.28	6.76	16:10					N		
CTP	7-17	17.14	N	11.32	11.5	17:59	Y	N	N	Y	Y	N	plug? 1x Fix Screw
CTPdeep	30-40	40.23	N	11.59	11.76	15:03	Y	N	Y	Y	Y	N	
CTPS	4-14	13.89	N	8.61	10.92	15:34	Y	Y	Y	Y	Y	Y 1x	1 SCREW WELL TIP BROKEN
DHR	3.5-13.5	13.55	N	8.88	9.44	16:12	Y	N	Y	Y	Y	N	—
EERC	7-17	16.92	N	13.51	13.88	14:00	Y	N	Y	Y	Y	N	covered w/ wood chips
EPA	4-14	14.29	N	8.43	10.61 8.61	15:52	Y	Y	Y	Y	Y	N	—
ETA	3.5-13.5	13.53	N	3.28	3.54	17:19	Y	N	Y	Y	Y	N	replaced plug
FG	6-16	16.21	N NO	13.48	13.91	10:49	Y	N	Y	Y	Y	N	Rubber
GEO	6.5-16.5	16.11	N	9.84	9.93	14:27	Y	N	Y	N	N	Y 1x	new cap
MFA	3.5-13.5	13.78 13.53	N	3.68	4.71	17:10	Y	N	Y	N	NA	N	rubber lock
NRLF	9-19	18.82	N	14.16	14.21	12:46	Y	Y	Y	Y	Y	N	rubber
PZ11	9-19	18.78	N	10.80	11.45	13:00	N	N	Y	NA	NA	N	rubber seal
PZ8	8-21	20.54	N	7.12	7.58	13:10	Y	N	N	Y	Y	N	NA

Piezometer Name	Screening Interval	Depth to Bottom (ft bgs)	Blockage?	2014 DTW from TOC (ft bgs)	2015 DTW from TOC (ft bgs)	Time Measured	Rubber Around Well Cap?	Water in Well Hole?	Is Locking Plug Tight?	Lock in Place?	Lock Functioning ?	Screw Missing?	Items Needed
PZ9	9-20	19.55 19.55	N	12.67	13.24	13:00	Y	N	N Y	N Y	Y	N	—
RWF	8-18	17.77	N	12.01	9.58	13:23	Y	Y	Y	Y	Y	N	—
TP1	7-17	15.99	N	11.66	11.93	12:14	N	N	Y	Y	Y	N	1x Screw fix
TP2	6-16	17.10	N	11.31	11.68	12:28	Y	N	Y	Y	Y	Y	1x Screw
WIA	4-14	14.00	N	5.69	6.01	16:03	Y	Y	Y	Y	Y	N	—

PZ-12		17.64	N		12.97	10:35	N	Y	Y	N	N	Y	Rubber, Lock
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WSN01	—	17.51	N	—	4.92	17:03	N	N	Y	Y	Y	N	—
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ETA01		15.18	N		2.52	17:15	Y	N	Y	Y	Y	N	—
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ETA02		20.07	N		5.92	17:23	Y	N	Y	Y	Y	N	—
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ETA03		20.22	N		7.12	17:25	Y	N	Y	Y	Y	N	—
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APPENDIX E
COMMENT LETTER AND RESPONSE TO COMMENTS



Matthew Rodriguez
Secretary for
Environmental Protection



Department of Toxic Substances Control

Barbara A. Lee, Director
700 Heinz Avenue
Berkeley, California 94710-2721



Edmund G. Brown Jr.
Governor

September 25, 2015

Mr. Greg Haet
EH&S Associate Director, Environmental Protection
Office of Environment, Health & Safety
University of California, Berkeley
University Hall, 3rd Floor, #1150
Berkeley, California 94720

Dear Mr. Haet:

The Department of Toxic Substances Control (DTSC) received the *Draft 2015 Groundwater Sampling Results Technical Memorandum* (Memorandum), dated July 24, 2015, for the Richmond Field Station Site (also known as the Berkeley Global Campus at Richmond Bay) located at 1301 South 46th Street, Richmond, California. The Memorandum was prepared by Tetra Tech, Inc. on behalf of the Regents of the University of California, and presents the results of annual groundwater monitoring and maintenance conducted during the October 2014 to June 2015 time period. Specifically, groundwater water level measurements were collected in October 2014 and April 2015, and groundwater sampling was conducted in April 2015.

In October 2014, depth to water measurements was collected from both shallow and deep piezometers. In April 2015, water levels were measured, and included four new piezometers installed near the biologically active permeable barrier. Groundwater samples were collected in April 2015. DTSC has reviewed the report and has the following comments:

1. Section 2.0 Field Activities: The first paragraph of this section states that in October 2014, depth-to-water measures were collected from 50 shallow piezometers and four deep piezometers, whereas Section 2.1 states that depth to water was collected in 47 shallow and four deep piezometers. Table 2: Groundwater Elevation Data does not identify that any wells were measured in October 2014. In addition, the second paragraph of Section 2.0 states that 40 locations were sampled in April 2015; however, only 39 sample locations are identified in Table 1 (Groundwater Sampling Registry). Please resolve these discrepancies.

Mr. Greg Haet
September 25, 2015
Page 2

2. Figure 17, Carbon Tetrachloride Groundwater Concentrations: Include the carbon tetrachloride concentrations for location B195 to the figure.
3. Include a copy of the field log used to document the water level measurements.

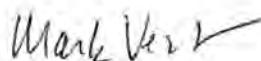
Please submit a report within 30-days addressing these revisions.

If you have any questions, please contact Lynn Nakashima at lynn.nakashima@dtsc.ca.gov or (510) 540-3839.

Sincerely,



Lynn Nakashima, Project Manager
Senior Hazardous Substances Scientist
Brownfields and Environmental
Restoration Program
Berkeley Office - Cleanup Operations



Mark Vest, P.G.
Senior Engineering Geologist
Brownfields and Environmental
Restoration Program
Sacramento Office - Geologic Services

cc: Karl Hans
University of California, Berkeley
Environmental Health & Safety
317 University Hall, No 1150
Berkeley, California 94720

Jason Brodersen
Tetra Tech EM Inc.
1999 Harrison Street, Suite 500
Oakland, CA 94612

Draft 2015 Groundwater Sampling Results Technical Memorandum
University of California, Richmond Field Station
July 24, 2015

Response to Comments
Department of Toxic Substances Control
September 25, 2015

October 15, 2015

Page 1 of 1

UC Berkeley Ref. No.	Page / Sect No.	DTSC Comment No.	DTSC Comment	UC Berkeley Response
LN 1	Section 2.0	1	The first paragraph of this section states that in October 2014, depth-to-water measures were collected from 50 shallow piezometers and four deep piezometers, whereas Section 2.1 states that depth to water was collected in 47 shallow and four deep piezometers. Table 2: Groundwater Elevation Data does not identify that any wells were measured in October 2014. In addition, the second paragraph of Section 2.0 states that 40 locations were sampled in April 2015; however, only 39 sample locations are identified in Table 1 (Groundwater Sampling Registry). Please resolve these discrepancies.	The text in Section 2.1 has been revised to indicate that depth-to-water measurements were completed at all 50 shallow piezometers and four deep piezometers. Text was deleted from Section 2.1 which previously differentiated between the 47 shallow piezometers installed during Phase I and the three piezometers installed prior to Phase I activities (for a total of 50). Table 2 has been updated to include the October 2014 water level measurements. Table 1 has been updated to include a row for piezometer B120, which was previously missing. Table 4 has also been updated to include the sampling date for piezometer B120.
LN 2	Figure 17	2	Include the carbon tetrachloride concentrations for location B195 to the figure.	Following clarification from DTSC, B195 was inadvertently identified in the comment letter – no revisions are necessary to Figure 17.
LN 3		3	Include a copy of the field log used to document the water level measurements.	The water level measurements field logs have been added as Appendix D.

ATTACHMENT 1
CURTIS & TOMPKINS, LTD. LABORATORY REPORTS

(Provided on CD only)



ct Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266019

ANALYTICAL REPORT

Volatile Organics by GC/MS

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

<u>Sample ID</u>	<u>Lab ID</u>
20150410TB	266019-001
20150410B185	266019-002
20150410B178	266019-003
20150410B120	266019-004
20150410TP1	266019-005
20150410TP2	266019-006
20150410TP2D	266019-007

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 04/24/2015

Will S Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

**CASE NARRATIVE
VOLATILE ORGANICS BY GC/MS (EPA 8260B)**

Laboratory number: 266019
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/10/15
Samples Received: 04/10/15

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 04/10/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Volatile Organics by GC/MS (EPA 8260B):

High responses were observed for 2,2-dichloropropane and vinyl acetate in the CCV analyzed 04/18/15 13:20; these analytes were not detected at or above the RL in the associated samples, and affected data was qualified with "b".

Low response was observed for tert-butyl alcohol (TBA) in the CCV analyzed 04/15/15 09:09; this analyte met minimum response criteria, and affected data was qualified with "b". High response was observed for bromomethane; affected data was qualified with "b".

High response was observed for bromomethane in the CCV analyzed 04/16/15 07:39; this analyte was not detected at or above the RL in the associated samples, and affected data was qualified with "b".

High recoveries were observed for vinyl acetate in the BS/BSD for batch 222382; the associated RPD was within limits, and this analyte was not detected at or above the RL in the associated sample.

High recoveries were observed for chloroethane in the MS/MSD of 20150410TP1 (lab # 266019-005); the BS/BSD were within limits, the associated RPD was within limits, and this analyte was not detected at or above the RL in the associated sample.

High surrogate recovery was observed for bromofluorobenzene in 20150410B178 (lab # 266019-003).

1,3-dichlorobenzene, 1,4-dichlorobenzene, and 1,2,4-trichlorobenzene were detected between the MDL and the RL in the method blank for batch 222234; these analytes were not detected in samples at or above the RL.

1,4-dichlorobenzene was detected between the MDL and the RL in the method blank for batch 222274; this analyte was not detected in the sample at or above the RL.

N-butylbenzene was detected between the MDL and the RL in the method blank for batch 222382; this analyte was not detected in the sample at or above the

**CASE NARRATIVE
VOLATILE ORGANICS BY GC/MS (EPA 8260B)**

Laboratory number: 266019
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/10/15
Samples Received: 04/10/15

Volatile Organics by GC/MS (EPA 8260B):

RL.

No other analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record No. 6087

Project name: Phase 2	Lab: C+T	No./Container Types		Preservative Added	
2015 GROUNDWATER	TIEMI technical contact: SARA WOLLEY	Field samplers: DAYNA ARAÇON QUINN JOHNSON	40 ml VOA	VOA	
Project (CTO) number: 103S225323.05	TIEMI project manager: JASON BRUDERSEN	Field samplers' signatures: <i>[Signature]</i>	1 liter Amber	SVOA	
Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD
20150410TB		4/10/15	0930	WATER	3
20150410B185			1050		3
20150410B178			1201		3
20150410B120			1240		3
20150410TP1			1328		3
20150410TP2			1421		3
20150410TP2D			1425		3

Relinquished by: <i>[Signature]</i>	Name (print): Dayna Aragon	Company Name: Tetra Tech	Date: 4/10/15	Time: 1517
Received by: <i>[Signature]</i>	Pat Gonzalez	C&T	4/10/15	1519
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:

Fed Ex #: **hand delivered**

COOLER RECEIPT CHECKLIST



Login # 2166019 Date Received 4/10/15 Number of coolers 1
Client Tetra Tech Project 2015 Groundwater

Date Opened 4/10 By (print) SL (sign) [Signature]
Date Logged in 4/10 By (print) IF (sign) [Signature]

- 1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
Shipping info
2A. Were custody seals present? ... YES (circle) on cooler on samples X NO
How many Name Date
2B. Were custody seals intact upon arrival? YES NO N/A
3. Were custody papers dry and intact when received? YES NO
4. Were custody papers filled out properly (ink, signed, etc)? YES NO
5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO
6. Indicate the packing in cooler: (if other, describe)
Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels
7. Temperature documentation: * Notify PM if temperature exceeds 6°C
Type of ice used: X Wet, Blue/Gel, None Temp(°C)
Samples Received on ice & cold without a temperature blank; temp. taken with IR gun
Samples received on ice directly from the field. Cooling process had begun
8. Were Method 5035 sampling containers present? YES (NO)
If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? YES NO
10. Are there any missing / extra samples? YES NO
11. Are samples in the appropriate containers for indicated tests? YES NO
12. Are sample labels present, in good condition and complete? YES NO
13. Do the sample labels agree with custody papers? YES NO
14. Was sufficient amount of sample sent for tests requested? YES NO
15. Are the samples appropriately preserved? YES NO N/A
16. Did you check preservatives for all bottles for each sample? YES NO N/A
17. Did you document your preservative check? YES NO N/A
18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A
19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A
20. Are bubbles > 6mm absent in VOA samples? YES NO N/A
21. Was the client contacted concerning this sample delivery? YES (NO)
If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 266019

Sample	pH: <2	>9	>12	Other
-003a	[]	[]	[]	_____
b	[]	[]	[]	_____
c	[]	[]	[]	_____
d	[]	[]	[]	_____
-005a	[]	[]	[]	_____
b	[]	[]	[]	_____
c	[]	[]	[]	_____
d	[]	[]	[]	_____
e	[]	[]	[]	_____
f	[]	[]	[]	_____
g	[]	[]	[]	_____
h	[]	[]	[]	_____
i	[]	[]	[]	_____
j	[]	[]	[]	_____
k	[]	[]	[]	_____
l	[]	[]	[]	_____

Analyst: *W. Curtis*
 Date: _____

Results & QC Summary

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TB	Batch#:	222234
Lab ID:	266019-001	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/14/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TB	Batch#:	222234
Lab ID:	266019-001	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/14/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	101	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410B185	Units:	ug/L
Lab ID:	266019-002	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Analyzed
Freon 12	ND	1.0	0.1	1.000	222234	04/14/15
Chloromethane	ND	1.0	0.1	1.000	222234	04/14/15
Vinyl Chloride	0.3 J	0.5	0.1	1.000	222234	04/14/15
Bromomethane	ND	1.0	0.2	1.000	222234	04/14/15
Chloroethane	ND	1.0	0.3	1.000	222234	04/14/15
Trichlorofluoromethane	ND	1.0	0.2	1.000	222234	04/14/15
Acetone	ND	10	3.3	1.000	222234	04/14/15
Freon 113	ND	2.0	0.1	1.000	222234	04/14/15
1,1-Dichloroethene	0.4 J	0.5	0.1	1.000	222234	04/14/15
Methylene Chloride	ND	10	0.4	1.000	222234	04/14/15
Carbon Disulfide	ND	0.5	0.1	1.000	222234	04/14/15
MTBE	0.2 J	0.5	0.1	1.000	222234	04/14/15
trans-1,2-Dichloroethene	0.2 J	0.5	0.2	1.000	222234	04/14/15
Vinyl Acetate	ND	10	1.0	1.000	222234	04/14/15
1,1-Dichloroethane	ND	0.5	0.1	1.000	222234	04/14/15
2-Butanone	ND	10	0.5	1.000	222234	04/14/15
cis-1,2-Dichloroethene	2.0	0.5	0.1	1.000	222234	04/14/15
2,2-Dichloropropane	ND	0.5	0.1	1.000	222234	04/14/15
Chloroform	3.7	0.5	0.1	1.000	222234	04/14/15
Bromochloromethane	ND	0.5	0.2	1.000	222234	04/14/15
1,1,1-Trichloroethane	ND	0.5	0.1	1.000	222234	04/14/15
1,1-Dichloropropene	ND	0.5	0.1	1.000	222234	04/14/15
Carbon Tetrachloride	8.2	0.5	0.1	1.000	222234	04/14/15
1,2-Dichloroethane	1.8	0.5	0.1	1.000	222234	04/14/15
Benzene	0.2 J	0.5	0.1	1.000	222234	04/14/15
Trichloroethene	72	1.0	0.2	2.000	222274	04/15/15
1,2-Dichloropropane	ND	0.5	0.1	1.000	222234	04/14/15
Bromodichloromethane	ND	0.5	0.1	1.000	222234	04/14/15
Dibromomethane	ND	0.5	0.1	1.000	222234	04/14/15
4-Methyl-2-Pentanone	ND	10	0.5	1.000	222234	04/14/15
cis-1,3-Dichloropropene	ND	0.5	0.1	1.000	222234	04/14/15
Toluene	ND	0.5	0.1	1.000	222234	04/14/15
trans-1,3-Dichloropropene	ND	0.5	0.1	1.000	222234	04/14/15
1,1,2-Trichloroethane	ND	0.5	0.1	1.000	222234	04/14/15
2-Hexanone	ND	10	0.5	1.000	222234	04/14/15
1,3-Dichloropropane	ND	0.5	0.1	1.000	222234	04/14/15
Tetrachloroethene	0.6	0.5	0.1	1.000	222234	04/14/15
Dibromochloromethane	ND	0.5	0.1	1.000	222234	04/14/15
1,2-Dibromoethane	ND	0.5	0.1	1.000	222234	04/14/15
Chlorobenzene	1.7	0.5	0.1	1.000	222234	04/14/15
1,1,1,2-Tetrachloroethane	ND	0.5	0.1	1.000	222234	04/14/15
Ethylbenzene	ND	0.5	0.1	1.000	222234	04/14/15
m,p-Xylenes	ND	0.5	0.1	1.000	222234	04/14/15
o-Xylene	ND	0.5	0.1	1.000	222234	04/14/15
Styrene	ND	0.5	0.1	1.000	222234	04/14/15
Bromoform	ND	1.0	0.1	1.000	222234	04/14/15
Isopropylbenzene	ND	0.5	0.1	1.000	222234	04/14/15
1,1,2,2-Tetrachloroethane	ND	0.5	0.1	1.000	222234	04/14/15
1,2,3-Trichloropropane	ND	0.5	0.1	1.000	222234	04/14/15
Propylbenzene	ND	0.5	0.1	1.000	222234	04/14/15
Bromobenzene	ND	0.5	0.1	1.000	222234	04/14/15
1,3,5-Trimethylbenzene	ND	0.5	0.1	1.000	222234	04/14/15
2-Chlorotoluene	ND	0.5	0.1	1.000	222234	04/14/15
4-Chlorotoluene	ND	0.5	0.1	1.000	222234	04/14/15

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410B185	Units:	ug/L
Lab ID:	266019-002	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Analyzed
tert-Butylbenzene	ND	0.5	0.1	1.000	222234	04/14/15
1,2,4-Trimethylbenzene	ND	0.5	0.1	1.000	222234	04/14/15
sec-Butylbenzene	ND	0.5	0.1	1.000	222234	04/14/15
para-Isopropyl Toluene	ND	0.5	0.1	1.000	222234	04/14/15
1,3-Dichlorobenzene	ND	0.5	0.1	1.000	222234	04/14/15
1,4-Dichlorobenzene	ND	0.5	0.1	1.000	222234	04/14/15
n-Butylbenzene	ND	0.5	0.1	1.000	222234	04/14/15
1,2-Dichlorobenzene	ND	0.5	0.1	1.000	222234	04/14/15
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5	1.000	222234	04/14/15
1,2,4-Trichlorobenzene	ND	0.5	0.1	1.000	222234	04/14/15
Hexachlorobutadiene	ND	2.0	0.4	1.000	222234	04/14/15
Naphthalene	ND	2.0	0.1	1.000	222234	04/14/15
1,2,3-Trichlorobenzene	ND	0.5	0.1	1.000	222234	04/14/15
tert-Butyl Alcohol (TBA)	ND	10	2.1	1.000	222234	04/14/15
Isopropyl Ether (DIPE)	ND	0.5	0.1	1.000	222234	04/14/15
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1	1.000	222234	04/14/15
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1	1.000	222234	04/14/15

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	104	80-128	1.000	222234	04/14/15
1,2-Dichloroethane-d4	95	75-139	1.000	222234	04/14/15
Toluene-d8	100	80-120	1.000	222234	04/14/15
Bromofluorobenzene	103	80-120	1.000	222234	04/14/15

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410B178	Batch#:	222382
Lab ID:	266019-003	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/18/15
Diln Fac:	2.000		

Analyte	Result	RL	MDL
Freon 12	ND	2.0	0.3
Chloromethane	ND	2.0	0.3
Vinyl Chloride	ND	1.0	0.3
Bromomethane	ND	2.0	0.4
Chloroethane	ND	2.0	0.4
Trichlorofluoromethane	ND	2.0	0.2
Acetone	ND	20	6.6
Freon 113	ND	4.0	0.3
1,1-Dichloroethene	0.4 J	1.0	0.2
Methylene Chloride	ND	20	0.2
Carbon Disulfide	ND	1.0	0.2
MTBE	ND	1.0	0.2
trans-1,2-Dichloroethene	0.4 J	1.0	0.3
Vinyl Acetate	ND	20	0.3
1,1-Dichloroethane	ND	1.0	0.2
2-Butanone	ND	20	0.8
cis-1,2-Dichloroethene	4.8	1.0	0.2
2,2-Dichloropropane	ND	1.0	0.3
Chloroform	ND	1.0	0.2
Bromochloromethane	ND	1.0	0.2
1,1,1-Trichloroethane	ND	1.0	0.3
1,1-Dichloropropene	ND	1.0	0.2
Carbon Tetrachloride	ND	1.0	0.2
1,2-Dichloroethane	0.5 J	1.0	0.2
Benzene	ND	1.0	0.2
Trichloroethene	130	1.0	0.2
1,2-Dichloropropane	ND	1.0	0.2
Bromodichloromethane	ND	1.0	0.2
Dibromomethane	ND	1.0	0.2
4-Methyl-2-Pentanone	ND	20	0.2
cis-1,3-Dichloropropene	ND	1.0	0.2
Toluene	ND	1.0	0.2
trans-1,3-Dichloropropene	ND	1.0	0.2
1,1,2-Trichloroethane	ND	1.0	0.2
2-Hexanone	ND	20	0.3
1,3-Dichloropropane	ND	1.0	0.2
Tetrachloroethene	0.4 J	1.0	0.2
Dibromochloromethane	ND	1.0	0.2
1,2-Dibromoethane	ND	1.0	0.2
Chlorobenzene	ND	1.0	0.2
1,1,1,2-Tetrachloroethane	ND	1.0	0.2
Ethylbenzene	ND	1.0	0.2
m,p-Xylenes	ND	1.0	0.3
o-Xylene	ND	1.0	0.3
Styrene	ND	1.0	0.2
Bromoform	ND	2.0	0.3
Isopropylbenzene	ND	1.0	0.2
1,1,2,2-Tetrachloroethane	ND	1.0	0.2
1,2,3-Trichloropropane	ND	1.0	0.2
Propylbenzene	ND	1.0	0.2
Bromobenzene	ND	1.0	0.2

*= Value outside of QC limits; see narrative

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410B178	Batch#:	222382
Lab ID:	266019-003	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/18/15
Diln Fac:	2.000		

Analyte	Result	RL	MDL
1,3,5-Trimethylbenzene	ND	1.0	0.3
2-Chlorotoluene	ND	1.0	0.3
4-Chlorotoluene	ND	1.0	0.2
tert-Butylbenzene	ND	1.0	0.2
1,2,4-Trimethylbenzene	ND	1.0	0.3
sec-Butylbenzene	ND	1.0	0.2
para-Isopropyl Toluene	ND	1.0	0.2
1,3-Dichlorobenzene	ND	1.0	0.3
1,4-Dichlorobenzene	ND	1.0	0.2
n-Butylbenzene	ND	1.0	0.2
1,2-Dichlorobenzene	ND	1.0	0.2
1,2-Dibromo-3-Chloropropane	ND	4.0	0.7
1,2,4-Trichlorobenzene	ND	1.0	0.2
Hexachlorobutadiene	ND	4.0	0.4
Naphthalene	ND	4.0	0.2
1,2,3-Trichlorobenzene	ND	1.0	0.2
tert-Butyl Alcohol (TBA)	ND	20	2.7
Isopropyl Ether (DIPE)	ND	1.0	0.2
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	0.2
Methyl tert-Amyl Ether (TAME)	ND	1.0	0.2

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	110	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	121 *	80-120

*= Value outside of QC limits; see narrative
 J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410B120	Units:	ug/L
Lab ID:	266019-004	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Analyzed
Freon 12	ND	1.0	0.1	1.000	222308	04/16/15
Chloromethane	ND	1.0	0.1	1.000	222308	04/16/15
Vinyl Chloride	ND	0.5	0.1	1.000	222308	04/16/15
Bromomethane	ND	1.0	0.2	1.000	222308	04/16/15
Chloroethane	ND	1.0	0.3	1.000	222308	04/16/15
Trichlorofluoromethane	ND	1.0	0.2	1.000	222308	04/16/15
Acetone	ND	10	3.3	1.000	222308	04/16/15
Freon 113	ND	2.0	0.1	1.000	222308	04/16/15
1,1-Dichloroethene	0.4 J	0.5	0.1	1.000	222308	04/16/15
Methylene Chloride	ND	10	0.4	1.000	222308	04/16/15
Carbon Disulfide	ND	0.5	0.1	1.000	222308	04/16/15
MTBE	0.1 J	0.5	0.1	1.000	222308	04/16/15
trans-1,2-Dichloroethene	0.5 J	0.5	0.2	1.000	222308	04/16/15
Vinyl Acetate	ND	10	1.0	1.000	222308	04/16/15
1,1-Dichloroethane	ND	0.5	0.1	1.000	222308	04/16/15
2-Butanone	ND	10	0.5	1.000	222308	04/16/15
cis-1,2-Dichloroethene	4.5	0.5	0.1	1.000	222308	04/16/15
2,2-Dichloropropane	ND	0.5	0.1	1.000	222308	04/16/15
Chloroform	0.2 J	0.5	0.1	1.000	222308	04/16/15
Bromochloromethane	ND	0.5	0.2	1.000	222308	04/16/15
1,1,1-Trichloroethane	ND	0.5	0.1	1.000	222308	04/16/15
1,1-Dichloropropene	ND	0.5	0.1	1.000	222308	04/16/15
Carbon Tetrachloride	ND	0.5	0.1	1.000	222308	04/16/15
1,2-Dichloroethane	0.6	0.5	0.1	1.000	222308	04/16/15
Benzene	ND	0.5	0.1	1.000	222308	04/16/15
Trichloroethene	140	1.0	0.2	2.000	222354	04/17/15
1,2-Dichloropropane	ND	0.5	0.1	1.000	222308	04/16/15
Bromodichloromethane	ND	0.5	0.1	1.000	222308	04/16/15
Dibromomethane	ND	0.5	0.1	1.000	222308	04/16/15
4-Methyl-2-Pentanone	ND	10	0.5	1.000	222308	04/16/15
cis-1,3-Dichloropropene	ND	0.5	0.1	1.000	222308	04/16/15
Toluene	ND	0.5	0.1	1.000	222308	04/16/15
trans-1,3-Dichloropropene	ND	0.5	0.1	1.000	222308	04/16/15
1,1,2-Trichloroethane	ND	0.5	0.1	1.000	222308	04/16/15
2-Hexanone	ND	10	0.5	1.000	222308	04/16/15
1,3-Dichloropropane	ND	0.5	0.1	1.000	222308	04/16/15
Tetrachloroethene	0.7	0.5	0.1	1.000	222308	04/16/15
Dibromochloromethane	ND	0.5	0.1	1.000	222308	04/16/15
1,2-Dibromoethane	ND	0.5	0.1	1.000	222308	04/16/15
Chlorobenzene	0.1 J	0.5	0.1	1.000	222308	04/16/15
1,1,1,2-Tetrachloroethane	ND	0.5	0.1	1.000	222308	04/16/15
Ethylbenzene	ND	0.5	0.1	1.000	222308	04/16/15
m,p-Xylenes	ND	0.5	0.1	1.000	222308	04/16/15
o-Xylene	ND	0.5	0.1	1.000	222308	04/16/15
Styrene	ND	0.5	0.1	1.000	222308	04/16/15
Bromoform	ND	1.0	0.1	1.000	222308	04/16/15
Isopropylbenzene	ND	0.5	0.1	1.000	222308	04/16/15
1,1,2,2-Tetrachloroethane	ND	0.5	0.1	1.000	222308	04/16/15
1,2,3-Trichloropropane	ND	0.5	0.1	1.000	222308	04/16/15
Propylbenzene	ND	0.5	0.1	1.000	222308	04/16/15
Bromobenzene	ND	0.5	0.1	1.000	222308	04/16/15
1,3,5-Trimethylbenzene	ND	0.5	0.1	1.000	222308	04/16/15
2-Chlorotoluene	ND	0.5	0.1	1.000	222308	04/16/15
4-Chlorotoluene	ND	0.5	0.1	1.000	222308	04/16/15

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410B120	Units:	ug/L
Lab ID:	266019-004	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Analyzed
tert-Butylbenzene	ND	0.5	0.1	1.000	222308	04/16/15
1,2,4-Trimethylbenzene	ND	0.5	0.1	1.000	222308	04/16/15
sec-Butylbenzene	ND	0.5	0.1	1.000	222308	04/16/15
para-Isopropyl Toluene	ND	0.5	0.1	1.000	222308	04/16/15
1,3-Dichlorobenzene	ND	0.5	0.1	1.000	222308	04/16/15
1,4-Dichlorobenzene	ND	0.5	0.1	1.000	222308	04/16/15
n-Butylbenzene	ND	0.5	0.1	1.000	222308	04/16/15
1,2-Dichlorobenzene	ND	0.5	0.1	1.000	222308	04/16/15
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5	1.000	222308	04/16/15
1,2,4-Trichlorobenzene	ND	0.5	0.1	1.000	222308	04/16/15
Hexachlorobutadiene	ND	2.0	0.4	1.000	222308	04/16/15
Naphthalene	ND	2.0	0.1	1.000	222308	04/16/15
1,2,3-Trichlorobenzene	ND	0.5	0.1	1.000	222308	04/16/15
tert-Butyl Alcohol (TBA)	ND	10	2.1	1.000	222308	04/16/15
Isopropyl Ether (DIPE)	ND	0.5	0.1	1.000	222308	04/16/15
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1	1.000	222308	04/16/15
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1	1.000	222308	04/16/15

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	106	80-128	1.000	222308	04/16/15
1,2-Dichloroethane-d4	98	75-139	1.000	222308	04/16/15
Toluene-d8	99	80-120	1.000	222308	04/16/15
Bromofluorobenzene	105	80-120	1.000	222308	04/16/15

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TPI	Batch#:	222354
Lab ID:	266019-005	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	0.1 J	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	0.4 J	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	4.7	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	0.2 J	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TP1	Batch#:	222354
Lab ID:	266019-005	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TP2	Batch#:	222321
Lab ID:	266019-006	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	0.7	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	29	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	0.5	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TP2	Batch#:	222321
Lab ID:	266019-006	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	99	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	108	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TP2D	Batch#:	222321
Lab ID:	266019-007	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	0.7	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	28	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	0.5	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TP2D	Batch#:	222321
Lab ID:	266019-007	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	99	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	107	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222234
Units:	ug/L	Analyzed:	04/14/15
Diln Fac:	1.000		

Type: BS Lab ID: QC784199

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	9.012	90	45-131
Chloromethane	10.00	10.51	105	48-133
Vinyl Chloride	10.00	10.97	110	63-132
Bromomethane	10.00	8.362	84	38-161
Chloroethane	10.00	10.62	106	62-131
Trichlorofluoromethane	10.00	9.553	96	64-137
Acetone	12.50	8.539	68	46-151
Freon 113	12.50	12.10	97	61-138
1,1-Dichloroethene	12.50	12.82	103	66-135
Methylene Chloride	12.50	13.29	106	74-131
Carbon Disulfide	12.50	14.30	114	63-150
MTBE	12.50	11.70	94	65-120
trans-1,2-Dichloroethene	12.50	13.24	106	72-134
Vinyl Acetate	12.50	18.85	151	60-194
1,1-Dichloroethane	12.50	12.30	98	68-127
2-Butanone	12.50	9.888	79	50-141
cis-1,2-Dichloroethene	12.50	13.33	107	73-129
2,2-Dichloropropane	12.50	14.18	113	72-146
Chloroform	12.50	12.85	103	73-126
Bromochloromethane	12.50	14.07	113	78-127
1,1,1-Trichloroethane	12.50	12.78	102	72-134
1,1-Dichloropropene	12.50	11.96	96	79-135
Carbon Tetrachloride	12.50	12.67	101	72-142
1,2-Dichloroethane	12.50	11.43	91	74-133
Benzene	12.50	13.10	105	80-123
Trichloroethene	12.50	12.06	96	80-123
1,2-Dichloropropane	12.50	11.91	95	74-120
Bromodichloromethane	12.50	12.07	97	79-121
Dibromomethane	12.50	12.05	96	80-120
4-Methyl-2-Pentanone	12.50	9.741	78	57-129
cis-1,3-Dichloropropene	12.50	12.56	100	80-130
Toluene	12.50	13.13	105	80-121
trans-1,3-Dichloropropene	12.50	11.31	90	76-122
1,1,2-Trichloroethane	12.50	11.90	95	80-120
2-Hexanone	12.50	9.174	73	49-136
1,3-Dichloropropane	12.50	12.22	98	80-120
Tetrachloroethene	12.50	13.50	108	78-130
Dibromochloromethane	12.50	12.47	100	80-123
1,2-Dibromoethane	12.50	12.03	96	80-120
Chlorobenzene	12.50	13.10	105	80-123
1,1,1,2-Tetrachloroethane	12.50	12.58	101	80-124
Ethylbenzene	12.50	12.94	104	80-123
m,p-Xylenes	25.00	27.01	108	80-126
o-Xylene	12.50	13.16	105	80-126
Styrene	12.50	12.92	103	80-122
Bromoform	12.50	12.76	102	72-132
Isopropylbenzene	12.50	13.49	108	79-130
1,1,2,2-Tetrachloroethane	12.50	11.85	95	72-129
1,2,3-Trichloropropane	12.50	11.62	93	72-124
Propylbenzene	12.50	13.13	105	79-128
Bromobenzene	12.50	13.77	110	80-122
1,3,5-Trimethylbenzene	12.50	13.59	109	80-129

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222234
Units:	ug/L	Analyzed:	04/14/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
2-Chlorotoluene	12.50	13.12	105	80-130
4-Chlorotoluene	12.50	12.91	103	79-125
tert-Butylbenzene	12.50	13.47	108	79-130
1,2,4-Trimethylbenzene	12.50	13.10	105	78-124
sec-Butylbenzene	12.50	13.32	107	79-134
para-Isopropyl Toluene	12.50	13.05	104	74-125
1,3-Dichlorobenzene	12.50	13.63	109	80-124
1,4-Dichlorobenzene	12.50	13.26	106	80-121
n-Butylbenzene	12.50	12.38	99	69-135
1,2-Dichlorobenzene	12.50	13.21	106	80-123
1,2-Dibromo-3-Chloropropane	12.50	9.067	73	59-125
1,2,4-Trichlorobenzene	12.50	12.49	100	66-133
Hexachlorobutadiene	12.50	13.25	106	70-152
Naphthalene	12.50	10.93	87	53-139
1,2,3-Trichlorobenzene	12.50	12.20	98	64-134
tert-Butyl Alcohol (TBA)	62.50	40.46	65	32-155
Isopropyl Ether (DIPE)	12.50	12.03	96	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	11.79	94	62-120
Methyl tert-Amyl Ether (TAME)	12.50	11.07	89	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-128
1,2-Dichloroethane-d4	90	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-120

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222234
Units:	ug/L	Analyzed:	04/14/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC784200

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	9.012	90	45-131	0	29
Chloromethane	10.00	9.776	98	48-133	7	25
Vinyl Chloride	10.00	10.58	106	63-132	4	23
Bromomethane	10.00	7.313	73	38-161	13	32
Chloroethane	10.00	10.38	104	62-131	2	24
Trichlorofluoromethane	10.00	9.277	93	64-137	3	23
Acetone	12.50	8.507	68	46-151	0	29
Freon 113	12.50	11.90	95	61-138	2	25
1,1-Dichloroethene	12.50	12.33	99	66-135	4	24
Methylene Chloride	12.50	13.22	106	74-131	1	21
Carbon Disulfide	12.50	13.77	110	63-150	4	25
MTBE	12.50	11.99	96	65-120	2	22
trans-1,2-Dichloroethene	12.50	13.23	106	72-134	0	22
Vinyl Acetate	12.50	18.96	152	60-194	1	25
1,1-Dichloroethane	12.50	12.37	99	68-127	1	21
2-Butanone	12.50	9.908	79	50-141	0	24
cis-1,2-Dichloroethene	12.50	13.05	104	73-129	2	20
2,2-Dichloropropane	12.50	14.07	113	72-146	1	24
Chloroform	12.50	12.77	102	73-126	1	20
Bromochloromethane	12.50	14.07	113	78-127	0	20
1,1,1-Trichloroethane	12.50	12.62	101	72-134	1	22
1,1-Dichloropropene	12.50	12.02	96	79-135	0	23
Carbon Tetrachloride	12.50	12.30	98	72-142	3	22
1,2-Dichloroethane	12.50	11.30	90	74-133	1	20
Benzene	12.50	12.92	103	80-123	1	20
Trichloroethene	12.50	11.75	94	80-123	3	20
1,2-Dichloropropane	12.50	11.64	93	74-120	2	20
Bromodichloromethane	12.50	11.93	95	79-121	1	20
Dibromomethane	12.50	12.01	96	80-120	0	20
4-Methyl-2-Pentanone	12.50	9.977	80	57-129	2	23
cis-1,3-Dichloropropene	12.50	12.12	97	80-130	4	20
Toluene	12.50	13.02	104	80-121	1	20
trans-1,3-Dichloropropene	12.50	11.01	88	76-122	3	20
1,1,2-Trichloroethane	12.50	11.88	95	80-120	0	20
2-Hexanone	12.50	9.611	77	49-136	5	24
1,3-Dichloropropane	12.50	12.28	98	80-120	1	20
Tetrachloroethene	12.50	13.18	105	78-130	2	21
Dibromochloromethane	12.50	12.42	99	80-123	0	20
1,2-Dibromoethane	12.50	12.07	97	80-120	0	20
Chlorobenzene	12.50	12.92	103	80-123	1	20
1,1,1,2-Tetrachloroethane	12.50	12.46	100	80-124	1	20
Ethylbenzene	12.50	12.80	102	80-123	1	21
m,p-Xylenes	25.00	26.34	105	80-126	3	21
o-Xylene	12.50	12.95	104	80-126	2	20
Styrene	12.50	12.77	102	80-122	1	20
Bromoform	12.50	12.82	103	72-132	0	20
Isopropylbenzene	12.50	12.98	104	79-130	4	21
1,1,2,2-Tetrachloroethane	12.50	12.17	97	72-129	3	20
1,2,3-Trichloropropane	12.50	11.46	92	72-124	1	22
Propylbenzene	12.50	12.48	100	79-128	5	21
Bromobenzene	12.50	13.40	107	80-122	3	20
1,3,5-Trimethylbenzene	12.50	13.04	104	80-129	4	20

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222234
Units:	ug/L	Analyzed:	04/14/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
2-Chlorotoluene	12.50	12.80	102	80-130	2	20
4-Chlorotoluene	12.50	12.54	100	79-125	3	20
tert-Butylbenzene	12.50	12.78	102	79-130	5	23
1,2,4-Trimethylbenzene	12.50	12.46	100	78-124	5	22
sec-Butylbenzene	12.50	12.37	99	79-134	7	23
para-Isopropyl Toluene	12.50	12.35	99	74-125	6	24
1,3-Dichlorobenzene	12.50	13.30	106	80-124	2	20
1,4-Dichlorobenzene	12.50	13.13	105	80-121	1	20
n-Butylbenzene	12.50	11.67	93	69-135	6	28
1,2-Dichlorobenzene	12.50	12.99	104	80-123	2	20
1,2-Dibromo-3-Chloropropane	12.50	9.396	75	59-125	4	23
1,2,4-Trichlorobenzene	12.50	11.69	94	66-133	7	24
Hexachlorobutadiene	12.50	11.67	93	70-152	13	26
Naphthalene	12.50	10.92	87	53-139	0	25
1,2,3-Trichlorobenzene	12.50	11.56	92	64-134	5	25
tert-Butyl Alcohol (TBA)	62.50	41.71	67	32-155	3	33
Isopropyl Ether (DIPE)	12.50	12.09	97	57-128	1	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.98	96	62-120	2	20
Methyl tert-Amyl Ether (TAME)	12.50	11.17	89	69-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	90	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784201	Batch#:	222234
Matrix:	Water	Analyzed:	04/14/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784201	Batch#:	222234
Matrix:	Water	Analyzed:	04/14/15
Units:	ug/L		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	0.1 J	0.5	0.1
1,4-Dichlorobenzene	0.1 J	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	0.1 J	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	92	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	222234
MSS Lab ID:	266002-005	Sampled:	04/09/15
Matrix:	Water	Received:	04/09/15
Units:	ug/L	Analyzed:	04/14/15
Diln Fac:	1.000		

Type: MS Lab ID: QC784237

Analyte	MSS Result	Spiked	Result	%REC	Limits
Freon 12	<0.1000	10.00	9.116	91	54-126
Chloromethane	<0.1000	10.00	10.94	109	54-121
Vinyl Chloride	<0.1000	10.00	10.99	110	66-126
Bromomethane	<0.2358	10.00	15.24	152	31-152
Chloroethane	<0.2518	10.00	10.98	110	69-126
Trichlorofluoromethane	<0.1912	10.00	9.729	97	71-132
Acetone	<3.300	12.50	10.30	82	47-129
Freon 113	<0.1308	12.50	11.90	95	67-127
1,1-Dichloroethene	<0.1147	12.50	12.84	103	73-129
Methylene Chloride	<0.4000	12.50	13.90	111	80-127
Carbon Disulfide	<0.1000	12.50	14.29	114	76-138
MTBE	<0.1000	12.50	12.79	102	71-120
trans-1,2-Dichloroethene	<0.1578	12.50	13.77	110	79-127
Vinyl Acetate	<1.003	12.50	16.82	135	62-173
1,1-Dichloroethane	<0.1000	12.50	13.00	104	77-123
2-Butanone	<0.5469	12.50	11.15	89	56-134
cis-1,2-Dichloroethene	<0.1159	12.50	13.76	110	74-126
2,2-Dichloropropane	<0.1000	12.50	12.55	100	69-130
Chloroform	<0.1000	12.50	13.51	108	80-123
Bromochloromethane	<0.1609	12.50	14.21	114	80-122
1,1,1-Trichloroethane	<0.1000	12.50	13.74	110	80-130
1,1-Dichloropropene	<0.1225	12.50	12.10	97	80-128
Carbon Tetrachloride	<0.1000	12.50	12.88	103	80-138
1,2-Dichloroethane	<0.1000	12.50	12.56	100	80-130
Benzene	<0.1000	12.50	13.59	109	80-120
Trichloroethene	0.1882	12.50	12.42	98	73-123
1,2-Dichloropropane	<0.1000	12.50	12.44	100	80-120
Bromodichloromethane	<0.1000	12.50	12.61	101	80-120
Dibromomethane	<0.1131	12.50	12.86	103	80-120
4-Methyl-2-Pentanone	<0.5044	12.50	11.26	90	67-130
cis-1,3-Dichloropropene	<0.1000	12.50	12.23	98	80-125
Toluene	<0.1000	12.50	13.35	107	80-120
trans-1,3-Dichloropropene	<0.1000	12.50	11.29	90	77-120
1,1,2-Trichloroethane	<0.1294	12.50	12.59	101	80-120
2-Hexanone	<0.5082	12.50	10.73	86	57-131
1,3-Dichloropropane	<0.1148	12.50	13.01	104	80-120
Tetrachloroethene	<0.1232	12.50	12.89	103	77-122
Dibromochloromethane	<0.1000	12.50	12.91	103	80-120
1,2-Dibromoethane	<0.1000	12.50	12.77	102	80-120
Chlorobenzene	<0.1000	12.50	13.20	106	80-120
1,1,1,2-Tetrachloroethane	<0.1383	12.50	13.09	105	80-120
Ethylbenzene	<0.1000	12.50	12.95	104	80-120
m,p-Xylenes	<0.1316	25.00	26.52	106	80-121
o-Xylene	<0.1000	12.50	13.08	105	80-120
Styrene	<0.1000	12.50	11.31	90	64-124
Bromoform	<0.1000	12.50	13.55	108	80-126
Isopropylbenzene	<0.1000	12.50	13.15	105	80-121
1,1,2,2-Tetrachloroethane	<0.1417	12.50	12.93	103	80-127
1,2,3-Trichloropropane	<0.1427	12.50	12.28	98	76-124
Propylbenzene	<0.1000	12.50	12.54	100	79-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	222234
MSS Lab ID:	266002-005	Sampled:	04/09/15
Matrix:	Water	Received:	04/09/15
Units:	ug/L	Analyzed:	04/14/15
Diln Fac:	1.000		

Analyte	MSS Result	Spiked	Result	%REC	Limits
Bromobenzene	<0.1000	12.50	13.60	109	80-120
1,3,5-Trimethylbenzene	<0.1000	12.50	12.87	103	80-121
2-Chlorotoluene	<0.1000	12.50	12.91	103	80-124
4-Chlorotoluene	<0.1000	12.50	12.60	101	80-120
tert-Butylbenzene	<0.1000	12.50	12.76	102	80-120
1,2,4-Trimethylbenzene	<0.1164	12.50	11.52	92	77-120
sec-Butylbenzene	<0.1000	12.50	12.27	98	79-123
para-Isopropyl Toluene	<0.1164	12.50	11.66	93	74-120
1,3-Dichlorobenzene	<0.1000	12.50	13.19	106	80-120
1,4-Dichlorobenzene	<0.1040	12.50	12.80	102	80-120
n-Butylbenzene	<0.1142	12.50	10.55	84	68-121
1,2-Dichlorobenzene	<0.1000	12.50	13.04	104	80-120
1,2-Dibromo-3-Chloropropane	<0.4962	12.50	10.57	85	67-125
1,2,4-Trichlorobenzene	<0.1123	12.50	10.63	85	68-120
Hexachlorobutadiene	<0.4449	12.50	11.14	89	73-127
Naphthalene	<0.1487	12.50	10.53	84	62-126
1,2,3-Trichlorobenzene	<0.1000	12.50	11.11	89	68-121
tert-Butyl Alcohol (TBA)	<2.072	62.50	49.22	79	49-155
Isopropyl Ether (DIPE)	<0.1000	12.50	12.76	102	65-122
Ethyl tert-Butyl Ether (ETBE)	<0.1000	12.50	12.50	100	69-120
Methyl tert-Amyl Ether (TAME)	<0.1000	12.50	11.85	95	74-120

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	96	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-120

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	222234
MSS Lab ID:	266002-005	Sampled:	04/09/15
Matrix:	Water	Received:	04/09/15
Units:	ug/L	Analyzed:	04/14/15
Diln Fac:	1.000		

Type: MSD Lab ID: QC784238

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	8.935	89	54-126	2	29
Chloromethane	10.00	10.87	109	54-121	1	27
Vinyl Chloride	10.00	11.04	110	66-126	0	24
Bromomethane	10.00	14.37	144	31-152	6	39
Chloroethane	10.00	10.84	108	69-126	1	29
Trichlorofluoromethane	10.00	9.461	95	71-132	3	24
Acetone	12.50	10.11	81	47-129	2	27
Freon 113	12.50	11.83	95	67-127	1	25
1,1-Dichloroethene	12.50	12.64	101	73-129	2	25
Methylene Chloride	12.50	13.54	108	80-127	3	21
Carbon Disulfide	12.50	13.91	111	76-138	3	24
MTBE	12.50	12.55	100	71-120	2	20
trans-1,2-Dichloroethene	12.50	13.41	107	79-127	3	23
Vinyl Acetate	12.50	16.12	129	62-173	4	24
1,1-Dichloroethane	12.50	12.80	102	77-123	2	22
2-Butanone	12.50	10.44	83	56-134	7	25
cis-1,2-Dichloroethene	12.50	13.44	108	74-126	2	21
2,2-Dichloropropane	12.50	12.03	96	69-130	4	29
Chloroform	12.50	13.34	107	80-123	1	22
Bromochloromethane	12.50	14.02	112	80-122	1	20
1,1,1-Trichloroethane	12.50	13.18	105	80-130	4	23
1,1-Dichloropropene	12.50	11.93	95	80-128	1	22
Carbon Tetrachloride	12.50	12.39	99	80-138	4	24
1,2-Dichloroethane	12.50	12.13	97	80-130	3	20
Benzene	12.50	13.02	104	80-120	4	20
Trichloroethene	12.50	11.83	93	73-123	5	20
1,2-Dichloropropane	12.50	11.98	96	80-120	4	20
Bromodichloromethane	12.50	12.37	99	80-120	2	20
Dibromomethane	12.50	12.49	100	80-120	3	20
4-Methyl-2-Pentanone	12.50	10.88	87	67-130	3	22
cis-1,3-Dichloropropene	12.50	11.88	95	80-125	3	20
Toluene	12.50	12.86	103	80-120	4	21
trans-1,3-Dichloropropene	12.50	10.91	87	77-120	3	20
1,1,2-Trichloroethane	12.50	13.34	107	80-120	6	20
2-Hexanone	12.50	11.12	89	57-131	4	24
1,3-Dichloropropane	12.50	12.76	102	80-120	2	20
Tetrachloroethene	12.50	12.65	101	77-122	2	22
Dibromochloromethane	12.50	12.73	102	80-120	1	20
1,2-Dibromoethane	12.50	12.42	99	80-120	3	20
Chlorobenzene	12.50	12.92	103	80-120	2	24
1,1,1,2-Tetrachloroethane	12.50	12.71	102	80-120	3	20
Ethylbenzene	12.50	12.61	101	80-120	3	25
m,p-Xylenes	25.00	26.10	104	80-121	2	23
o-Xylene	12.50	12.74	102	80-120	3	25
Styrene	12.50	11.21	90	64-124	1	22
Bromoform	12.50	13.35	107	80-126	1	20
Isopropylbenzene	12.50	12.99	104	80-121	1	27
1,1,2,2-Tetrachloroethane	12.50	12.66	101	80-127	2	20
1,2,3-Trichloropropane	12.50	11.85	95	76-124	4	22
Propylbenzene	12.50	12.30	98	79-120	2	23

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	222234
MSS Lab ID:	266002-005	Sampled:	04/09/15
Matrix:	Water	Received:	04/09/15
Units:	ug/L	Analyzed:	04/14/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Bromobenzene	12.50	13.52	108	80-120	1	22
1,3,5-Trimethylbenzene	12.50	12.73	102	80-121	1	23
2-Chlorotoluene	12.50	12.61	101	80-124	2	23
4-Chlorotoluene	12.50	12.43	99	80-120	1	21
tert-Butylbenzene	12.50	12.60	101	80-120	1	25
1,2,4-Trimethylbenzene	12.50	11.37	91	77-120	1	23
sec-Butylbenzene	12.50	12.03	96	79-123	2	24
para-Isopropyl Toluene	12.50	11.25	90	74-120	4	22
1,3-Dichlorobenzene	12.50	13.16	105	80-120	0	20
1,4-Dichlorobenzene	12.50	12.74	102	80-120	0	20
n-Butylbenzene	12.50	10.05	80	68-121	5	22
1,2-Dichlorobenzene	12.50	12.93	103	80-120	1	20
1,2-Dibromo-3-Chloropropane	12.50	9.975	80	67-125	6	28
1,2,4-Trichlorobenzene	12.50	10.88	87	68-120	2	21
Hexachlorobutadiene	12.50	11.08	89	73-127	1	25
Naphthalene	12.50	10.62	85	62-126	1	25
1,2,3-Trichlorobenzene	12.50	11.26	90	68-121	1	22
tert-Butyl Alcohol (TBA)	62.50	47.10	75	49-155	4	33
Isopropyl Ether (DIPE)	12.50	12.43	99	65-122	3	22
Ethyl tert-Butyl Ether (ETBE)	12.50	12.40	99	69-120	1	20
Methyl tert-Amyl Ether (TAME)	12.50	11.57	93	74-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222274
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Type: BS Lab ID: QC784352

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	8.849	88	45-131
Chloromethane	10.00	10.39	104	48-133
Vinyl Chloride	10.00	10.91	109	63-132
Bromomethane	10.00	13.52 b	135	38-161
Chloroethane	10.00	10.42	104	62-131
Trichlorofluoromethane	10.00	9.771	98	64-137
Acetone	12.50	9.045	72	46-151
Freon 113	12.50	11.50	92	61-138
1,1-Dichloroethene	12.50	12.01	96	66-135
Methylene Chloride	12.50	12.51	100	74-131
Carbon Disulfide	12.50	13.50	108	63-150
MTBE	12.50	12.03	96	65-120
trans-1,2-Dichloroethene	12.50	12.91	103	72-134
Vinyl Acetate	12.50	16.85	135	60-194
1,1-Dichloroethane	12.50	11.74	94	68-127
2-Butanone	12.50	10.19	82	50-141
cis-1,2-Dichloroethene	12.50	12.57	101	73-129
2,2-Dichloropropane	12.50	13.85	111	72-146
Chloroform	12.50	12.43	99	73-126
Bromochloromethane	12.50	13.39	107	78-127
1,1,1-Trichloroethane	12.50	12.41	99	72-134
1,1-Dichloropropene	12.50	11.57	93	79-135
Carbon Tetrachloride	12.50	12.35	99	72-142
1,2-Dichloroethane	12.50	11.42	91	74-133
Benzene	12.50	12.58	101	80-123
Trichloroethene	12.50	11.78	94	80-123
1,2-Dichloropropane	12.50	11.12	89	74-120
Bromodichloromethane	12.50	11.79	94	79-121
Dibromomethane	12.50	11.76	94	80-120
4-Methyl-2-Pentanone	12.50	9.737	78	57-129
cis-1,3-Dichloropropene	12.50	12.07	97	80-130
Toluene	12.50	12.93	103	80-121
trans-1,3-Dichloropropene	12.50	11.13	89	76-122
1,1,2-Trichloroethane	12.50	11.62	93	80-120
2-Hexanone	12.50	9.611	77	49-136
1,3-Dichloropropane	12.50	12.19	98	80-120
Tetrachloroethene	12.50	13.33	107	78-130
Dibromochloromethane	12.50	12.49	100	80-123
1,2-Dibromoethane	12.50	11.82	95	80-120
Chlorobenzene	12.50	12.86	103	80-123
1,1,1,2-Tetrachloroethane	12.50	12.66	101	80-124
Ethylbenzene	12.50	12.70	102	80-123
m,p-Xylenes	25.00	26.45	106	80-126
o-Xylene	12.50	12.92	103	80-126
Styrene	12.50	12.80	102	80-122
Bromoform	12.50	12.86	103	72-132
Isopropylbenzene	12.50	12.87	103	79-130
1,1,2,2-Tetrachloroethane	12.50	11.65	93	72-129
1,2,3-Trichloropropane	12.50	10.88	87	72-124
Propylbenzene	12.50	12.51	100	79-128
Bromobenzene	12.50	13.44	107	80-122

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222274
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
1,3,5-Trimethylbenzene	12.50	12.83	103	80-129
2-Chlorotoluene	12.50	12.47	100	80-130
4-Chlorotoluene	12.50	12.47	100	79-125
tert-Butylbenzene	12.50	12.82	103	79-130
1,2,4-Trimethylbenzene	12.50	12.02	96	78-124
sec-Butylbenzene	12.50	12.45	100	79-134
para-Isopropyl Toluene	12.50	12.29	98	74-125
1,3-Dichlorobenzene	12.50	13.25	106	80-124
1,4-Dichlorobenzene	12.50	13.14	105	80-121
n-Butylbenzene	12.50	10.95	88	69-135
1,2-Dichlorobenzene	12.50	12.86	103	80-123
1,2-Dibromo-3-Chloropropane	12.50	9.256	74	59-125
1,2,4-Trichlorobenzene	12.50	11.20	90	66-133
Hexachlorobutadiene	12.50	12.51	100	70-152
Naphthalene	12.50	10.85	87	53-139
1,2,3-Trichlorobenzene	12.50	11.43	91	64-134
tert-Butyl Alcohol (TBA)	62.50	45.71 b	73	32-155
Isopropyl Ether (DIPE)	12.50	11.75	94	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	11.92	95	62-120
Methyl tert-Amyl Ether (TAME)	12.50	11.36	91	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-120

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222274
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC784353

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	8.688	87	45-131	2	29
Chloromethane	10.00	10.50	105	48-133	1	25
Vinyl Chloride	10.00	10.96	110	63-132	1	23
Bromomethane	10.00	14.12 b	141	38-161	4	32
Chloroethane	10.00	10.60	106	62-131	2	24
Trichlorofluoromethane	10.00	9.613	96	64-137	2	23
Acetone	12.50	8.640	69	46-151	5	29
Freon 113	12.50	11.56	93	61-138	1	25
1,1-Dichloroethene	12.50	12.92	103	66-135	7	24
Methylene Chloride	12.50	12.57	101	74-131	0	21
Carbon Disulfide	12.50	13.06	104	63-150	3	25
MTBE	12.50	12.04	96	65-120	0	22
trans-1,2-Dichloroethene	12.50	12.96	104	72-134	0	22
Vinyl Acetate	12.50	17.62	141	60-194	5	25
1,1-Dichloroethane	12.50	11.87	95	68-127	1	21
2-Butanone	12.50	9.691	78	50-141	5	24
cis-1,2-Dichloroethene	12.50	12.90	103	73-129	3	20
2,2-Dichloropropane	12.50	13.54	108	72-146	2	24
Chloroform	12.50	12.67	101	73-126	2	20
Bromochloromethane	12.50	13.56	108	78-127	1	20
1,1,1-Trichloroethane	12.50	12.54	100	72-134	1	22
1,1-Dichloropropene	12.50	11.50	92	79-135	1	23
Carbon Tetrachloride	12.50	12.30	98	72-142	0	22
1,2-Dichloroethane	12.50	11.34	91	74-133	1	20
Benzene	12.50	12.38	99	80-123	2	20
Trichloroethene	12.50	11.70	94	80-123	1	20
1,2-Dichloropropane	12.50	11.14	89	74-120	0	20
Bromodichloromethane	12.50	11.69	94	79-121	1	20
Dibromomethane	12.50	11.59	93	80-120	1	20
4-Methyl-2-Pentanone	12.50	9.624	77	57-129	1	23
cis-1,3-Dichloropropene	12.50	11.85	95	80-130	2	20
Toluene	12.50	12.42	99	80-121	4	20
trans-1,3-Dichloropropene	12.50	10.85	87	76-122	3	20
1,1,2-Trichloroethane	12.50	11.25	90	80-120	3	20
2-Hexanone	12.50	8.874	71	49-136	8	24
1,3-Dichloropropane	12.50	11.82	95	80-120	3	20
Tetrachloroethene	12.50	12.91	103	78-130	3	21
Dibromochloromethane	12.50	12.13	97	80-123	3	20
1,2-Dibromoethane	12.50	11.62	93	80-120	2	20
Chlorobenzene	12.50	12.46	100	80-123	3	20
1,1,1,2-Tetrachloroethane	12.50	12.16	97	80-124	4	20
Ethylbenzene	12.50	12.17	97	80-123	4	21
m,p-Xylenes	25.00	25.39	102	80-126	4	21
o-Xylene	12.50	12.49	100	80-126	3	20
Styrene	12.50	12.24	98	80-122	5	20
Bromoform	12.50	12.54	100	72-132	3	20
Isopropylbenzene	12.50	12.50	100	79-130	3	21
1,1,2,2-Tetrachloroethane	12.50	11.41	91	72-129	2	20
1,2,3-Trichloropropane	12.50	11.24	90	72-124	3	22
Propylbenzene	12.50	11.89	95	79-128	5	21
Bromobenzene	12.50	13.23	106	80-122	2	20

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222274
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,3,5-Trimethylbenzene	12.50	12.41	99	80-129	3	20
2-Chlorotoluene	12.50	12.33	99	80-130	1	20
4-Chlorotoluene	12.50	12.04	96	79-125	4	20
tert-Butylbenzene	12.50	12.20	98	79-130	5	23
1,2,4-Trimethylbenzene	12.50	11.66	93	78-124	3	22
sec-Butylbenzene	12.50	11.81	94	79-134	5	23
para-Isopropyl Toluene	12.50	11.18	89	74-125	9	24
1,3-Dichlorobenzene	12.50	12.84	103	80-124	3	20
1,4-Dichlorobenzene	12.50	12.78	102	80-121	3	20
n-Butylbenzene	12.50	10.05	80	69-135	9	28
1,2-Dichlorobenzene	12.50	12.60	101	80-123	2	20
1,2-Dibromo-3-Chloropropane	12.50	8.864	71	59-125	4	23
1,2,4-Trichlorobenzene	12.50	10.49	84	66-133	6	24
Hexachlorobutadiene	12.50	11.31	90	70-152	10	26
Naphthalene	12.50	9.860	79	53-139	10	25
1,2,3-Trichlorobenzene	12.50	10.41	83	64-134	9	25
tert-Butyl Alcohol (TBA)	62.50	41.48 b	66	32-155	10	33
Isopropyl Ether (DIPE)	12.50	11.83	95	57-128	1	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.97	96	62-120	0	20
Methyl tert-Amyl Ether (TAME)	12.50	11.30	90	69-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	92	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-120

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784354	Batch#:	222274
Matrix:	Water	Analyzed:	04/15/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784354	Batch#:	222274
Matrix:	Water	Analyzed:	04/15/15
Units:	ug/L		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	0.1 J	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	102	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222308
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Type: BS Lab ID: QC784501

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	9.392	94	45-131
Chloromethane	10.00	11.67	117	48-133
Vinyl Chloride	10.00	11.92	119	63-132
Bromomethane	10.00	14.42 b	144	38-161
Chloroethane	10.00	11.45	114	62-131
Trichlorofluoromethane	10.00	10.41	104	64-137
Acetone	12.50	10.85	87	46-151
Freon 113	12.50	12.70	102	61-138
1,1-Dichloroethene	12.50	12.90	103	66-135
Methylene Chloride	12.50	13.22	106	74-131
Carbon Disulfide	12.50	14.22	114	63-150
MTBE	12.50	13.49	108	65-120
trans-1,2-Dichloroethene	12.50	13.70	110	72-134
Vinyl Acetate	12.50	20.72	166	60-194
1,1-Dichloroethane	12.50	12.80	102	68-127
2-Butanone	12.50	11.77	94	50-141
cis-1,2-Dichloroethene	12.50	13.38	107	73-129
2,2-Dichloropropane	12.50	15.19	122	72-146
Chloroform	12.50	13.30	106	73-126
Bromochloromethane	12.50	14.17	113	78-127
1,1,1-Trichloroethane	12.50	13.35	107	72-134
1,1-Dichloropropene	12.50	11.56	92	79-135
Carbon Tetrachloride	12.50	12.72	102	72-142
1,2-Dichloroethane	12.50	11.76	94	74-133
Benzene	12.50	12.44	100	80-123
Trichloroethene	12.50	11.69	94	80-123
1,2-Dichloropropane	12.50	11.13	89	74-120
Bromodichloromethane	12.50	11.91	95	79-121
Dibromomethane	12.50	12.29	98	80-120
4-Methyl-2-Pentanone	12.50	10.72	86	57-129
cis-1,3-Dichloropropene	12.50	12.10	97	80-130
Toluene	12.50	12.25	98	80-121
trans-1,3-Dichloropropene	12.50	11.05	88	76-122
1,1,2-Trichloroethane	12.50	11.78	94	80-120
2-Hexanone	12.50	10.39	83	49-136
1,3-Dichloropropane	12.50	11.98	96	80-120
Tetrachloroethene	12.50	12.86	103	78-130
Dibromochloromethane	12.50	12.38	99	80-123
1,2-Dibromoethane	12.50	12.03	96	80-120
Chlorobenzene	12.50	12.48	100	80-123
1,1,1,2-Tetrachloroethane	12.50	12.16	97	80-124
Ethylbenzene	12.50	12.27	98	80-123
m,p-Xylenes	25.00	25.31	101	80-126
o-Xylene	12.50	12.32	99	80-126
Styrene	12.50	12.01	96	80-122
Bromoform	12.50	13.05	104	72-132
Isopropylbenzene	12.50	12.82	103	79-130
1,1,2,2-Tetrachloroethane	12.50	12.45	100	72-129
1,2,3-Trichloropropane	12.50	12.21	98	72-124
Propylbenzene	12.50	12.51	100	79-128
Bromobenzene	12.50	13.39	107	80-122

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222308
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
1,3,5-Trimethylbenzene	12.50	12.67	101	80-129
2-Chlorotoluene	12.50	12.62	101	80-130
4-Chlorotoluene	12.50	12.35	99	79-125
tert-Butylbenzene	12.50	12.70	102	79-130
1,2,4-Trimethylbenzene	12.50	11.86	95	78-124
sec-Butylbenzene	12.50	12.36	99	79-134
para-Isopropyl Toluene	12.50	11.93	95	74-125
1,3-Dichlorobenzene	12.50	13.11	105	80-124
1,4-Dichlorobenzene	12.50	12.95	104	80-121
n-Butylbenzene	12.50	10.83	87	69-135
1,2-Dichlorobenzene	12.50	12.77	102	80-123
1,2-Dibromo-3-Chloropropane	12.50	10.39	83	59-125
1,2,4-Trichlorobenzene	12.50	10.92	87	66-133
Hexachlorobutadiene	12.50	13.07	105	70-152
Naphthalene	12.50	10.48	84	53-139
1,2,3-Trichlorobenzene	12.50	11.03	88	64-134
tert-Butyl Alcohol (TBA)	62.50	61.57	99	32-155
Isopropyl Ether (DIPE)	12.50	12.77	102	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	13.00	104	62-120
Methyl tert-Amyl Ether (TAME)	12.50	11.60	93	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-128
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222308
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC784502

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	8.597	86	45-131	9	29
Chloromethane	10.00	10.83	108	48-133	7	25
Vinyl Chloride	10.00	11.07	111	63-132	7	23
Bromomethane	10.00	12.49 b	125	38-161	14	32
Chloroethane	10.00	11.09	111	62-131	3	24
Trichlorofluoromethane	10.00	9.577	96	64-137	8	23
Acetone	12.50	8.912	71	46-151	20	29
Freon 113	12.50	11.38	91	61-138	11	25
1,1-Dichloroethene	12.50	12.35	99	66-135	4	24
Methylene Chloride	12.50	12.79	102	74-131	3	21
Carbon Disulfide	12.50	13.12	105	63-150	8	25
MTBE	12.50	12.40	99	65-120	8	22
trans-1,2-Dichloroethene	12.50	12.66	101	72-134	8	22
Vinyl Acetate	12.50	18.62	149	60-194	11	25
1,1-Dichloroethane	12.50	11.92	95	68-127	7	21
2-Butanone	12.50	10.12	81	50-141	15	24
cis-1,2-Dichloroethene	12.50	12.61	101	73-129	6	20
2,2-Dichloropropane	12.50	14.11	113	72-146	7	24
Chloroform	12.50	12.63	101	73-126	5	20
Bromochloromethane	12.50	13.50	108	78-127	5	20
1,1,1-Trichloroethane	12.50	12.46	100	72-134	7	22
1,1-Dichloropropene	12.50	11.10	89	79-135	4	23
Carbon Tetrachloride	12.50	12.04	96	72-142	6	22
1,2-Dichloroethane	12.50	11.37	91	74-133	3	20
Benzene	12.50	12.11	97	80-123	3	20
Trichloroethene	12.50	11.10	89	80-123	5	20
1,2-Dichloropropane	12.50	10.90	87	74-120	2	20
Bromodichloromethane	12.50	11.53	92	79-121	3	20
Dibromomethane	12.50	11.77	94	80-120	4	20
4-Methyl-2-Pentanone	12.50	9.648	77	57-129	11	23
cis-1,3-Dichloropropene	12.50	11.61	93	80-130	4	20
Toluene	12.50	12.11	97	80-121	1	20
trans-1,3-Dichloropropene	12.50	10.67	85	76-122	3	20
1,1,2-Trichloroethane	12.50	11.33	91	80-120	4	20
2-Hexanone	12.50	9.223	74	49-136	12	24
1,3-Dichloropropane	12.50	11.64	93	80-120	3	20
Tetrachloroethene	12.50	12.47	100	78-130	3	21
Dibromochloromethane	12.50	11.99	96	80-123	3	20
1,2-Dibromoethane	12.50	11.30	90	80-120	6	20
Chlorobenzene	12.50	12.14	97	80-123	3	20
1,1,1,2-Tetrachloroethane	12.50	11.75	94	80-124	3	20
Ethylbenzene	12.50	11.96	96	80-123	3	21
m,p-Xylenes	25.00	25.13	101	80-126	1	21
o-Xylene	12.50	12.00	96	80-126	3	20
Styrene	12.50	11.78	94	80-122	2	20
Bromoform	12.50	12.53	100	72-132	4	20
Isopropylbenzene	12.50	12.05	96	79-130	6	21
1,1,2,2-Tetrachloroethane	12.50	11.42	91	72-129	9	20
1,2,3-Trichloropropane	12.50	11.09	89	72-124	10	22
Propylbenzene	12.50	11.64	93	79-128	7	21
Bromobenzene	12.50	12.71	102	80-122	5	20

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222308
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,3,5-Trimethylbenzene	12.50	11.96	96	80-129	6	20
2-Chlorotoluene	12.50	11.80	94	80-130	7	20
4-Chlorotoluene	12.50	11.83	95	79-125	4	20
tert-Butylbenzene	12.50	11.78	94	79-130	8	23
1,2,4-Trimethylbenzene	12.50	11.08	89	78-124	7	22
sec-Butylbenzene	12.50	11.38	91	79-134	8	23
para-Isopropyl Toluene	12.50	10.97	88	74-125	8	24
1,3-Dichlorobenzene	12.50	12.35	99	80-124	6	20
1,4-Dichlorobenzene	12.50	12.32	99	80-121	5	20
n-Butylbenzene	12.50	10.04	80	69-135	8	28
1,2-Dichlorobenzene	12.50	12.21	98	80-123	4	20
1,2-Dibromo-3-Chloropropane	12.50	8.787	70	59-125	17	23
1,2,4-Trichlorobenzene	12.50	10.30	82	66-133	6	24
Hexachlorobutadiene	12.50	11.00	88	70-152	17	26
Naphthalene	12.50	9.991	80	53-139	5	25
1,2,3-Trichlorobenzene	12.50	10.44	83	64-134	6	25
tert-Butyl Alcohol (TBA)	62.50	45.63	73	32-155	30	33
Isopropyl Ether (DIPE)	12.50	11.83	95	57-128	8	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.12	97	62-120	7	20
Methyl tert-Amyl Ether (TAME)	12.50	11.12	89	69-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-120

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784503	Batch#:	222308
Matrix:	Water	Analyzed:	04/16/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784503	Batch#:	222308
Matrix:	Water	Analyzed:	04/16/15
Units:	ug/L		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222321
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Type: BS Lab ID: QC784558

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	7.931	79	45-131
Chloromethane	10.00	9.624	96	48-133
Vinyl Chloride	10.00	10.26	103	63-132
Bromomethane	10.00	13.30	133	38-161
Chloroethane	10.00	9.967	100	62-131
Trichlorofluoromethane	10.00	9.396	94	64-137
Acetone	12.50	11.15	89	46-151
Freon 113	12.50	12.60	101	61-138
1,1-Dichloroethene	12.50	12.44	100	66-135
Methylene Chloride	12.50	12.86	103	74-131
Carbon Disulfide	12.50	13.73	110	63-150
MTBE	12.50	11.63	93	65-120
trans-1,2-Dichloroethene	12.50	12.74	102	72-134
Vinyl Acetate	12.50	15.54	124	60-194
1,1-Dichloroethane	12.50	12.80	102	68-127
2-Butanone	12.50	11.58	93	50-141
cis-1,2-Dichloroethene	12.50	12.39	99	73-129
2,2-Dichloropropane	12.50	14.13	113	72-146
Chloroform	12.50	13.22	106	73-126
Bromochloromethane	12.50	13.10	105	78-127
1,1,1-Trichloroethane	12.50	13.54	108	72-134
1,1-Dichloropropene	12.50	12.92	103	79-135
Carbon Tetrachloride	12.50	13.64	109	72-142
1,2-Dichloroethane	12.50	12.74	102	74-133
Benzene	12.50	13.10	105	80-123
Trichloroethene	12.50	13.03	104	80-123
1,2-Dichloropropane	12.50	11.86	95	74-120
Bromodichloromethane	12.50	12.51	100	79-121
Dibromomethane	12.50	12.38	99	80-120
4-Methyl-2-Pentanone	12.50	11.46	92	57-129
cis-1,3-Dichloropropene	12.50	12.07	97	80-130
Toluene	12.50	13.21	106	80-121
trans-1,3-Dichloropropene	12.50	11.41	91	76-122
1,1,2-Trichloroethane	12.50	12.47	100	80-120
2-Hexanone	12.50	10.99	88	49-136
1,3-Dichloropropane	12.50	12.63	101	80-120
Tetrachloroethene	12.50	13.82	111	78-130
Dibromochloromethane	12.50	12.03	96	80-123
1,2-Dibromoethane	12.50	12.21	98	80-120
Chlorobenzene	12.50	12.80	102	80-123
1,1,1,2-Tetrachloroethane	12.50	12.07	97	80-124
Ethylbenzene	12.50	13.29	106	80-123
m,p-Xylenes	25.00	25.73	103	80-126
o-Xylene	12.50	12.50	100	80-126
Styrene	12.50	12.35	99	80-122
Bromoform	12.50	11.32	91	72-132
Isopropylbenzene	12.50	14.18	113	79-130
1,1,2,2-Tetrachloroethane	12.50	13.74	110	72-129
1,2,3-Trichloropropane	12.50	13.27	106	72-124
Propylbenzene	12.50	14.26	114	79-128
Bromobenzene	12.50	13.37	107	80-122
1,3,5-Trimethylbenzene	12.50	14.02	112	80-129

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222321
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
2-Chlorotoluene	12.50	14.03	112	80-130
4-Chlorotoluene	12.50	13.52	108	79-125
tert-Butylbenzene	12.50	13.59	109	79-130
1,2,4-Trimethylbenzene	12.50	13.19	106	78-124
sec-Butylbenzene	12.50	14.31	114	79-134
para-Isopropyl Toluene	12.50	13.45	108	74-125
1,3-Dichlorobenzene	12.50	13.16	105	80-124
1,4-Dichlorobenzene	12.50	12.98	104	80-121
n-Butylbenzene	12.50	13.58	109	69-135
1,2-Dichlorobenzene	12.50	13.03	104	80-123
1,2-Dibromo-3-Chloropropane	12.50	12.38	99	59-125
1,2,4-Trichlorobenzene	12.50	12.81	102	66-133
Hexachlorobutadiene	12.50	15.03	120	70-152
Naphthalene	12.50	11.48	92	53-139
1,2,3-Trichlorobenzene	12.50	13.01	104	64-134
tert-Butyl Alcohol (TBA)	62.50	56.51	90	32-155
Isopropyl Ether (DIPE)	12.50	11.46	92	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	11.61	93	62-120
Methyl tert-Amyl Ether (TAME)	12.50	11.40	91	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	109	80-120

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222321
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC784559

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	7.639	76	45-131	4	29
Chloromethane	10.00	9.357	94	48-133	3	25
Vinyl Chloride	10.00	9.889	99	63-132	4	23
Bromomethane	10.00	12.42	124	38-161	7	32
Chloroethane	10.00	9.874	99	62-131	1	24
Trichlorofluoromethane	10.00	9.000	90	64-137	4	23
Acetone	12.50	11.84	95	46-151	6	29
Freon 113	12.50	11.82	95	61-138	6	25
1,1-Dichloroethene	12.50	12.26	98	66-135	1	24
Methylene Chloride	12.50	12.48	100	74-131	3	21
Carbon Disulfide	12.50	13.19	106	63-150	4	25
MTBE	12.50	11.64	93	65-120	0	22
trans-1,2-Dichloroethene	12.50	12.31	99	72-134	3	22
Vinyl Acetate	12.50	14.94	120	60-194	4	25
1,1-Dichloroethane	12.50	12.32	99	68-127	4	21
2-Butanone	12.50	11.90	95	50-141	3	24
cis-1,2-Dichloroethene	12.50	12.13	97	73-129	2	20
2,2-Dichloropropane	12.50	13.74	110	72-146	3	24
Chloroform	12.50	12.93	103	73-126	2	20
Bromochloromethane	12.50	12.75	102	78-127	3	20
1,1,1-Trichloroethane	12.50	13.21	106	72-134	2	22
1,1-Dichloropropene	12.50	12.52	100	79-135	3	23
Carbon Tetrachloride	12.50	13.27	106	72-142	3	22
1,2-Dichloroethane	12.50	12.42	99	74-133	3	20
Benzene	12.50	12.88	103	80-123	2	20
Trichloroethene	12.50	12.91	103	80-123	1	20
1,2-Dichloropropane	12.50	11.80	94	74-120	1	20
Bromodichloromethane	12.50	12.22	98	79-121	2	20
Dibromomethane	12.50	12.41	99	80-120	0	20
4-Methyl-2-Pentanone	12.50	11.41	91	57-129	0	23
cis-1,3-Dichloropropene	12.50	11.95	96	80-130	1	20
Toluene	12.50	12.66	101	80-121	4	20
trans-1,3-Dichloropropene	12.50	11.08	89	76-122	3	20
1,1,2-Trichloroethane	12.50	12.38	99	80-120	1	20
2-Hexanone	12.50	11.55	92	49-136	5	24
1,3-Dichloropropane	12.50	12.66	101	80-120	0	20
Tetrachloroethene	12.50	13.25	106	78-130	4	21
Dibromochloromethane	12.50	11.80	94	80-123	2	20
1,2-Dibromoethane	12.50	12.32	99	80-120	1	20
Chlorobenzene	12.50	12.50	100	80-123	2	20
1,1,1,2-Tetrachloroethane	12.50	11.87	95	80-124	2	20
Ethylbenzene	12.50	12.86	103	80-123	3	21
m,p-Xylenes	25.00	25.09	100	80-126	3	21
o-Xylene	12.50	12.21	98	80-126	2	20
Styrene	12.50	12.06	96	80-122	2	20
Bromoform	12.50	11.29	90	72-132	0	20
Isopropylbenzene	12.50	13.26	106	79-130	7	21
1,1,2,2-Tetrachloroethane	12.50	13.24	106	72-129	4	20
1,2,3-Trichloropropane	12.50	12.68	101	72-124	5	22
Propylbenzene	12.50	13.43	107	79-128	6	21
Bromobenzene	12.50	12.76	102	80-122	5	20
1,3,5-Trimethylbenzene	12.50	13.30	106	80-129	5	20

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222321
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
2-Chlorotoluene	12.50	13.07	105	80-130	7	20
4-Chlorotoluene	12.50	12.88	103	79-125	5	20
tert-Butylbenzene	12.50	12.90	103	79-130	5	23
1,2,4-Trimethylbenzene	12.50	12.55	100	78-124	5	22
sec-Butylbenzene	12.50	13.45	108	79-134	6	23
para-Isopropyl Toluene	12.50	12.67	101	74-125	6	24
1,3-Dichlorobenzene	12.50	12.43	99	80-124	6	20
1,4-Dichlorobenzene	12.50	12.55	100	80-121	3	20
n-Butylbenzene	12.50	12.78	102	69-135	6	28
1,2-Dichlorobenzene	12.50	12.19	98	80-123	7	20
1,2-Dibromo-3-Chloropropane	12.50	12.10	97	59-125	2	23
1,2,4-Trichlorobenzene	12.50	12.50	100	66-133	2	24
Hexachlorobutadiene	12.50	13.81	110	70-152	8	26
Naphthalene	12.50	11.21	90	53-139	2	25
1,2,3-Trichlorobenzene	12.50	12.67	101	64-134	3	25
tert-Butyl Alcohol (TBA)	62.50	59.11	95	32-155	4	33
Isopropyl Ether (DIPE)	12.50	11.15	89	57-128	3	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.56	93	62-120	0	20
Methyl tert-Amyl Ether (TAME)	12.50	11.29	90	69-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-120

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784560	Batch#:	222321
Matrix:	Water	Analyzed:	04/16/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784560	Batch#:	222321
Matrix:	Water	Analyzed:	04/16/15
Units:	ug/L		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	99	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222354
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Type: BS Lab ID: QC784671

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	8.787	88	45-131
Chloromethane	10.00	11.11	111	48-133
Vinyl Chloride	10.00	11.49	115	63-132
Bromomethane	10.00	13.20	132	38-161
Chloroethane	10.00	11.09	111	62-131
Trichlorofluoromethane	10.00	10.25	102	64-137
Acetone	12.50	11.27	90	46-151
Freon 113	12.50	12.60	101	61-138
1,1-Dichloroethene	12.50	13.10	105	66-135
Methylene Chloride	12.50	13.50	108	74-131
Carbon Disulfide	12.50	14.26	114	63-150
MTBE	12.50	13.25	106	65-120
trans-1,2-Dichloroethene	12.50	13.32	107	72-134
Vinyl Acetate	12.50	20.27	162	60-194
1,1-Dichloroethane	12.50	12.38	99	68-127
2-Butanone	12.50	12.08	97	50-141
cis-1,2-Dichloroethene	12.50	13.21	106	73-129
2,2-Dichloropropane	12.50	14.82	119	72-146
Chloroform	12.50	13.30	106	73-126
Bromochloromethane	12.50	14.12	113	78-127
1,1,1-Trichloroethane	12.50	13.08	105	72-134
1,1-Dichloropropene	12.50	11.49	92	79-135
Carbon Tetrachloride	12.50	12.59	101	72-142
1,2-Dichloroethane	12.50	11.87	95	74-133
Benzene	12.50	12.48	100	80-123
Trichloroethene	12.50	11.60	93	80-123
1,2-Dichloropropane	12.50	11.10	89	74-120
Bromodichloromethane	12.50	12.03	96	79-121
Dibromomethane	12.50	12.15	97	80-120
4-Methyl-2-Pentanone	12.50	10.79	86	57-129
cis-1,3-Dichloropropene	12.50	12.05	96	80-130
Toluene	12.50	12.38	99	80-121
trans-1,3-Dichloropropene	12.50	11.21	90	76-122
1,1,2-Trichloroethane	12.50	11.73	94	80-120
2-Hexanone	12.50	10.24	82	49-136
1,3-Dichloropropane	12.50	12.27	98	80-120
Tetrachloroethene	12.50	13.00	104	78-130
Dibromochloromethane	12.50	12.31	98	80-123
1,2-Dibromoethane	12.50	12.14	97	80-120
Chlorobenzene	12.50	12.48	100	80-123
1,1,1,2-Tetrachloroethane	12.50	12.22	98	80-124
Ethylbenzene	12.50	12.27	98	80-123
m,p-Xylenes	25.00	25.61	102	80-126
o-Xylene	12.50	12.50	100	80-126
Styrene	12.50	12.18	97	80-122
Bromoform	12.50	13.43	107	72-132
Isopropylbenzene	12.50	12.61	101	79-130
1,1,2,2-Tetrachloroethane	12.50	12.51	100	72-129
1,2,3-Trichloropropane	12.50	12.14	97	72-124
Propylbenzene	12.50	12.31	98	79-128
Bromobenzene	12.50	13.26	106	80-122
1,3,5-Trimethylbenzene	12.50	12.76	102	80-129

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222354
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
2-Chlorotoluene	12.50	12.53	100	80-130
4-Chlorotoluene	12.50	12.36	99	79-125
tert-Butylbenzene	12.50	12.63	101	79-130
1,2,4-Trimethylbenzene	12.50	11.90	95	78-124
sec-Butylbenzene	12.50	12.36	99	79-134
para-Isopropyl Toluene	12.50	11.98	96	74-125
1,3-Dichlorobenzene	12.50	13.08	105	80-124
1,4-Dichlorobenzene	12.50	12.97	104	80-121
n-Butylbenzene	12.50	10.82	87	69-135
1,2-Dichlorobenzene	12.50	12.85	103	80-123
1,2-Dibromo-3-Chloropropane	12.50	10.14	81	59-125
1,2,4-Trichlorobenzene	12.50	11.02	88	66-133
Hexachlorobutadiene	12.50	12.48	100	70-152
Naphthalene	12.50	10.17	81	53-139
1,2,3-Trichlorobenzene	12.50	11.09	89	64-134
tert-Butyl Alcohol (TBA)	62.50	61.86	99	32-155
Isopropyl Ether (DIPE)	12.50	12.52	100	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	12.71	102	62-120
Methyl tert-Amyl Ether (TAME)	12.50	11.62	93	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-120

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222354
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC784672

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	8.160	82	45-131	7	29
Chloromethane	10.00	10.63	106	48-133	4	25
Vinyl Chloride	10.00	10.58	106	63-132	8	23
Bromomethane	10.00	12.90	129	38-161	2	32
Chloroethane	10.00	10.47	105	62-131	6	24
Trichlorofluoromethane	10.00	9.775	98	64-137	5	23
Acetone	12.50	8.927	71	46-151	23	29
Freon 113	12.50	11.37	91	61-138	10	25
1,1-Dichloroethene	12.50	12.35	99	66-135	6	24
Methylene Chloride	12.50	12.68	101	74-131	6	21
Carbon Disulfide	12.50	12.86	103	63-150	10	25
MTBE	12.50	12.36	99	65-120	7	22
trans-1,2-Dichloroethene	12.50	12.53	100	72-134	6	22
Vinyl Acetate	12.50	18.31	146	60-194	10	25
1,1-Dichloroethane	12.50	11.82	95	68-127	5	21
2-Butanone	12.50	10.49	84	50-141	14	24
cis-1,2-Dichloroethene	12.50	12.51	100	73-129	5	20
2,2-Dichloropropane	12.50	13.68	109	72-146	8	24
Chloroform	12.50	12.45	100	73-126	7	20
Bromochloromethane	12.50	13.46	108	78-127	5	20
1,1,1-Trichloroethane	12.50	12.33	99	72-134	6	22
1,1-Dichloropropene	12.50	11.19	90	79-135	3	23
Carbon Tetrachloride	12.50	12.24	98	72-142	3	22
1,2-Dichloroethane	12.50	11.31	90	74-133	5	20
Benzene	12.50	12.31	99	80-123	1	20
Trichloroethene	12.50	11.49	92	80-123	1	20
1,2-Dichloropropane	12.50	11.04	88	74-120	1	20
Bromodichloromethane	12.50	11.53	92	79-121	4	20
Dibromomethane	12.50	11.67	93	80-120	4	20
4-Methyl-2-Pentanone	12.50	9.902	79	57-129	9	23
cis-1,3-Dichloropropene	12.50	11.67	93	80-130	3	20
Toluene	12.50	11.97	96	80-121	3	20
trans-1,3-Dichloropropene	12.50	10.52	84	76-122	6	20
1,1,2-Trichloroethane	12.50	11.35	91	80-120	3	20
2-Hexanone	12.50	8.864	71	49-136	14	24
1,3-Dichloropropane	12.50	11.85	95	80-120	4	20
Tetrachloroethene	12.50	12.28	98	78-130	6	21
Dibromochloromethane	12.50	11.99	96	80-123	3	20
1,2-Dibromoethane	12.50	11.34	91	80-120	7	20
Chlorobenzene	12.50	12.11	97	80-123	3	20
1,1,1,2-Tetrachloroethane	12.50	11.90	95	80-124	3	20
Ethylbenzene	12.50	11.88	95	80-123	3	21
m,p-Xylenes	25.00	24.30	97	80-126	5	21
o-Xylene	12.50	12.03	96	80-126	4	20
Styrene	12.50	11.72	94	80-122	4	20
Bromoform	12.50	12.87	103	72-132	4	20
Isopropylbenzene	12.50	12.25	98	79-130	3	21
1,1,2,2-Tetrachloroethane	12.50	11.50	92	72-129	8	20
1,2,3-Trichloropropane	12.50	11.35	91	72-124	7	22
Propylbenzene	12.50	11.68	93	79-128	5	21
Bromobenzene	12.50	12.92	103	80-122	3	20
1,3,5-Trimethylbenzene	12.50	11.85	95	80-129	7	20

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222354
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
2-Chlorotoluene	12.50	11.93	95	80-130	5	20
4-Chlorotoluene	12.50	11.91	95	79-125	4	20
tert-Butylbenzene	12.50	11.90	95	79-130	6	23
1,2,4-Trimethylbenzene	12.50	10.98	88	78-124	8	22
sec-Butylbenzene	12.50	11.26	90	79-134	9	23
para-Isopropyl Toluene	12.50	10.65	85	74-125	12	24
1,3-Dichlorobenzene	12.50	12.63	101	80-124	3	20
1,4-Dichlorobenzene	12.50	12.29	98	80-121	5	20
n-Butylbenzene	12.50	9.569	77	69-135	12	28
1,2-Dichlorobenzene	12.50	12.50	100	80-123	3	20
1,2-Dibromo-3-Chloropropane	12.50	8.910	71	59-125	13	23
1,2,4-Trichlorobenzene	12.50	9.634	77	66-133	13	24
Hexachlorobutadiene	12.50	10.91	87	70-152	13	26
Naphthalene	12.50	9.288	74	53-139	9	25
1,2,3-Trichlorobenzene	12.50	9.725	78	64-134	13	25
tert-Butyl Alcohol (TBA)	62.50	50.49	81	32-155	20	33
Isopropyl Ether (DIPE)	12.50	12.03	96	57-128	4	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.15	97	62-120	4	20
Methyl tert-Amyl Ether (TAME)	12.50	11.29	90	69-120	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	94	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784673	Batch#:	222354
Matrix:	Water	Analyzed:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784673	Batch#:	222354
Matrix:	Water	Analyzed:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	106	80-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TP1	Batch#:	222354
MSS Lab ID:	266019-005	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Type: MS Lab ID: QC784685

Analyte	MSS Result	Spiked	Result	%REC	Limits
Freon 12	<0.1000	10.00	8.319	83	54-126
Chloromethane	<0.1000	10.00	9.230	92	54-121
Vinyl Chloride	<0.1000	10.00	10.44	104	66-126
Bromomethane	<0.2358	10.00	4.428	44	31-152
Chloroethane	<0.2518	10.00	14.59	146 *	69-126
Trichlorofluoromethane	<0.1912	10.00	9.875	99	71-132
Acetone	<3.300	12.50	9.930	79	47-129
Freon 113	<0.1308	12.50	9.251	74	67-127
1,1-Dichloroethene	<0.1147	12.50	11.37	91	73-129
Methylene Chloride	<0.4000	12.50	13.03	104	80-127
Carbon Disulfide	0.1231	12.50	12.95	103	76-138
MTBE	<0.1000	12.50	12.45	100	71-120
trans-1,2-Dichloroethene	<0.1578	12.50	12.82	103	79-127
Vinyl Acetate	<1.003	12.50	17.28	138	62-173
1,1-Dichloroethane	<0.1000	12.50	12.12	97	77-123
2-Butanone	<0.5469	12.50	11.19	90	56-134
cis-1,2-Dichloroethene	0.3988	12.50	13.08	101	74-126
2,2-Dichloropropane	<0.1000	12.50	12.04	96	69-130
Chloroform	<0.1000	12.50	12.95	104	80-123
Bromochloromethane	<0.1609	12.50	13.67	109	80-122
1,1,1-Trichloroethane	<0.1000	12.50	12.64	101	80-130
1,1-Dichloropropene	<0.1225	12.50	11.44	92	80-128
Carbon Tetrachloride	<0.1000	12.50	12.33	99	80-138
1,2-Dichloroethane	<0.1000	12.50	12.79	102	80-130
Benzene	<0.1000	12.50	13.10	105	80-120
Trichloroethene	4.699	12.50	15.91	90	73-123
1,2-Dichloropropane	<0.1000	12.50	11.88	95	80-120
Bromodichloromethane	<0.1000	12.50	12.53	100	80-120
Dibromomethane	<0.1131	12.50	12.80	102	80-120
4-Methyl-2-Pentanone	<0.5044	12.50	11.98	96	67-130
cis-1,3-Dichloropropene	<0.1000	12.50	11.81	95	80-125
Toluene	<0.1000	12.50	12.75	102	80-120
trans-1,3-Dichloropropene	<0.1000	12.50	10.34	83	77-120
1,1,2-Trichloroethane	<0.1294	12.50	12.30	98	80-120
2-Hexanone	<0.5082	12.50	10.70	86	57-131
1,3-Dichloropropane	<0.1148	12.50	12.83	103	80-120
Tetrachloroethene	0.2114	12.50	12.62	99	77-122
Dibromochloromethane	<0.1000	12.50	12.54	100	80-120
1,2-Dibromoethane	<0.1000	12.50	12.81	102	80-120
Chlorobenzene	<0.1000	12.50	12.90	103	80-120
1,1,1,2-Tetrachloroethane	<0.1383	12.50	12.75	102	80-120
Ethylbenzene	<0.1000	12.50	12.38	99	80-120
m,p-Xylenes	<0.1316	25.00	25.94	104	80-121
o-Xylene	<0.1000	12.50	12.84	103	80-120
Styrene	<0.1000	12.50	12.40	99	64-124
Bromoform	<0.1000	12.50	12.85	103	80-126
Isopropylbenzene	<0.1000	12.50	12.30	98	80-121
1,1,2,2-Tetrachloroethane	<0.1417	12.50	12.98	104	80-127
1,2,3-Trichloropropane	<0.1427	12.50	12.55	100	76-124

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TP1	Batch#:	222354
MSS Lab ID:	266019-005	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Analyte	MSS Result	Spiked	Result	%REC	Limits
Propylbenzene	<0.1000	12.50	11.64	93	79-120
Bromobenzene	<0.1000	12.50	13.29	106	80-120
1,3,5-Trimethylbenzene	<0.1000	12.50	12.29	98	80-121
2-Chlorotoluene	<0.1000	12.50	12.20	98	80-124
4-Chlorotoluene	<0.1000	12.50	12.00	96	80-120
tert-Butylbenzene	<0.1000	12.50	11.87	95	80-120
1,2,4-Trimethylbenzene	<0.1164	12.50	11.37	91	77-120
sec-Butylbenzene	<0.1000	12.50	11.30	90	79-123
para-Isopropyl Toluene	<0.1164	12.50	10.74	86	74-120
1,3-Dichlorobenzene	<0.1000	12.50	12.80	102	80-120
1,4-Dichlorobenzene	<0.1040	12.50	12.68	101	80-120
n-Butylbenzene	<0.1142	12.50	9.365	75	68-121
1,2-Dichlorobenzene	<0.1000	12.50	12.96	104	80-120
1,2-Dibromo-3-Chloropropane	<0.4962	12.50	9.690	78	67-125
1,2,4-Trichlorobenzene	<0.1123	12.50	9.930	79	68-120
Hexachlorobutadiene	<0.4449	12.50	10.46	84	73-127
Naphthalene	<0.1487	12.50	9.927	79	62-126
1,2,3-Trichlorobenzene	<0.1000	12.50	10.28	82	68-121
tert-Butyl Alcohol (TBA)	<2.072	62.50	55.46	89	49-155
Isopropyl Ether (DIPE)	<0.1000	12.50	11.52	92	65-122
Ethyl tert-Butyl Ether (ETBE)	<0.1000	12.50	11.71	94	69-120
Methyl tert-Amyl Ether (TAME)	<0.1000	12.50	11.99	96	74-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	99	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-120

*= Value outside of QC limits; see narrative
 RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TP1	Batch#:	222354
MSS Lab ID:	266019-005	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Type: MSD Lab ID: QC784686

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	8.566	86	54-126	3	29
Chloromethane	10.00	9.870	99	54-121	7	27
Vinyl Chloride	10.00	11.00	110	66-126	5	24
Bromomethane	10.00	4.649	46	31-152	5	39
Chloroethane	10.00	13.16	132 *	69-126	10	29
Trichlorofluoromethane	10.00	10.29	103	71-132	4	24
Acetone	12.50	10.56	85	47-129	6	27
Freon 113	12.50	9.551	76	67-127	3	25
1,1-Dichloroethene	12.50	12.23	98	73-129	7	25
Methylene Chloride	12.50	13.72	110	80-127	5	21
Carbon Disulfide	12.50	13.50	107	76-138	4	24
MTBE	12.50	13.27	106	71-120	6	20
trans-1,2-Dichloroethene	12.50	13.68	109	79-127	7	23
Vinyl Acetate	12.50	17.59	141	62-173	2	24
1,1-Dichloroethane	12.50	12.90	103	77-123	6	22
2-Butanone	12.50	11.14	89	56-134	0	25
cis-1,2-Dichloroethene	12.50	14.07	109	74-126	7	21
2,2-Dichloropropane	12.50	12.54	100	69-130	4	29
Chloroform	12.50	13.60	109	80-123	5	22
Bromochloromethane	12.50	14.39	115	80-122	5	20
1,1,1-Trichloroethane	12.50	13.19	106	80-130	4	23
1,1-Dichloropropene	12.50	11.31	90	80-128	1	22
Carbon Tetrachloride	12.50	12.24	98	80-138	1	24
1,2-Dichloroethane	12.50	12.72	102	80-130	1	20
Benzene	12.50	13.24	106	80-120	1	20
Trichloroethene	12.50	15.98	90	73-123	0	20
1,2-Dichloropropane	12.50	11.77	94	80-120	1	20
Bromodichloromethane	12.50	12.47	100	80-120	1	20
Dibromomethane	12.50	12.71	102	80-120	1	20
4-Methyl-2-Pentanone	12.50	11.47	92	67-130	4	22
cis-1,3-Dichloropropene	12.50	11.66	93	80-125	1	20
Toluene	12.50	12.81	102	80-120	0	21
trans-1,3-Dichloropropene	12.50	10.53	84	77-120	2	20
1,1,2-Trichloroethane	12.50	12.18	97	80-120	1	20
2-Hexanone	12.50	10.70	86	57-131	0	24
1,3-Dichloropropane	12.50	12.95	104	80-120	1	20
Tetrachloroethene	12.50	12.72	100	77-122	1	22
Dibromochloromethane	12.50	12.84	103	80-120	2	20
1,2-Dibromoethane	12.50	12.82	103	80-120	0	20
Chlorobenzene	12.50	12.99	104	80-120	1	24
1,1,1,2-Tetrachloroethane	12.50	12.86	103	80-120	1	20
Ethylbenzene	12.50	12.59	101	80-120	2	25
m,p-Xylenes	25.00	25.91	104	80-121	0	23
o-Xylene	12.50	12.81	102	80-120	0	25
Styrene	12.50	12.55	100	64-124	1	22
Bromoform	12.50	12.99	104	80-126	1	20
Isopropylbenzene	12.50	12.36	99	80-121	1	27
1,1,2,2-Tetrachloroethane	12.50	12.81	103	80-127	1	20
1,2,3-Trichloropropane	12.50	12.54	100	76-124	0	22

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150410TP1	Batch#:	222354
MSS Lab ID:	266019-005	Sampled:	04/10/15
Matrix:	Water	Received:	04/10/15
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Propylbenzene	12.50	11.52	92	79-120	1	23
Bromobenzene	12.50	13.34	107	80-120	0	22
1,3,5-Trimethylbenzene	12.50	12.21	98	80-121	1	23
2-Chlorotoluene	12.50	12.27	98	80-124	1	23
4-Chlorotoluene	12.50	12.08	97	80-120	1	21
tert-Butylbenzene	12.50	11.85	95	80-120	0	25
1,2,4-Trimethylbenzene	12.50	11.35	91	77-120	0	23
sec-Butylbenzene	12.50	11.10	89	79-123	2	24
para-Isopropyl Toluene	12.50	10.71	86	74-120	0	22
1,3-Dichlorobenzene	12.50	12.90	103	80-120	1	20
1,4-Dichlorobenzene	12.50	12.62	101	80-120	0	20
n-Butylbenzene	12.50	9.050	72	68-121	3	22
1,2-Dichlorobenzene	12.50	12.84	103	80-120	1	20
1,2-Dibromo-3-Chloropropane	12.50	9.375	75	67-125	3	28
1,2,4-Trichlorobenzene	12.50	9.853	79	68-120	1	21
Hexachlorobutadiene	12.50	10.33	83	73-127	1	25
Naphthalene	12.50	9.617	77	62-126	3	25
1,2,3-Trichlorobenzene	12.50	10.22	82	68-121	1	22
tert-Butyl Alcohol (TBA)	62.50	55.04	88	49-155	1	33
Isopropyl Ether (DIPE)	12.50	12.40	99	65-122	7	22
Ethyl tert-Butyl Ether (ETBE)	12.50	12.49	100	69-120	6	20
Methyl tert-Amyl Ether (TAME)	12.50	11.98	96	74-120	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-120

*= Value outside of QC limits; see narrative
 RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784794	Batch#:	222382
Matrix:	Water	Analyzed:	04/18/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.2
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.2
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.2
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.2
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.4
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.1
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784794	Batch#:	222382
Matrix:	Water	Analyzed:	04/18/15
Units:	ug/L		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	0.1 J	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.3
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	118	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222382
Units:	ug/L	Analyzed:	04/18/15
Diln Fac:	1.000		

Type: BS Lab ID: QC784795

Analyte	Spiked	Result	%REC	Limits
Freon 12	16.00	17.12	107	45-131
Chloromethane	16.00	18.75	117	48-133
Vinyl Chloride	16.00	19.21	120	63-132
Bromomethane	16.00	12.81	80	38-161
Chloroethane	16.00	17.50	109	62-131
Trichlorofluoromethane	16.00	18.17	114	64-137
Acetone	20.00	16.80	84	46-151
Freon 113	20.00	22.18	111	61-138
1,1-Dichloroethene	20.00	21.41	107	66-135
Methylene Chloride	20.00	20.33	102	74-131
Carbon Disulfide	20.00	22.51	113	63-150
MTBE	20.00	21.60	108	65-120
trans-1,2-Dichloroethene	20.00	20.82	104	72-134
Vinyl Acetate	20.00	49.43 b	247 *	60-194
1,1-Dichloroethane	20.00	21.88	109	68-127
2-Butanone	20.00	20.96	105	50-141
cis-1,2-Dichloroethene	20.00	20.59	103	73-129
2,2-Dichloropropane	20.00	27.43 b	137	72-146
Chloroform	20.00	21.28	106	73-126
Bromochloromethane	20.00	20.35	102	78-127
1,1,1-Trichloroethane	20.00	23.50	117	72-134
1,1-Dichloropropene	20.00	21.12	106	79-135
Carbon Tetrachloride	20.00	23.33	117	72-142
1,2-Dichloroethane	20.00	20.75	104	74-133
Benzene	20.00	21.05	105	80-123
Trichloroethene	20.00	20.36	102	80-123
1,2-Dichloropropane	20.00	19.94	100	74-120
Bromodichloromethane	20.00	20.14	101	79-121
Dibromomethane	20.00	19.46	97	80-120
4-Methyl-2-Pentanone	20.00	22.17	111	57-129
cis-1,3-Dichloropropene	20.00	21.33	107	80-130
Toluene	20.00	20.90	104	80-121
trans-1,3-Dichloropropene	20.00	20.74	104	76-122
1,1,2-Trichloroethane	20.00	19.35	97	80-120
2-Hexanone	20.00	24.66	123	49-136
1,3-Dichloropropane	20.00	20.46	102	80-120
Tetrachloroethene	20.00	20.60	103	78-130
Dibromochloromethane	20.00	19.80	99	80-123
1,2-Dibromoethane	20.00	19.86	99	80-120
Chlorobenzene	20.00	20.25	101	80-123
1,1,1,2-Tetrachloroethane	20.00	20.28	101	80-124
Ethylbenzene	20.00	21.76	109	80-123
m,p-Xylenes	40.00	43.80	110	80-126
o-Xylene	20.00	21.13	106	80-126
Styrene	20.00	21.13	106	80-122
Bromoform	20.00	20.14	101	72-132
Isopropylbenzene	20.00	22.48	112	79-130
1,1,2,2-Tetrachloroethane	20.00	20.57	103	72-129
1,2,3-Trichloropropane	20.00	20.10	100	72-124
Propylbenzene	20.00	22.72	114	79-128

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222382
Units:	ug/L	Analyzed:	04/18/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Bromobenzene	20.00	20.07	100	80-122
1,3,5-Trimethylbenzene	20.00	23.01	115	80-129
2-Chlorotoluene	20.00	21.71	109	80-130
4-Chlorotoluene	20.00	21.94	110	79-125
tert-Butylbenzene	20.00	21.80	109	79-130
1,2,4-Trimethylbenzene	20.00	21.45	107	78-124
sec-Butylbenzene	20.00	22.01	110	79-134
para-Isopropyl Toluene	20.00	20.96	105	74-125
1,3-Dichlorobenzene	20.00	20.04	100	80-124
1,4-Dichlorobenzene	20.00	20.74	104	80-121
n-Butylbenzene	20.00	19.77	99	69-135
1,2-Dichlorobenzene	20.00	19.75	99	80-123
1,2-Dibromo-3-Chloropropane	20.00	21.03	105	59-125
1,2,4-Trichlorobenzene	20.00	18.00	90	66-133
Hexachlorobutadiene	20.00	18.81	94	70-152
Naphthalene	20.00	15.78	79	53-139
1,2,3-Trichlorobenzene	20.00	16.88	84	64-134
tert-Butyl Alcohol (TBA)	100.0	119.9	120	32-155
Isopropyl Ether (DIPE)	20.00	22.22	111	57-128
Ethyl tert-Butyl Ether (ETBE)	20.00	21.98	110	62-120
Methyl tert-Amyl Ether (TAME)	20.00	20.39	102	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	107	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222382
Units:	ug/L	Analyzed:	04/18/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC784796

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	16.00	16.28	102	45-131	5	29
Chloromethane	16.00	18.17	114	48-133	3	25
Vinyl Chloride	16.00	18.19	114	63-132	5	23
Bromomethane	16.00	13.08	82	38-161	2	32
Chloroethane	16.00	17.12	107	62-131	2	24
Trichlorofluoromethane	16.00	17.08	107	64-137	6	23
Acetone	20.00	14.98	75	46-151	11	29
Freon 113	20.00	21.64	108	61-138	2	25
1,1-Dichloroethene	20.00	20.65	103	66-135	4	24
Methylene Chloride	20.00	20.70	103	74-131	2	21
Carbon Disulfide	20.00	21.67	108	63-150	4	25
MTBE	20.00	21.39	107	65-120	1	22
trans-1,2-Dichloroethene	20.00	20.16	101	72-134	3	22
Vinyl Acetate	20.00	48.25 b	241 *	60-194	2	25
1,1-Dichloroethane	20.00	21.01	105	68-127	4	21
2-Butanone	20.00	20.48	102	50-141	2	24
cis-1,2-Dichloroethene	20.00	20.33	102	73-129	1	20
2,2-Dichloropropane	20.00	25.26 b	126	72-146	8	24
Chloroform	20.00	20.70	104	73-126	3	20
Bromochloromethane	20.00	20.44	102	78-127	0	20
1,1,1-Trichloroethane	20.00	22.30	112	72-134	5	22
1,1-Dichloropropene	20.00	20.49	102	79-135	3	23
Carbon Tetrachloride	20.00	22.29	111	72-142	5	22
1,2-Dichloroethane	20.00	20.32	102	74-133	2	20
Benzene	20.00	20.70	104	80-123	2	20
Trichloroethene	20.00	19.94	100	80-123	2	20
1,2-Dichloropropane	20.00	19.79	99	74-120	1	20
Bromodichloromethane	20.00	19.71	99	79-121	2	20
Dibromomethane	20.00	19.60	98	80-120	1	20
4-Methyl-2-Pentanone	20.00	22.13	111	57-129	0	23
cis-1,3-Dichloropropene	20.00	20.84	104	80-130	2	20
Toluene	20.00	20.69	103	80-121	1	20
trans-1,3-Dichloropropene	20.00	20.76	104	76-122	0	20
1,1,2-Trichloroethane	20.00	19.95	100	80-120	3	20
2-Hexanone	20.00	24.39	122	49-136	1	24
1,3-Dichloropropane	20.00	21.08	105	80-120	3	20
Tetrachloroethene	20.00	20.43	102	78-130	1	21
Dibromochloromethane	20.00	19.91	100	80-123	1	20
1,2-Dibromoethane	20.00	20.00	100	80-120	1	20
Chlorobenzene	20.00	20.04	100	80-123	1	20
1,1,1,2-Tetrachloroethane	20.00	20.04	100	80-124	1	20
Ethylbenzene	20.00	21.39	107	80-123	2	21
m,p-Xylenes	40.00	42.36	106	80-126	3	21
o-Xylene	20.00	20.73	104	80-126	2	20
Styrene	20.00	21.16	106	80-122	0	20
Bromoform	20.00	20.66	103	72-132	3	20
Isopropylbenzene	20.00	22.23	111	79-130	1	21
1,1,2,2-Tetrachloroethane	20.00	20.91	105	72-129	2	20
1,2,3-Trichloropropane	20.00	20.23	101	72-124	1	22
Propylbenzene	20.00	22.71	114	79-128	0	21

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222382
Units:	ug/L	Analyzed:	04/18/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Bromobenzene	20.00	20.41	102	80-122	2	20
1,3,5-Trimethylbenzene	20.00	23.57	118	80-129	2	20
2-Chlorotoluene	20.00	21.55	108	80-130	1	20
4-Chlorotoluene	20.00	21.93	110	79-125	0	20
tert-Butylbenzene	20.00	22.26	111	79-130	2	23
1,2,4-Trimethylbenzene	20.00	22.51	113	78-124	5	22
sec-Butylbenzene	20.00	22.71	114	79-134	3	23
para-Isopropyl Toluene	20.00	22.50	112	74-125	7	24
1,3-Dichlorobenzene	20.00	20.71	104	80-124	3	20
1,4-Dichlorobenzene	20.00	20.78	104	80-121	0	20
n-Butylbenzene	20.00	22.14	111	69-135	11	28
1,2-Dichlorobenzene	20.00	20.48	102	80-123	4	20
1,2-Dibromo-3-Chloropropane	20.00	21.23	106	59-125	1	23
1,2,4-Trichlorobenzene	20.00	19.15	96	66-133	6	24
Hexachlorobutadiene	20.00	20.53	103	70-152	9	26
Naphthalene	20.00	18.10	90	53-139	14	25
1,2,3-Trichlorobenzene	20.00	18.76	94	64-134	11	25
tert-Butyl Alcohol (TBA)	100.0	118.7	119	32-155	1	33
Isopropyl Ether (DIPE)	20.00	21.59	108	57-128	3	20
Ethyl tert-Butyl Ether (ETBE)	20.00	21.43	107	62-120	3	20
Methyl tert-Amyl Ether (TAME)	20.00	20.34	102	69-120	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

CURTIS & TOMPKINS BFB TUNE FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0
Seqnum : 415092829003 File : bc503 Time : 05-MAR-2015 12:15

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	105632	27.09	
75	30% - 60% of mass 95	201768	51.75	
95		389888	100.00	
96	5% - 9% of mass 95	25758	6.61	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	297493	76.30	
175	5% - 9% of mass 174	21965	7.38	
176	> 95% and < 101% of mass 174	293909	98.80	
177	5% - 9% of mass 176	19360	6.59	

Analyst: MCT Date: 03/12/15 Reviewer: TKM Date: 03/12/15

CURTIS & TOMPKINS BFB TUNE FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0
Seqnum : 415150181005 File : bde05 Time : 14-APR-2015 09:21

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	102782	24.42	
75	30% - 60% of mass 95	206145	48.98	
95		420906	100.00	
96	5% - 9% of mass 95	27917	6.63	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	339541	80.67	
175	5% - 9% of mass 174	26901	7.92	
176	> 95% and < 101% of mass 174	335146	98.71	
177	5% - 9% of mass 176	22448	6.70	

Analyst: MCT Date: 04/14/15 Reviewer: LW Date: 04/15/15

CURTIS & TOMPKINS BFB TUNE FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0
Seqnum : 415151586005 File : bdf05 Time : 15-APR-2015 08:41

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	90891	24.67	
75	30% - 60% of mass 95	183642	49.85	
95		368362	100.00	
96	5% - 9% of mass 95	24172	6.56	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	300650	81.62	
175	5% - 9% of mass 174	23250	7.73	
176	> 95% and < 101% of mass 174	296170	98.51	
177	5% - 9% of mass 176	19727	6.66	

Analyst: MCT Date: 04/15/15 Reviewer: LW Date: 04/16/15

CURTIS & TOMPKINS BFB TUNE FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0
Seqnum : 415153005003 File : bdg03 Time : 16-APR-2015 07:12

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	83539	25.55	
75	30% - 60% of mass 95	165605	50.66	
95		326912	100.00	
96	5% - 9% of mass 95	21359	6.53	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	264234	80.83	
175	5% - 9% of mass 174	20714	7.84	
176	> 95% and < 101% of mass 174	259989	98.39	
177	5% - 9% of mass 176	17088	6.57	

Analyst: MCT Date: 04/16/15 Reviewer: LW Date: 04/16/15

CURTIS & TOMPKINS BFB TUNE FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0
Seqnum : 415154447003 File : bdh03 Time : 17-APR-2015 07:18

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	79634	25.11	
75	30% - 60% of mass 95	160298	50.54	
95		317184	100.00	
96	5% - 9% of mass 95	21789	6.87	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	255360	80.51	
175	5% - 9% of mass 174	19920	7.80	
176	> 95% and < 101% of mass 174	254016	99.47	
177	5% - 9% of mass 176	17250	6.79	

Analyst: MCT Date: 04/17/15 Reviewer: LW Date: 04/20/15

CURTIS & TOMPKINS BFB TUNE FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : BFB IDF : 1.0
Seqnum : 495052755006 File : jb506 Time : 05-FEB-2015 20:36

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	51514	30.11	
75	30% - 60% of mass 95	96306	56.28	
95		171114	100.00	
96	5% - 9% of mass 95	11346	6.63	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	112648	65.83	
175	5% - 9% of mass 174	8383	7.44	
176	> 95% and < 101% of mass 174	110792	98.35	
177	5% - 9% of mass 176	7545	6.81	

Analyst: DAR Date: 02/06/15 Reviewer: LW Date: 02/09/15

CURTIS & TOMPKINS BFB TUNE FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : BFB IDF : 1.0
Seqnum : 495156249002 File : jdi02 Time : 18-APR-2015 12:56

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	48106	32.72	
75	30% - 60% of mass 95	86464	58.82	
95		147008	100.00	
96	5% - 9% of mass 95	9952	6.77	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	92896	63.19	
175	5% - 9% of mass 174	6998	7.53	
176	> 95% and < 101% of mass 174	92072	99.11	
177	5% - 9% of mass 176	6405	6.96	

Analyst: DJA Date: 04/20/15 Reviewer: LW Date: 04/20/15

CURTIS & TOMPKINS BFB TUNE FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA11 Run Name : BFB IDF : 1.0
Seqnum : 835120089003 File : kcn03 Time : 24-MAR-2015 10:41

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	5955	16.73	
75	30% - 60% of mass 95	16765	47.10	
95		35592	100.00	
96	5% - 9% of mass 95	2363	6.64	
173	< 2% of mass 174	173	0.54	
174	> 50% and < 100% of mass 95	32248	90.60	
175	5% - 9% of mass 174	2404	7.45	
176	> 95% and < 101% of mass 174	31152	96.60	
177	5% - 9% of mass 176	1795	5.76	

Analyst: DJA Date: 03/25/15 Reviewer: LW Date: 03/25/15

CURTIS & TOMPKINS BFB TUNE FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA11 Run Name : BFB IDF : 1.0
Seqnum : 835153190003 File : kdg03 Time : 16-APR-2015 10:56

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	6116	17.43	
75	30% - 60% of mass 95	16656	47.47	
95		35088	100.00	
96	5% - 9% of mass 95	2330	6.64	
173	< 2% of mass 174	343	1.10	
174	> 50% and < 100% of mass 95	31048	88.49	
175	5% - 9% of mass 174	2304	7.42	
176	> 95% and < 101% of mass 174	29680	95.59	
177	5% - 9% of mass 176	2118	7.14	

Analyst: DJA Date: 04/16/15 Reviewer: LW Date: 04/17/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266019 MSVOA Water: EPA 8260B

Inst : MSVOA02
 Calnum : 415092829001
 Units : ug/L
 Date : 05-MAR-2015 14:27
 X Axis : R
 Type : WATER

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	bc507	415092829007	05-MAR-2015 14:27	S25695 (2000000X), S26560 (2000000X), S26570 (2000000X), S26571 (1000000X), S26528 (1000X)
L2	bc508	415092829008	05-MAR-2015 15:03	S25695 (1000000X), S26560 (1000000X), S26570 (1000000X), S26571 (5000000X), S26528 (1000X)
L3	bc509	415092829009	05-MAR-2015 15:38	S25695 (5000000X), S26560 (2500000X), S26570 (2500000X), S26571 (2500000X), S26528 (10000X)
L4	bc510	415092829010	05-MAR-2015 16:14	S25695 (2000000X), S26560 (1000000X), S26570 (1000000X), S26571 (1000000X), S26528 (10000X)
L5	bc511	415092829011	05-MAR-2015 16:50	S25695 (1000000X), S26560 (500000X), S26570 (500000X), S26571 (500000X), S26528 (10000X)
L6	bc512	415092829012	05-MAR-2015 17:26	S25695 (500000X), S26560 (250000X), S26570 (250000X), S26571 (250000X), S26528 (10000X)
L7	bc513	415092829013	05-MAR-2015 18:01	S25695 (200000X), S26560 (100000X), S26570 (100000X), S26571 (100000X), S26528 (10000X)
L8	bc514	415092829014	05-MAR-2015 18:37	S25695 (133300X), S26560 (6667X), S26570 (6667X), S26571 (6667X), S26528 (10000X)
L9	bc515	415092829015	05-MAR-2015 19:12	S25695 (100000X), S26560 (50000X), S26570 (50000X), S26571 (50000X), S26528 (10000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Freon 12		1.0333m	1.0540m	1.0312	1.0044	0.9900	1.0359	0.9907	0.9616	AVRG	0.98752			1.0126	3	15	0.05	0.99	
Chloromethane	1.8552m	1.4794m	1.5393	1.4441	1.4866	1.4336	1.4275	1.3921	1.3788	AVRG	0.66981			1.4930	10	15	0.10	0.99	
Vinyl Chloride	1.3424m		1.1834m	1.1476	1.0350	1.0415	1.1071	1.0711	1.0693	AVRG	0.89220			1.1208	9	15	0.05	0.99	
Bromomethane		0.4622m	0.5256	0.4908	0.5180	0.5282	0.5745	0.5821	0.6082	AVRG	1.86496			0.5362	9	15	0.05	0.99	
Chloroethane		0.7570m	0.6754	0.6393	0.6182	0.6010	0.6136	0.5959	0.6029	AVRG	1.56764			0.6379	9	15	0.05	0.99	
Trichlorofluoromethane		1.2559	1.2463	1.1854	1.2203	1.2012	1.2335	1.1904	1.1751	AVRG	0.82405			1.2135	2	15	0.05	0.99	
Acetone			0.6117m	0.5073	0.4462	0.4870	0.4492	0.4914	0.4458	AVRG	2.03570			0.4912	12	15	0.05	0.99	
Freon 113		0.6223	0.6259	0.6438	0.6088	0.5984	0.6358	0.6152	0.6068	AVRG	1.61387			0.6196	2	15	0.05	0.99	
1,1-Dichloroethene		0.5908m	0.7244	0.6849	0.6542	0.6624	0.6697	0.6549	0.6411	AVRG	1.51452			0.6603	6	15	0.05	0.99	
Methylene Chloride		0.9396	0.9056	0.9144	0.8991	0.8923	0.8985	0.8568	0.8588	AVRG	1.11650			0.8957	3	15	0.05	0.99	
Carbon Disulfide		2.5130	2.6110	2.5803	2.4999	2.5284	2.5735	2.4637	2.4781	AVRG	0.39511			2.5310	2	15	0.05	0.99	
MTBE		2.4905	2.4818	2.4597	2.4700	2.5224	2.5213	2.2645m	2.4187	AVRG	0.40756			2.4536	3	15	0.05	0.99	
trans-1,2-Dichloroethene		0.7529m	0.7749	0.7971	0.7661	0.7634	0.7637	0.7464	0.7403	AVRG	1.31048			0.7631	2	15	0.05	0.99	
Vinyl Acetate			1.7282	1.8508	2.1593	2.0690	2.1965	1.7384	1.7839	AVRG	0.51752			1.9323	11	15	0.05	0.99	
1,1-Dichloroethane		1.8863	1.9080	1.7937	1.7824	1.8003	1.7812	1.7096	1.7036	AVRG	0.55691			1.7956	4	15	0.10	0.99	
2-Butanone			0.6242	0.7164	0.6646	0.6788	0.6583	0.6788	0.6340	AVRG	1.50374			0.6650	5	15	0.05	0.99	
2,2-Dichloropropane		1.2779	1.2306	1.1457	1.0878	1.0824	1.0590	1.0022	0.9727	AVRG	0.90311			1.1073	10	15	0.05	0.99	
cis-1,2-Dichloroethene		0.9140	0.9351	0.9013	0.8609	0.8848	0.8759	0.8552	0.8483	AVRG	1.13067			0.8844	3	15	0.05	0.99	
Chloroform		1.5732	1.5891	1.5619	1.5309	1.5569	1.5600	1.5097	1.4979	AVRG	0.64623			1.5474	2	15	0.05	0.99	
Bromochloromethane		0.4237	0.4709	0.4620	0.4629	0.4710	0.4621	0.4447	0.4443	AVRG	2.19683			0.4552	4	15	0.05	0.99	
1,1,1-Trichloroethane		1.1954	1.1857	1.1912	1.1692	1.1943	1.2069	1.1665	1.1593	AVRG	0.84490			1.1836	1	15	0.05	0.99	
1,1-Dichloropropene		0.5952	0.5455	0.5666	0.5507	0.5459	0.5601	0.5422	0.5383	AVRG	1.79999			0.5556	3	15	0.05	0.99	
Carbon Tetrachloride		0.4422	0.4864	0.4798	0.4712	0.4833	0.5010	0.4865	0.4822	AVRG	2.08734			0.4791	4	15	0.05	0.99	
1,2-Dichloroethane		0.7333	0.7662	0.7300	0.7458	0.7365	0.7381	0.7142	0.7027	AVRG	1.36359			0.7334	3	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r ² %RSD	Max %RSD	Min RF	Min r ²	Flg
Benzene		1.5615	1.5815	1.5886	1.5403	1.5580	1.5340	1.4987	1.4890	AVRG		0.64769		1.5439	2	15	0.05	0.99	
Trichloroethene		0.4284	0.4291	0.4119	0.3952	0.4215	0.4031	0.4028	0.3973	AVRG		2.43216		0.4112	3	15	0.05	0.99	
1,2-Dichloropropane		0.5277	0.5276	0.5300	0.5339	0.5355	0.5279	0.5172	0.5098	AVRG		1.90043		0.5262	2	15	0.05	0.99	
Bromodichloromethane		0.5901	0.5860	0.5972	0.5941	0.6105	0.6193	0.6018	0.5959	AVRG		1.66844		0.5994	2	15	0.05	0.99	
Dibromomethane		0.3517	0.3393	0.3380	0.3358	0.3403	0.3375	0.3292	0.3254	AVRG		2.96612		0.3371	2	15	0.05	0.99	
4-Methyl-2-Pentanone			0.6836	0.7060	0.7208	0.7130	0.7196	0.7168	0.7069	AVRG		1.40936		0.7095	2	15	0.05	0.99	
cis-1,3-Dichloropropene		0.6785	0.7213	0.7117	0.7152	0.7259	0.7310	0.7205	0.7177	AVRG		1.39814		0.7152	2	15	0.05	0.99	
Toluene		1.0032	0.9623	0.9484	0.9236	0.9296	0.9498	0.9428	0.9389	AVRG		1.05283		0.9498	3	15	0.05	0.99	
trans-1,3-Dichloropropene		0.7280	0.7018	0.7206	0.7160	0.7282	0.7442	0.7427	0.7379	AVRG		1.37474		0.7274	2	15	0.05	0.99	
1,1,2-Trichloroethane		0.2538	0.2492	0.2525	0.2471	0.2533	0.2499	0.2432	0.2416	AVRG		4.01880		0.2488	2	15	0.05	0.99	
2-Hexanone			0.5097	0.5617	0.5412	0.5622	0.5624	0.5768	0.5637	AVRG		1.80521		0.5540	4	15	0.05	0.99	
1,3-Dichloropropane		0.7662	0.7530	0.7805	0.7441	0.7575	0.7646	0.7530	0.7493	AVRG		1.31832		0.7585	2	15	0.05	0.99	
Tetrachloroethene		0.3845	0.3637	0.3544	0.3434	0.3388	0.3481	0.3486	0.3521	AVRG		2.82331		0.3542	4	15	0.05	0.99	
Dibromochloromethane		0.4438	0.4545	0.4860	0.4870	0.5079	0.5338	0.5301	0.5333	AVRG		2.01186		0.4971	7	15	0.05	0.99	
1,2-Dibromoethane		0.4586	0.4827	0.4881	0.4792	0.4884	0.4973	0.4888	0.4876	AVRG		2.06683		0.4838	2	15	0.05	0.99	
Chlorobenzene		1.0766	1.0829	1.0883	1.0535	1.0617	1.0767	1.0661	1.0674	AVRG		0.93314		1.0716	1	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.3825	0.3907	0.4049	0.3951	0.3987	0.4103	0.4083	0.4086	AVRG		2.50076		0.3999	2	15	0.05	0.99	
Ethylbenzene		1.7363	1.7412	1.7579	1.7132	1.7233	1.7606	1.7505	1.7714	AVRG		0.57329		1.7443	1	15	0.05	0.99	
m,p-Xylenes	0.5559	0.5906	0.6111	0.6089	0.5994	0.6112	0.6218	0.6125	0.6161	AVRG		1.65824		0.6030	3	15	0.05	0.99	
o-Xylene		0.5837	0.6162	0.6243	0.6220	0.6201	0.6392	0.6227	0.6240	AVRG		1.61545		0.6190	3	15	0.05	0.99	
Styrene		0.9974	1.0432	1.0784	1.0891	1.1110	1.1522	1.1266	1.1356	AVRG		0.91602		1.0917	5	15	0.05	0.99	
Bromoform		0.2566	0.2702	0.3005	0.3232	0.3397	0.3579	0.3636	0.3684	AVRG		3.110053		0.3225	13	15	0.10	0.99	
Isopropylbenzene		3.2023	3.2334	3.1919	3.1547	3.1917	3.2691	3.3068	3.3143	AVRG		0.30931		3.2330	2	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		1.2403	1.3367	1.3321	1.3496	1.3178	1.3089	1.2767	1.2822	AVRG		0.76597		1.3055	3	15	0.30	0.99	
1,2,3-Trichloropropane		1.2088	1.1508	1.1492	1.0948	1.0831	1.0799	1.0929	1.0883	AVRG		0.89408		1.1185	4	15	0.05	0.99	
Propylbenzene		3.9851	3.7872	3.7390	3.6982	3.6922	3.7797	3.8001	3.8149	AVRG		0.26406		3.7870	2	15	0.05	0.99	
Bromobenzene		1.0343	0.9674	0.9841	0.9799	0.9640	0.9647	0.9766	0.9752	AVRG		1.01961		0.9808	2	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.5626	2.4688	2.4965	2.4804	2.6102	2.5442	2.5591	2.5601	AVRG		0.39444		2.5352	2	15	0.05	0.99	
2-Chlorotoluene		2.9536	2.8507	2.8317	2.7629	2.8385	2.7480	2.7750	2.7532	AVRG		0.35534		2.8142	2	15	0.05	0.99	
4-Chlorotoluene		2.8909	2.5973	2.5738	2.4910	2.5204	2.5683	2.5802	2.5859	AVRG		0.38447		2.6010	5	15	0.05	0.99	
tert-Butylbenzene		2.2226	2.0939	2.0750	2.0584	2.0690	2.1540	2.1607	2.1775	AVRG		0.47028		2.1264	3	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.3172	2.2576	2.3840	2.3484	2.4330	2.5275	2.5728	2.5891	AVRG		0.41174		2.4287	5	15	0.05	0.99	
sec-Butylbenzene		3.0429	3.0213	3.0299	3.0096	3.0373	3.1913	3.1761	3.1952	AVRG		0.32384		3.0880	3	15	0.05	0.99	
para-Isopropyl Toluene		2.2490	2.2246	2.2409	2.3141	2.2741	2.3815	2.4034	2.4256	AVRG		0.43213		2.3141	3	15	0.05	0.99	
1,3-Dichlorobenzene		1.4962	1.5255	1.5211	1.4937	1.4570	1.4832	1.4945	1.4992	AVRG		0.66832		1.4963	1	15	0.05	0.99	
1,4-Dichlorobenzene		1.7022	1.5569	1.5169	1.5193	1.4927	1.5090	1.5228	1.5354	AVRG		0.64749		1.5444	4	15	0.05	0.99	
n-Butylbenzene		1.9251	1.7483	1.7998	1.7906	1.8544	2.0140	2.0347	2.0759	AVRG		0.52484		1.9053	7	15	0.05	0.99	
1,2-Dichlorobenzene		1.6049	1.5796	1.5678	1.5546	1.5478	1.5521	1.5547	1.5703	AVRG		0.63837		1.5665	1	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane		0.2801	0.2804	0.2617	0.2703	0.2671	0.2678	0.2726	0.2668	AVRG		3.69174		0.2709	2	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.6421	0.5671	0.6095	0.6218	0.6647	0.7046	0.7176	0.7366	AVRG		1.51972		0.6580	9	15	0.05	0.99	
Hexachlorobutadiene		0.4841	0.4253	0.4071	0.4036	0.3977	0.4210	0.4186	0.4199	AVRG		2.36880		0.4222	6	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r ² %RSD	Max %RSD	Min RF	Min r ²	FLg
Naphthalene	1.5377	1.4713	1.5654	1.6770	1.8343	1.9158	1.9997	2.0211	AVRG	0.57052				1.7528	12	15	0.05	0.99	
1,2,3-Trichlorobenzene	0.5631	0.5634	0.6303	0.6547	0.6964	0.7376	0.7539	0.7683	AVRG	1.49041				0.6710	12	15	0.05	0.99	
tert-Butyl Alcohol (TEA)	0.0852	0.0787	0.0752	0.0738	0.0758	0.0738	0.0855	0.0746	AVRG	12.8509				0.0778	6	15	0.005	0.99	
Isopropyl Ether (DIPE)	4.2600	4.2918	4.2355	4.2629	4.3565	4.3699	4.2475	4.2110	AVRG	0.23368				4.2794	1	15	0.05	0.99	
Ethyl tert-Butyl Ether (ETBE)	3.1905	3.2227	3.2351	3.2261	3.2965	3.3383	3.2383	3.2291	AVRG	0.30797				3.2471	1	15	0.05	0.99	
Methyl tert-Amyl Ether (TAME)	1.3077	1.3497	1.3177	1.3265	1.3408	1.3357	1.3095	1.2949	AVRG	0.75597				1.3228	1	15	0.05	0.99	
Dibromofluoromethane	0.7952	0.8172	0.8166	0.8006	0.8225	0.8171	0.7884	0.7880	AVRG	1.23990				0.8065	2	15	0.05	0.99	
1,2-Dichloroethane-d4	0.5345	0.5373	0.5390	0.5332	0.5344	0.5201	0.5034	0.4913	AVRG	1.90542				0.5248	3	15	0.05	0.99	
Toluene-d8	1.2703	1.2944	1.2825	1.2911	1.2707	1.2784	1.2793	1.2919	AVRG	0.77894				1.2838	1	15	0.05	0.99	
Bromofluorobenzene	1.1364	1.1452	1.1328	1.1285	1.1077	1.0959	1.1144	1.1148	AVRG	0.89251				1.1204	1	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	2	2.0000	4	5.0000	2	10.000	-1	20.000	-2	50.000	2	75.000	-2	100.00	-5
Chloromethane	0.5000	24	1.0000	-1	2.0000	3	5.0000	-3	10.000	0	20.000	-4	50.000	-4	75.000	-7	100.00	-8
Vinyl Chloride	0.5000	20	1.0000	6	2.0000	2	5.0000	-8	10.000	-3	20.000	-7	50.000	-1	75.000	-4	100.00	-5
Bromomethane			1.0000	-14	2.0000	-2	5.0000	-8	10.000	-3	20.000	-2	50.000	7	75.000	9	100.00	13
Chloroethane			1.0000	19	2.0000	6	5.0000	0	10.000	-3	20.000	-6	50.000	-4	75.000	-7	100.00	-5
Trichlorofluoromethane			1.0000	3	2.0000	3	5.0000	-2	10.000	1	20.000	-1	50.000	2	75.000	-2	100.00	-3
Acetone					2.0000	25	5.0000	3	10.000	-9	20.000	-1	50.000	-9	75.000	0	100.00	-9
Freon 113			0.5000	0	2.0000	1	5.0000	4	10.000	-2	20.000	-3	50.000	3	75.000	-1	100.00	-2
1,1-Dichloroethene			0.5000	-11	2.0000	10	5.0000	4	10.000	-1	20.000	0	50.000	1	75.000	-1	100.00	-3
Methylene Chloride			0.5000	5	2.0000	1	5.0000	2	10.000	0	20.000	0	50.000	0	75.000	-4	100.00	-4
Carbon Disulfide			0.5000	-1	2.0000	3	5.0000	2	10.000	-1	20.000	0	50.000	2	75.000	-3	100.00	-2
MTBE			0.5000	2	2.0000	1	5.0000	0	10.000	1	20.000	3	50.000	3	75.000	-8	100.00	-1
trans-1,2-Dichloroethene			0.5000	-1	2.0000	2	5.0000	4	10.000	0	20.000	0	50.000	0	75.000	-2	100.00	-3
Vinyl Acetate					2.0000	-11	5.0000	-4	10.000	12	20.000	7	50.000	14	75.000	-10	100.00	-8
1,1-Dichloroethane			0.5000	5	2.0000	6	5.0000	0	10.000	-1	20.000	0	50.000	-1	75.000	-5	100.00	-5
2-Butanone					2.0000	-6	5.0000	8	10.000	0	20.000	2	50.000	-1	75.000	2	100.00	-5
2,2-Dichloropropane			0.5000	15	2.0000	11	5.0000	3	10.000	-2	20.000	-2	50.000	-4	75.000	-9	100.00	-12
cis-1,2-Dichloroethene			0.5000	3	2.0000	6	5.0000	2	10.000	-3	20.000	0	50.000	-1	75.000	-3	100.00	-4
Chloroform			0.5000	2	2.0000	3	5.0000	1	10.000	-1	20.000	1	50.000	1	75.000	-2	100.00	-3
Bromochloromethane			0.5000	-7	2.0000	3	5.0000	2	10.000	2	20.000	3	50.000	2	75.000	-2	100.00	-2
1,1,1-Trichloroethane			0.5000	1	2.0000	0	5.0000	1	10.000	-1	20.000	1	50.000	2	75.000	-1	100.00	-2
1,1-Dichloropropene			0.5000	7	2.0000	-2	5.0000	2	10.000	-1	20.000	-2	50.000	1	75.000	-2	100.00	-3
Carbon Tetrachloride			0.5000	-8	2.0000	2	5.0000	0	10.000	-2	20.000	1	50.000	5	75.000	2	100.00	1
1,2-Dichloroethane			0.5000	0	2.0000	4	5.0000	0	10.000	2	20.000	0	50.000	0	75.000	-3	100.00	-4
Benzene			0.5000	1	2.0000	2	5.0000	3	10.000	0	20.000	1	50.000	-1	75.000	-3	100.00	-4
Trichloroethene			0.5000	4	2.0000	4	5.0000	0	10.000	-4	20.000	3	50.000	-2	75.000	-2	100.00	-3
1,2-Dichloropropane			0.5000	0	2.0000	0	5.0000	1	10.000	1	20.000	2	50.000	0	75.000	-2	100.00	-3
Bromodichloromethane			0.5000	-2	2.0000	-2	5.0000	0	10.000	-1	20.000	2	50.000	3	75.000	0	100.00	-1
Dibromomethane			0.5000	4	2.0000	1	5.0000	0	10.000	0	20.000	1	50.000	0	75.000	-2	100.00	-3
4-Methyl-2-Pentanone					2.0000	-4	5.0000	0	10.000	2	20.000	0	50.000	0	75.000	1	100.00	0
cis-1,3-Dichloropropene			0.5000	-5	2.0000	1	5.0000	0	10.000	0	20.000	1	50.000	2	75.000	1	100.00	0
Toluene			0.5000	6	2.0000	1	5.0000	0	10.000	-3	20.000	-2	50.000	0	75.000	-1	100.00	-1
trans-1,3-Dichloropropene			0.5000	0	2.0000	-4	5.0000	-1	10.000	-2	20.000	0	50.000	2	75.000	2	100.00	1
1,1,2-Trichloroethane			0.5000	2	2.0000	0	5.0000	1	10.000	-1	20.000	2	50.000	0	75.000	-2	100.00	-3
2-Hexanone					2.0000	-8	5.0000	1	10.000	-2	20.000	1	50.000	2	75.000	4	100.00	2
1,3-Dichloropropane			0.5000	1	2.0000	-1	5.0000	3	10.000	-2	20.000	0	50.000	1	75.000	-1	100.00	-1
Tetrachloroethene			0.5000	9	2.0000	3	5.0000	0	10.000	-3	20.000	-4	50.000	-2	75.000	-2	100.00	-1
Dibromochloromethane			0.5000	-11	2.0000	-9	5.0000	-2	10.000	-2	20.000	2	50.000	7	75.000	7	100.00	7
1,2-Dibromoethane			0.5000	-5	2.0000	0	5.0000	1	10.000	-1	20.000	1	50.000	3	75.000	1	100.00	1
Chlorobenzene			0.5000	0	2.0000	1	5.0000	2	10.000	-2	20.000	-1	50.000	0	75.000	-1	100.00	0
1,1,1,2-Tetrachloroethane			0.5000	-4	2.0000	-2	5.0000	1	10.000	-1	20.000	0	50.000	3	75.000	2	100.00	2
Ethylbenzene			0.5000	0	2.0000	0	5.0000	1	10.000	-2	20.000	-1	50.000	1	75.000	0	100.00	2

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	-8	1.0000	-2	4.0000	1	10.000	1	20.000	-1	40.000	-1	100.00	1	150.00	2	200.00	2
o-Xylene			0.5000	-6	2.0000	0	5.0000	0	10.000	0	20.000	0	50.000	0	75.000	1	100.00	1
Styrene			0.5000	-9	2.0000	-4	5.0000	-4	10.000	0	20.000	0	50.000	2	75.000	3	100.00	4
Bromoform			0.5000	-20	2.0000	-16	5.0000	-16	10.000	0	20.000	0	50.000	5	75.000	11	100.00	14
Isopropylbenzene			0.5000	-1	2.0000	0	5.0000	0	10.000	-1	20.000	-2	50.000	-1	75.000	2	100.00	3
1,1,2,2-Tetrachloroethane			0.5000	-5	2.0000	2	5.0000	2	10.000	3	20.000	3	50.000	1	75.000	-2	100.00	-2
1,2,3-Trichloropropane			0.5000	8	2.0000	3	5.0000	3	10.000	-2	20.000	-2	50.000	-3	75.000	-2	100.00	-3
Propylbenzene			0.5000	5	2.0000	0	5.0000	0	10.000	-1	20.000	-2	50.000	0	75.000	0	100.00	1
Bromobenzene			0.5000	5	2.0000	-1	5.0000	-1	10.000	0	20.000	0	50.000	-2	75.000	0	100.00	-1
1,3,5-Trimethylbenzene			0.5000	1	2.0000	-3	5.0000	-3	10.000	-2	20.000	-2	50.000	3	75.000	1	100.00	1
2-Chlorotoluene			0.5000	5	2.0000	1	5.0000	1	10.000	-2	20.000	-2	50.000	1	75.000	-1	100.00	-2
4-Chlorotoluene			0.5000	11	2.0000	0	5.0000	0	10.000	-4	20.000	-4	50.000	-3	75.000	-1	100.00	-1
tert-Butylbenzene			0.5000	5	2.0000	-2	5.0000	-2	10.000	-3	20.000	-3	50.000	-3	75.000	2	100.00	2
1,2,4-Trimethylbenzene			0.5000	-5	2.0000	-7	5.0000	-7	10.000	-2	20.000	-2	50.000	0	75.000	4	100.00	7
sec-Butylbenzene			0.5000	-1	2.0000	-2	5.0000	-2	10.000	-3	20.000	-3	50.000	-2	75.000	3	100.00	3
para-Isopropyl Toluene			0.5000	-3	2.0000	-4	5.0000	-4	10.000	0	20.000	0	50.000	-2	75.000	3	100.00	5
1,3-Dichlorobenzene			0.5000	0	2.0000	2	5.0000	2	10.000	0	20.000	0	50.000	-3	75.000	0	100.00	0
1,4-Dichlorobenzene			0.5000	10	2.0000	1	5.0000	1	10.000	-2	20.000	-2	50.000	-3	75.000	-2	100.00	-1
n-Butylbenzene			0.5000	1	2.0000	-8	5.0000	-8	10.000	-6	20.000	-6	50.000	-3	75.000	6	100.00	9
1,2-Dichlorobenzene			0.5000	2	2.0000	1	5.0000	1	10.000	-1	20.000	-1	50.000	-1	75.000	-1	100.00	0
1,2-Dibromo-3-Chloropropane			0.5000	3	2.0000	4	5.0000	4	10.000	0	20.000	0	50.000	-1	75.000	1	100.00	-1
1,2,4-Trichlorobenzene			0.5000	-2	2.0000	-14	5.0000	-14	10.000	-6	20.000	-6	50.000	1	75.000	7	100.00	12
Hexachlorobutadiene			0.5000	15	2.0000	1	5.0000	1	10.000	-4	20.000	-4	50.000	-6	75.000	0	100.00	-1
Naphthalene			0.5000	-12	2.0000	-16	5.0000	-16	10.000	-4	20.000	-4	50.000	5	75.000	14	100.00	15
1,2,3-Trichlorobenzene			0.5000	-16	2.0000	-16	5.0000	-16	10.000	-2	20.000	-2	50.000	4	75.000	10	100.00	15
tert-Butyl Alcohol (TEA)			5.0000	9	20.000	1	50.000	1	100.00	-5	200.00	-5	500.00	-3	750.00	10	1000.0	-4
Isopropyl Ether (DIPE)			0.5000	0	2.0000	0	5.0000	0	10.000	-1	20.000	0	50.000	2	75.000	-1	100.00	-2
Ethyl tert-Butyl Ether (ETBE)			0.5000	-2	2.0000	-1	5.0000	-1	10.000	-1	20.000	-1	50.000	2	75.000	0	100.00	-1
Methyl tert-Amyl Ether (TAME)			0.5000	-1	2.0000	2	5.0000	2	10.000	0	20.000	0	50.000	1	75.000	-1	100.00	-2
Dibromofluoromethane	50.000	-1	50.000	1	50.000	1	50.000	1	50.000	-1	50.000	-1	50.000	2	50.000	1	50.000	-2
1,2-Dichloroethane-d4	50.000	2	50.000	2	50.000	3	50.000	3	50.000	2	50.000	2	50.000	2	50.000	-1	50.000	-6
Toluene-d8	50.000	-1	50.000	1	50.000	0	50.000	0	50.000	-1	50.000	-1	50.000	0	50.000	0	50.000	1
Bromofluorobenzene	50.000	1	50.000	2	50.000	1	50.000	1	50.000	-1	50.000	1	50.000	-1	50.000	-2	50.000	0

MCT 03/12/15 [Freon 12]: Combined split peak in multiple levels.

MCT 03/12/15 [Chloromethane]: Corrected baseline noise or negative peak in multiple levels.

MCT 03/12/15 [Vinyl Chloride]: Combined split peak in multiple levels.

MCT 03/12/15 [Bromomethane]: Corrected baseline noise or negative peak in multiple levels.

MCT 03/12/15 [Chloroethane]: Combined split peak in multiple levels.
MCT 03/12/15 [Acetone]: Corrected baseline noise or negative peak in multiple levels.
MCT 03/12/15 [Isopropanol]: Corrected baseline noise or negative peak in multiple levels.
MCT 03/12/15 [trans-1,2-Dichloroethene]: Corrected baseline noise or negative peak in (bc508).
MCT 03/12/15 [1,1-Dichloroethene]: Corrected baseline noise or negative peak in (bc508).
MCT 03/12/15 [2-Chloroethylvinylether]: Picked or reassigned peak in multiple levels.

Analyst: MCT Date: 03/12/15 Reviewer: TKM Date: 03/12/15

m>manual integration
Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor
Page 6 of 6

415092829001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA02
Calnum : 415092829001

Cal Date : 05-MAR-2015

Type : WATER

ICV 415092829016 (bc516 05-MAR-2015) stds: S26359 (10000X), S26528 (1000X)
ICV 415092829017 (bc517 05-MAR-2015) stds: S26569 (10000X), S26642 (10000X),
S26759 (10000X), S26528 (1000X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	415092829016	20.00	17.44	ug/L	-13	30	
Chloromethane	415092829016	20.00	17.29	ug/L	-14	30	
Vinyl Chloride	415092829016	20.00	19.30	ug/L	-3	20	
Bromomethane	415092829016	20.00	19.52	ug/L	-2	30	
Chloroethane	415092829016	20.00	18.73	ug/L	-6	30	
Trichlorofluoromethane	415092829016	20.00	19.19	ug/L	-4	30	
Acetone	415092829017	25.00	19.24	ug/L	-23	40	!v-
Freon 113	415092829017	25.00	21.93	ug/L	-12	30	
1,1-Dichloroethene	415092829017	25.00	23.66	ug/L	-5	20	
Methylene Chloride	415092829017	25.00	24.53	ug/L	-2	30	
Carbon Disulfide	415092829017	25.00	25.40	ug/L	2	30	
MTBE	415092829017	25.00	23.78	ug/L	-5	30	
trans-1,2-Dichloroethene	415092829017	25.00	24.07	ug/L	-4	30	
Vinyl Acetate	415092829017	25.00	31.21	ug/L	25	40	!v+
1,1-Dichloroethane	415092829017	25.00	23.58	ug/L	-6	30	
2-Butanone	415092829017	25.00	21.71	ug/L	-13	40	
2,2-Dichloropropane	415092829017	25.00	21.63	ug/L	-13	30	
cis-1,2-Dichloroethene	415092829017	25.00	24.48	ug/L	-2	30	
Chloroform	415092829017	25.00	24.53	ug/L	-2	20	
Bromochloromethane	415092829017	25.00	25.49	ug/L	2	30	
1,1,1-Trichloroethane	415092829017	25.00	24.89	ug/L	0	30	
1,1-Dichloropropene	415092829017	25.00	23.88	ug/L	-4	30	
Carbon Tetrachloride	415092829017	25.00	25.20	ug/L	1	30	
1,2-Dichloroethane	415092829017	25.00	23.92	ug/L	-4	30	
Benzene	415092829017	25.00	25.46	ug/L	2	30	
Trichloroethene	415092829017	25.00	24.65	ug/L	-1	30	
1,2-Dichloropropane	415092829017	25.00	23.59	ug/L	-6	20	
Bromodichloromethane	415092829017	25.00	24.29	ug/L	-3	30	
Dibromomethane	415092829017	25.00	24.43	ug/L	-2	30	
4-Methyl-2-Pentanone	415092829017	25.00	23.09	ug/L	-8	40	
cis-1,3-Dichloropropene	415092829017	25.00	24.32	ug/L	-3	30	
Toluene	415092829017	25.00	25.67	ug/L	3	20	
trans-1,3-Dichloropropene	415092829017	25.00	22.90	ug/L	-8	30	
1,1,2-Trichloroethane	415092829017	25.00	24.65	ug/L	-1	30	
2-Hexanone	415092829017	25.00	23.01	ug/L	-8	40	
1,3-Dichloropropane	415092829017	25.00	25.57	ug/L	2	30	
Tetrachloroethene	415092829017	25.00	25.72	ug/L	3	30	
Dibromochloromethane	415092829017	25.00	25.75	ug/L	3	30	
1,2-Dibromoethane	415092829017	25.00	25.22	ug/L	1	30	
Chlorobenzene	415092829017	25.00	25.74	ug/L	3	30	
1,1,1,2-Tetrachloroethane	415092829017	25.00	25.16	ug/L	1	30	
Ethylbenzene	415092829017	25.00	26.08	ug/L	4	20	
m,p-Xylenes	415092829017	50.00	52.57	ug/L	5	30	
o-Xylene	415092829017	25.00	26.03	ug/L	4	30	
Styrene	415092829017	25.00	26.52	ug/L	6	30	
Bromoform	415092829017	25.00	26.21	ug/L	5	30	
Isopropylbenzene	415092829017	25.00	25.77	ug/L	3	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	415092829017	25.00	24.54	ug/L	-2	30	
1,2,3-Trichloropropane	415092829017	25.00	24.20	ug/L	-3	30	
Propylbenzene	415092829017	25.00	25.35	ug/L	1	30	
Bromobenzene	415092829017	25.00	26.00	ug/L	4	30	
1,3,5-Trimethylbenzene	415092829017	25.00	26.56	ug/L	6	30	
2-Chlorotoluene	415092829017	25.00	25.26	ug/L	1	30	
4-Chlorotoluene	415092829017	25.00	25.50	ug/L	2	30	
tert-Butylbenzene	415092829017	25.00	26.03	ug/L	4	30	
1,2,4-Trimethylbenzene	415092829017	25.00	25.77	ug/L	3	30	
sec-Butylbenzene	415092829017	25.00	26.09	ug/L	4	30	
para-Isopropyl Toluene	415092829017	25.00	25.67	ug/L	3	30	
1,3-Dichlorobenzene	415092829017	25.00	25.91	ug/L	4	30	
1,4-Dichlorobenzene	415092829017	25.00	25.83	ug/L	3	30	
n-Butylbenzene	415092829017	25.00	25.56	ug/L	2	30	
1,2-Dichlorobenzene	415092829017	25.00	25.92	ug/L	4	30	
1,2-Dibromo-3-Chloropropane	415092829017	25.00	22.40	ug/L	-10	30	
1,2,4-Trichlorobenzene	415092829017	25.00	26.15	ug/L	5	30	
Hexachlorobutadiene	415092829017	25.00	24.64	ug/L	-1	30	
Naphthalene	415092829017	25.00	23.85	ug/L	-5	30	
1,2,3-Trichlorobenzene	415092829017	25.00	26.99	ug/L	8	30	
tert-Butyl Alcohol (TBA)	415092829017	125.0	96.06	ug/L	-23	30	!v-
Isopropyl Ether (DIPE)	415092829017	25.00	23.70	ug/L	-5	30	
Ethyl tert-Butyl Ether (ETBE)	415092829017	25.00	23.47	ug/L	-6	30	
Methyl tert-Amyl Ether (TAME)	415092829017	25.00	23.23	ug/L	-7	30	

415092829016: Analyst: TKM

Date: 03/12/15 *

Reviewer: MCT

Date: 03/12/15

415092829017: Analyst: TKM

Date: 03/12/15 *

Reviewer: MCT

Date: 03/12/15

!=warning +=high bias -=low bias v=ICV

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266019 MSVOA Water: EPA 8260B

Inst : MSVOA10 Name : 826GOX10
 Calnum : 495052755001 Date : 05-FEB-2015 23:42 Type : WATER
 Units : ug/L X Axis : R

Level File	Seqnum	Sample ID	Analyzed	StdS
L1	j512	495052755012	0.25/0.5PPB 05-FEB-2015 23:42	S26396 (200000X), S24979 (1000000X), S26526 (2500X)
L2	j513	495052755013	0.5/1PPB 06-FEB-2015 00:13	S24977 (1000000X), S26560 (1000000X), S26396 (1000000X), S24979 (500000X), S26526 (2500X)
L3	j514	495052755014	2PPB 06-FEB-2015 00:44	S24977 (500000X), S26560 (250000X), S26396 (250000X), S24979 (250000X), S26526 (2500X)
L4	j515	495052755015	5PPB 06-FEB-2015 01:14	S24977 (200000X), S26560 (100000X), S26396 (100000X), S24979 (100000X), S26526 (2500X)
L5	j516	495052755016	10PPB 06-FEB-2015 01:45	S24977 (100000X), S26560 (50000X), S26396 (50000X), S24979 (50000X), S26526 (2500X)
L6	j517	495052755017	20PPB 06-FEB-2015 02:16	S24977 (50000X), S26560 (25000X), S26396 (25000X), S24979 (25000X), S26526 (2500X)
L7	j518	495052755018	50PPB 06-FEB-2015 02:47	S24977 (20000X), S26560 (10000X), S26396 (10000X), S24979 (10000X), S26526 (2500X)
L8	j519	495052755019	75PPB 06-FEB-2015 03:18	S24977 (13330X), S26560 (6667X), S26396 (6667X), S24979 (6667X), S26526 (2500X)
L9	j520	495052755020	100PPB 06-FEB-2015 03:49	S24977 (10000X), S26560 (5000X), S26396 (5000X), S24979 (5000X), S26526 (2500X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.7200	0.7451m	0.8762	0.7208	0.6960	0.6389	0.6668	0.6609	AVRG	1.39743			0.7156	10	15	0.05	0.99	
Chloromethane	1.1933	1.2818	1.1197	1.2258	1.1109	1.0486	0.9426	0.9730	0.9073	AVRG		0.91809		1.0892	12	15	0.10	0.99	
Vinyl Chloride	0.7817	0.9720m	0.9155	0.9942m	0.8852	0.8307	0.7593	0.7691	0.7363	AVRG		1.17739		0.8493	11	15	0.05	0.99	
Bromomethane		0.5414	0.5647	0.5824	0.5280	0.5145	0.4859	0.5045	0.4923	AVRG		1.89857		0.5267	7	15	0.05	0.99	
Chloroethane		0.5721	0.5790	0.5959	0.5419	0.5287	0.4890	0.4966	0.4727	AVRG		1.87092		0.5345	9	15	0.05	0.99	
Trichlorofluoromethane		1.0020	1.0131	1.1562	1.0019	0.9429	0.8883	0.9107	0.8904	AVRG		1.02490		0.9757	9	15	0.05	0.99	
Acetone			0.5128	0.4662	0.3925	0.4166	0.3674	0.3615	0.3758	AVRG		2.41983		0.4133	14	15	0.05	0.99	
Freon 113			0.5620	0.5767	0.5236	0.5341	0.5023	0.4860	0.4818	AVRG		1.90918		0.5238	7	15	0.05	0.99	
1,1-Dichloroethene		0.4993	0.5135	0.5326	0.4759	0.5052	0.4701	0.4779	0.4626	AVRG		2.03197		0.4921	5	15	0.05	0.99	
Methylene Chloride		0.6928	0.6848	0.7158	0.6763	0.6506	0.6552	0.6657	0.6522	AVRG		1.48330		0.6742	3	15	0.05	0.99	
Carbon Disulfide		2.1802	2.1319	2.1963	2.0551	2.0269	1.8866	1.8940	1.8560	AVRG		0.49300		2.0284	7	15	0.05	0.99	
MTBE		2.0578	2.0223	2.1270	1.9500	1.9035	1.8303	1.8291	1.7568	AVRG		0.51690		1.9346	7	15	0.05	0.99	
trans-1,2-Dichloroethene		0.5917	0.6014	0.6057	0.5815	0.5828	0.5553	0.5657	0.5500	AVRG		1.72633		0.5793	4	15	0.05	0.99	
Vinyl Acetate			0.9843	0.9843	0.9642	0.8943	0.9551	1.0593	0.9550	AVRG		1.03230		0.9687	6	15	0.05	0.99	
1,1-Dichloroethane		1.4531	1.3966	1.4640	1.3806	1.3453	1.2564	1.2484	1.1707	AVRG		0.74661		1.3394	8	15	0.10	0.99	
2-Butanone				0.5369	0.4890	0.4919	0.4547	0.4471	0.4530	AVRG		2.08881		0.4787	7	15	0.05	0.99	
2,2-Dichloropropane		1.0050	0.9369	0.9579	0.8991	0.8855	0.8104	0.7842	0.7384	AVRG		1.14004		0.8772	10	15	0.05	0.99	
cis-1,2-Dichloroethene		0.6240	0.6904	0.6785	0.6445	0.6364	0.6263	0.6313	0.6154	AVRG		1.55436		0.6434	4	15	0.05	0.99	
Chloroform		1.3821	1.2397	1.3161	1.2331	1.2004	1.1243	1.1062	1.0572	AVRG		0.82822		1.2074	9	15	0.05	0.99	
Bromochloromethane		0.2969	0.3233	0.3388	0.3260	0.3207	0.3293	0.3379	0.3312	AVRG		3.07196		0.3255	4	15	0.05	0.99	
1,1,1-Trichloroethane		0.9230	0.9601	0.9344	0.9385	0.9308	0.8579	0.8415	0.8022	AVRG		1.11291		0.8985	6	15	0.05	0.99	
1,1-Dichloropropene		0.6346	0.6106	0.5925	0.5617	0.5771	0.5451	0.5334	0.4940	AVRG		1.75865		0.5686	8	15	0.05	0.99	
Carbon Tetrachloride		0.5027	0.4792	0.4774	0.4647	0.4858	0.4506	0.4425	0.4118	AVRG		2.15365		0.4643	6	15	0.05	0.99	
1,2-Dichloroethane		0.7522	0.7258	0.7686	0.6972	0.6987	0.6515	0.6269	0.5945	AVRG		1.45048		0.6894	9	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r ² %RSD	Max %RSD	Min RF	Min r ²	Flg
Benzene		1.5955	1.5498	1.5987	1.4798	1.4985	1.4439	1.4355	1.3590	AVRG	0.66886			1.4951	6	15	0.05	0.99	
Trichloroethene		0.4183	0.4091	0.4142	0.3913	0.4097	0.3867	0.3905	0.3830	AVRG				0.4003	3	15	0.05	0.99	
1,2-Dichloropropane		0.5200	0.5002	0.5217m	0.4687	0.4896	0.4649	0.4658	0.4440	AVRG				0.4844	6	15	0.05	0.99	
Bromodichloromethane		0.5727	0.5832	0.6325	0.5890	0.5967	0.5784	0.5842	0.5568	AVRG				0.5867	4	15	0.05	0.99	
Dibromomethane		0.3044	0.3106	0.3088	0.3004	0.2988	0.2949	0.2972	0.2894	AVRG				0.3006	2	15	0.05	0.99	
4-Methyl-2-Pentanone				0.5905	0.5533	0.5623	0.5691	0.5590	0.5772	AVRG				0.5685	2	15	0.05	0.99	
cis-1,3-Dichloropropene		0.6562	0.6577	0.6951	0.6677	0.6842	0.6684	0.6731	0.6429	AVRG				0.6682	2	15	0.05	0.99	
Toluene		1.0720	1.0784	1.0924	1.0502	1.0513	1.0110	1.0183	0.9900	AVRG				1.0455	3	15	0.05	0.99	
trans-1,3-Dichloropropene		0.7118	0.6669	0.7483	0.6914	0.7069	0.6968	0.6916	0.6828	AVRG				0.6996	3	15	0.05	0.99	
1,1,2-Trichloroethane		0.2157	0.2475	0.2527	0.2465	0.2362	0.2368	0.2402	0.2358	AVRG				0.2389	5	15	0.05	0.99	
2-Hexanone				0.3721	0.3744	0.3847	0.4284	0.4177	0.4596	AVRG				0.4061	9	15	0.05	0.99	
1,3-Dichloropropane		0.7704	0.7965	0.8339	0.7816	0.7746	0.7614	0.7373	0.7344	AVRG				0.7738	4	15	0.05	0.99	
Tetrachloroethene		0.4103	0.4076	0.4114	0.4001	0.4113	0.4061	0.4037	0.4074	AVRG				0.4072	1	15	0.05	0.99	
Dibromochloromethane		0.4356	0.4572	0.4972	0.4843	0.4782	0.4920	0.5065	0.4988	AVRG				0.4812	5	15	0.05	0.99	
1,2-Dibromoethane		0.3744	0.4435	0.4571	0.4376	0.4388	0.4442	0.4514	0.4552	AVRG				0.4378	6	15	0.05	0.99	
Chlorobenzene		1.1235	1.1661	1.1597	1.1019	1.1030	1.0896	1.0841	1.0648	AVRG				1.1116	3	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.3591	0.4004	0.4183	0.4126	0.4086	0.4106	0.4107	0.4107	AVRG				0.4039	5	15	0.05	0.99	
Ethylbenzene		2.0799	2.1015	2.0978	2.0228	2.0023	1.8702	1.7861	1.7335	AVRG				1.9618	7	15	0.05	0.99	
m,p-Xylenes	0.7071	0.6294	0.6895	0.6940	0.6778	0.6830	0.6715	0.6620	0.6462	AVRG				0.6734	4	15	0.05	0.99	
o-Xylene		0.5943	0.6283	0.6658	0.6521	0.6704	0.6792	0.6783	0.6662	AVRG				0.6543	4	15	0.05	0.99	
Styrene		1.0119	1.0540	1.1558	1.1576	1.2079	1.2371	1.2408	1.1911	AVRG				1.1570	7	15	0.05	0.99	
Bromoform		0.2094	0.2757	0.3074	0.3150	0.3230	0.3430	0.3541	0.3475	AVRG				0.3094	15	15	0.10	0.99	
Isopropylbenzene		4.0805	3.8570	3.9751	3.6328	3.6697	3.4409	3.2053	3.0739	AVRG				3.6169	10	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		1.2852	1.2136	1.2701	1.1512	1.1111	1.0564	1.0467	1.0399	AVRG				1.1468	9	15	0.30	0.99	
1,2,3-Trichloropropane		1.4019	1.2382	1.3190	1.0960	1.0800	0.9962	0.9628	0.9457	AVRG				1.1300	15	15	0.05	0.99	
Propylbenzene		4.6469	4.3546	4.7909	4.4771	4.4759	4.1443	3.8595	3.6983	AVRG				4.3060	9	15	0.05	0.99	
Bromobenzene		1.1197	0.9459	1.0758	0.9840	0.9911	0.9608	0.9637	0.9591	AVRG				1.0000	6	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.7964	2.8019	2.8336	2.8206	2.8874	2.7151	2.5826	2.5288	AVRG				2.7458	5	15	0.05	0.99	
2-Chlorotoluene		3.7702	3.4710	3.5555	3.2554	3.1988	2.8756	2.7201	2.5787	AVRG				3.1782	13	15	0.05	0.99	
4-Chlorotoluene		3.3585	3.0137	3.1933	2.8930	2.8492	2.6993	2.5674	2.5238	AVRG				2.8873	10	15	0.05	0.99	
tert-Butylbenzene		2.3736	2.2773	2.4316	2.3282	2.3894	2.3481	2.2056	2.2390	AVRG				2.3241	3	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.6441	2.4735	2.5929	2.5615	2.6183	2.6631	2.5504	2.5599	AVRG				2.5829	2	15	0.05	0.99	
sec-Butylbenzene		3.3514	3.4433	3.6630	3.5277	3.6279	3.6391	3.3886	3.3609	AVRG				3.5002	4	15	0.05	0.99	
para-Isopropyl Toluene		2.3776	2.4086	2.5805	2.5510	2.6590	2.7715	2.6488	2.7277	AVRG				2.5906	5	15	0.05	0.99	
1,3-Dichlorobenzene		1.8227	1.6950	1.8321	1.6981	1.7086	1.6837	1.7444	1.6544	AVRG				1.7299	4	15	0.05	0.99	
1,4-Dichlorobenzene		1.8639	1.7326	1.8446	1.6865	1.6853	1.6716	1.6618	1.6619	AVRG				1.7260	5	15	0.05	0.99	
n-Butylbenzene		3.0117	2.3175	2.3703	2.2201	2.3418	2.4260	2.3264	2.4226	AVRG				2.4296	10	15	0.05	0.99	
1,2-Dichlorobenzene		1.6828	1.6233	1.6917	1.6331	1.6417	1.6194	1.6176	1.5972	AVRG				1.6384	2	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane			0.1978	0.1800	0.1735	0.1761	0.1810	0.1744	0.1802	AVRG				0.1804	5	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.8896	0.8408	0.8444	0.7605	0.7734	0.7979	0.7924	0.8406	AVRG				0.8299	9	15	0.05	0.99	
Hexachlorobutadiene		0.3478	0.3840	0.4367	0.4108	0.4406	0.4551	0.4319	0.4509	AVRG				0.4197	9	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max	Min	Min	FLg
															%RSD	%RSD	RF	r^2	
Naphthalene		2.4361	1.9481	1.9968	1.8420	1.7589	1.7477	1.7264	1.7987	AVRG		0.52443		1.9068	12	15	0.05	0.99	
1,2,3-Trichlorobenzene		0.9061	0.7404	0.7739	0.6986	0.6977	0.7415	0.7343	0.7857	AVRG		1.31617		0.7598	9	15	0.05	0.99	
tert-Butyl Alcohol (TEA)		0.0600	0.0698	0.0649	0.0598	0.0608	0.0604	0.0590	0.0626	AVRG		16.0851		0.0622	6	15	0.005	0.99	
Isopropyl Ether (DIPE)		3.9327	3.5967	3.8340	3.5476	3.4042	3.1792	3.0775	2.8466	AVRG		0.29177		3.4273	11	15	0.05	0.99	
Ethyl tert-Butyl Ether (ETBE)		2.7326	2.7101	2.7549	2.6089	2.5286	2.3767	2.3497	2.2096	AVRG		0.39465		2.5339	8	15	0.05	0.99	
Methyl tert-Amyl Ether (TAME)		1.2757	1.3360	1.3884	1.2849	1.2961	1.2341	1.2223	1.1729	AVRG		0.78351		1.2763	5	15	0.05	0.99	
Dibromofluoromethane	0.5993	0.6291	0.6044	0.6057	0.6330	0.6055	0.5949	0.5974	0.5851	AVRG		1.65001		0.6061	3	15	0.05	0.99	
1,2-Dichloroethane-d4	0.5398	0.5422	0.5347	0.5343	0.5169	0.5031	0.4564	0.4318	0.3982	AVRG		2.01902		0.4953	11	15	0.05	0.99	
Toluene-d8	1.3617	1.3871	1.3766	1.3745	1.3766	1.3634	1.3069	1.3411	1.3332	AVRG		0.73643		1.3579	2	15	0.05	0.99	
Bromofluorobenzene	1.2724	1.2981	1.2201	1.2356	1.1561	1.1360	1.0830	1.0708	1.0535	AVRG		0.85506		1.1695	8	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	1	2.0000	4	5.0000	22	10.000	1	20.000	-3	50.000	-11	75.000	-7	100.00	-8
Chloromethane	0.5000	10	1.0000	18	2.0000	3	5.0000	13	10.000	2	20.000	-4	50.000	-13	75.000	-11	100.00	-17
Vinyl Chloride	0.5000	-8	1.0000	14	2.0000	8	5.0000	17	10.000	4	20.000	-2	50.000	-11	75.000	-9	100.00	-13
Bromomethane			1.0000	3	2.0000	7	5.0000	11	10.000	0	20.000	-2	50.000	-8	75.000	-4	100.00	-7
Chloroethane			1.0000	7	2.0000	8	5.0000	11	10.000	1	20.000	-1	50.000	-9	75.000	-7	100.00	-12
Trichlorofluoromethane			1.0000	3	2.0000	4	5.0000	18	10.000	3	20.000	-3	50.000	-9	75.000	-7	100.00	-9
Acetone					2.0000	24	5.0000	13	10.000	-5	20.000	1	50.000	-11	75.000	-13	100.00	-9
Freon 113					2.0000	7	5.0000	10	10.000	0	20.000	2	50.000	-4	75.000	-7	100.00	-8
1,1-Dichloroethene	0.5000	1	0.5000	1	2.0000	4	5.0000	8	10.000	-3	20.000	3	50.000	-4	75.000	-3	100.00	-6
Methylene Chloride	0.5000	3	0.5000	3	2.0000	2	5.0000	6	10.000	0	20.000	-4	50.000	-3	75.000	-1	100.00	-3
Carbon Disulfide	0.5000	7	0.5000	7	2.0000	5	5.0000	8	10.000	1	20.000	0	50.000	-7	75.000	-7	100.00	-8
MTBE	0.5000	6	0.5000	6	2.0000	5	5.0000	10	10.000	1	20.000	-2	50.000	-5	75.000	-5	100.00	-9
trans-1,2-Dichloroethene	0.5000	2	0.5000	2	2.0000	4	5.0000	5	10.000	0	20.000	1	50.000	-4	75.000	-2	100.00	-5
Vinyl Acetate					2.0000	8	5.0000	2	10.000	0	20.000	-8	50.000	-1	75.000	9	100.00	-1
1,1-Dichloroethane	0.5000	8	0.5000	8	2.0000	4	5.0000	9	10.000	3	20.000	0	50.000	-6	75.000	-7	100.00	-13
2-Butanone					2.0000	12	5.0000	12	10.000	2	20.000	3	50.000	-5	75.000	-7	100.00	-5
2,2-Dichloropropane	0.5000	15	0.5000	15	2.0000	7	5.0000	9	10.000	3	20.000	1	50.000	-8	75.000	-11	100.00	-16
cis-1,2-Dichloroethene	0.5000	-3	0.5000	-3	2.0000	7	5.0000	5	10.000	0	20.000	-1	50.000	-3	75.000	-2	100.00	-4
Chloroform	0.5000	14	0.5000	14	2.0000	3	5.0000	9	10.000	2	20.000	-1	50.000	-7	75.000	-8	100.00	-12
Bromochloromethane	0.5000	-9	0.5000	-9	2.0000	-1	5.0000	4	10.000	0	20.000	-1	50.000	1	75.000	4	100.00	2
1,1,1-Trichloroethane	0.5000	3	0.5000	3	2.0000	7	5.0000	4	10.000	4	20.000	4	50.000	-5	75.000	-6	100.00	-11
1,1-Dichloropropene	0.5000	12	0.5000	12	2.0000	7	5.0000	4	10.000	-1	20.000	1	50.000	-4	75.000	-6	100.00	-13
Carbon Tetrachloride	0.5000	8	0.5000	8	2.0000	3	5.0000	3	10.000	0	20.000	5	50.000	-3	75.000	-5	100.00	-11
1,2-Dichloroethane	0.5000	9	0.5000	9	2.0000	5	5.0000	11	10.000	1	20.000	1	50.000	-6	75.000	-9	100.00	-14
Benzene	0.5000	7	0.5000	7	2.0000	4	5.0000	7	10.000	-1	20.000	0	50.000	-3	75.000	-4	100.00	-9
Trichloroethene	0.5000	4	0.5000	4	2.0000	2	5.0000	3	10.000	-2	20.000	2	50.000	-3	75.000	-2	100.00	-4
1,2-Dichloropropane	0.5000	7	0.5000	7	2.0000	3	5.0000	8	10.000	-3	20.000	1	50.000	-4	75.000	-4	100.00	-8
Bromodichloromethane	0.5000	-2	0.5000	-2	2.0000	-1	5.0000	8	10.000	0	20.000	2	50.000	-1	75.000	0	100.00	-5
Dibromomethane	0.5000	1	0.5000	1	2.0000	3	5.0000	3	10.000	0	20.000	-1	50.000	-2	75.000	-1	100.00	-4
4-Methyl-2-Pentanone					2.0000	4	5.0000	4	10.000	-3	20.000	-1	50.000	0	75.000	-2	100.00	2
cis-1,3-Dichloropropene	0.5000	-2	0.5000	-2	2.0000	-2	5.0000	4	10.000	0	20.000	2	50.000	0	75.000	1	100.00	-4
Toluene	0.5000	3	0.5000	3	2.0000	3	5.0000	4	10.000	0	20.000	1	50.000	-3	75.000	-3	100.00	-5
trans-1,3-Dichloropropene	0.5000	2	0.5000	2	2.0000	-5	5.0000	7	10.000	-1	20.000	1	50.000	0	75.000	-1	100.00	-2
1,1,2-Trichloroethane	0.5000	-10	0.5000	-10	2.0000	4	5.0000	6	10.000	3	20.000	-1	50.000	-1	75.000	1	100.00	-1
2-Hexanone					2.0000	-8	5.0000	-8	10.000	-8	20.000	-5	50.000	5	75.000	3	100.00	13
1,3-Dichloropropane	0.5000	0	0.5000	0	2.0000	3	5.0000	8	10.000	1	20.000	0	50.000	-2	75.000	-5	100.00	-5
Tetrachloroethene	0.5000	1	0.5000	1	2.0000	0	5.0000	1	10.000	-2	20.000	1	50.000	0	75.000	-1	100.00	0
Dibromochloromethane	0.5000	-9	0.5000	-9	2.0000	-5	5.0000	3	10.000	1	20.000	-1	50.000	2	75.000	5	100.00	4
1,2-Dibromoethane	0.5000	-14	0.5000	-14	2.0000	1	5.0000	4	10.000	0	20.000	0	50.000	1	75.000	3	100.00	4
Chlorobenzene	0.5000	1	0.5000	1	2.0000	5	5.0000	4	10.000	-1	20.000	-1	50.000	-2	75.000	-2	100.00	-4
1,1,1,2-Tetrachloroethane	0.5000	-11	0.5000	-11	2.0000	-1	5.0000	4	10.000	2	20.000	1	50.000	2	75.000	2	100.00	2
Ethylbenzene	0.5000	6	0.5000	6	2.0000	7	5.0000	7	10.000	3	20.000	2	50.000	-5	75.000	-9	100.00	-12

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	5	1.0000	-7	4.0000	2	10.000	3	20.000	1	40.000	1	100.00	0	150.00	-2	200.00	-4
o-Xylene			0.5000	-9	2.0000	-4	5.0000	2	10.000	0	20.000	0	50.000	4	75.000	4	100.00	2
Styrene			0.5000	-13	2.0000	-9	5.0000	0	10.000	0	20.000	0	50.000	7	75.000	7	100.00	3
Bromoform			0.5000	-32	2.0000	-11	5.0000	-1	10.000	2	20.000	4	50.000	11	75.000	14	100.00	12
Isopropylbenzene			0.5000	13	2.0000	7	5.0000	10	10.000	0	20.000	1	50.000	-5	75.000	-11	100.00	-15
1,1,2,2-Tetrachloroethane			0.5000	12	2.0000	6	5.0000	11	10.000	0	20.000	-3	50.000	-8	75.000	-9	100.00	-9
1,2,3-Trichloropropane			0.5000	24	2.0000	10	5.0000	17	10.000	-3	20.000	-4	50.000	-12	75.000	-15	100.00	-16
Propylbenzene			0.5000	8	2.0000	1	5.0000	11	10.000	4	20.000	4	50.000	-4	75.000	-10	100.00	-14
Bromobenzene			0.5000	12	2.0000	-5	5.0000	8	10.000	-2	20.000	-1	50.000	-4	75.000	-4	100.00	-4
1,3,5-Trimethylbenzene			0.5000	2	2.0000	2	5.0000	3	10.000	3	20.000	5	50.000	-1	75.000	-6	100.00	-8
2-Chlorotoluene			0.5000	19	2.0000	9	5.0000	12	10.000	2	20.000	1	50.000	-10	75.000	-14	100.00	-19
4-Chlorotoluene			0.5000	16	2.0000	4	5.0000	11	10.000	0	20.000	-1	50.000	-7	75.000	-11	100.00	-13
tert-Butylbenzene			0.5000	2	2.0000	-2	5.0000	5	10.000	0	20.000	3	50.000	1	75.000	-5	100.00	-4
1,2,4-Trimethylbenzene			0.5000	2	2.0000	-4	5.0000	0	10.000	-1	20.000	1	50.000	3	75.000	-1	100.00	-1
sec-Butylbenzene			0.5000	-4	2.0000	-2	5.0000	5	10.000	1	20.000	4	50.000	4	75.000	-3	100.00	-4
para-Isopropyl Toluene			0.5000	-8	2.0000	-7	5.0000	0	10.000	-2	20.000	3	50.000	7	75.000	2	100.00	5
1,3-Dichlorobenzene			0.5000	5	2.0000	-2	5.0000	6	10.000	-2	20.000	-1	50.000	-3	75.000	1	100.00	-4
1,4-Dichlorobenzene			0.5000	8	2.0000	0	5.0000	7	10.000	-2	20.000	-2	50.000	-3	75.000	-4	100.00	-4
n-Butylbenzene			0.5000	24	2.0000	-5	5.0000	-2	10.000	-9	20.000	-4	50.000	0	75.000	-4	100.00	0
1,2-Dichlorobenzene			0.5000	3	2.0000	-1	5.0000	3	10.000	0	20.000	0	50.000	-1	75.000	-1	100.00	-3
1,2-Dibromo-3-Chloropropane					2.0000	10	5.0000	0	10.000	-4	20.000	-2	50.000	0	75.000	-3	100.00	0
1,2,4-Trichlorobenzene			0.5000	19	2.0000	1	5.0000	2	10.000	-8	20.000	-7	50.000	-4	75.000	-5	100.00	1
Hexachlorobutadiene			0.5000	-17	2.0000	-9	5.0000	4	10.000	-2	20.000	5	50.000	8	75.000	3	100.00	7
Naphthalene			0.5000	28	2.0000	2	5.0000	5	10.000	-3	20.000	-8	50.000	-8	75.000	-9	100.00	-6
1,2,3-Trichlorobenzene			0.5000	19	2.0000	-3	5.0000	2	10.000	-8	20.000	-8	50.000	-2	75.000	-3	100.00	3
tert-Butyl Alcohol (TEA)			5.0000	-3	20.000	12	50.000	4	100.00	-4	200.00	-2	500.00	-3	750.00	-5	1000.0	1
Isopropyl Ether (DIPE)			0.5000	15	2.0000	5	5.0000	12	10.000	4	20.000	-1	50.000	-7	75.000	-10	100.00	-17
Ethyl tert-Butyl Ether (ETBE)			0.5000	8	2.0000	7	5.0000	9	10.000	3	20.000	0	50.000	-6	75.000	-7	100.00	-13
Methyl tert-Amyl Ether (TAME)			0.5000	0	2.0000	5	5.0000	9	10.000	1	20.000	2	50.000	-3	75.000	-4	100.00	-8
Dibromofluoromethane	50.000	-1	50.000	4	50.000	0	50.000	0	50.000	4	50.000	0	50.000	-2	50.000	-1	50.000	-3
1,2-Dichloroethane-d4	50.000	9	50.000	9	50.000	8	50.000	8	50.000	4	50.000	2	50.000	-8	50.000	-13	50.000	-20
Toluene-d8	50.000	0	50.000	2	50.000	1	50.000	1	50.000	1	50.000	0	50.000	-4	50.000	-1	50.000	-2
Bromofluorobenzene	50.000	9	50.000	11	50.000	4	50.000	6	50.000	-1	50.000	-3	50.000	-7	50.000	-8	50.000	-10

DAR 02/06/15 [Freon 12]: Combined split peak in 2PPB (jb514).

DAR 02/06/15 [Vinyl Chloride]: Combined split peak in multiple levels.

DAR 02/06/15 [Ethanol]: Combined split peak in multiple levels.

DAR 02/06/15 [1,2-Dichloropropane]: Corrected automatically drawn baseline in 5PPB (jb515).

DAR 02/06/15 [2-Chloroethylvinylether]: Average RF under 0.05, not usable

Analyst: DAR

Date: 02/06/15

Reviewer: IW

Date: 02/09/15

m>manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor

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495052755001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA10
Calnum : 495052755001

Name : 826GOX10
Cal Date : 05-FEB-2015

Type : WATER

ICV 495052755021 (jb521 06-FEB-2015) stds: S24978 (10000X), S26526 (2500X)
ICV 495052755022 (jb522 06-FEB-2015) stds: S26221 (10000X), S26275 (10000X),
S26249 (10000X), S26526 (2500X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	495052755021	20.00	20.67	ug/L	3	30	
Chloromethane	495052755021	20.00	18.07	ug/L	-10	30	
Vinyl Chloride	495052755021	20.00	18.96	ug/L	-5	20	
Bromomethane	495052755021	20.00	17.20	ug/L	-14	30	
Chloroethane	495052755021	20.00	18.98	ug/L	-5	30	
Trichlorofluoromethane	495052755021	20.00	18.51	ug/L	-7	30	
Acetone	495052755022	25.00	17.54	ug/L	-30	40	!v-
Freon 113	495052755022	25.00	20.08	ug/L	-20	30	
1,1-Dichloroethene	495052755022	25.00	23.86	ug/L	-5	20	
Methylene Chloride	495052755022	25.00	23.96	ug/L	-4	30	
Carbon Disulfide	495052755022	25.00	24.95	ug/L	0	30	
MTBE	495052755022	25.00	23.27	ug/L	-7	30	
trans-1,2-Dichloroethene	495052755022	25.00	24.02	ug/L	-4	30	
Vinyl Acetate	495052755022	25.00	30.63	ug/L	23	40	!v+
1,1-Dichloroethane	495052755022	25.00	23.06	ug/L	-8	30	
2-Butanone	495052755022	25.00	21.33	ug/L	-15	40	
2,2-Dichloropropane	495052755022	25.00	21.72	ug/L	-13	30	
cis-1,2-Dichloroethene	495052755022	25.00	24.75	ug/L	-1	30	
Chloroform	495052755022	25.00	23.68	ug/L	-5	20	
Bromochloromethane	495052755022	25.00	25.95	ug/L	4	30	
1,1,1-Trichloroethane	495052755022	25.00	24.35	ug/L	-3	30	
1,1-Dichloropropene	495052755022	25.00	23.32	ug/L	-7	30	
Carbon Tetrachloride	495052755022	25.00	24.44	ug/L	-2	30	
1,2-Dichloroethane	495052755022	25.00	23.56	ug/L	-6	30	
Benzene	495052755022	25.00	23.97	ug/L	-4	30	
Trichloroethene	495052755022	25.00	25.19	ug/L	1	30	
1,2-Dichloropropane	495052755022	25.00	23.75	ug/L	-5	20	
Bromodichloromethane	495052755022	25.00	24.89	ug/L	0	30	
Dibromomethane	495052755022	25.00	24.69	ug/L	-1	30	
4-Methyl-2-Pentanone	495052755022	25.00	22.30	ug/L	-11	40	
cis-1,3-Dichloropropene	495052755022	25.00	25.83	ug/L	3	30	
Toluene	495052755022	25.00	24.90	ug/L	0	20	
trans-1,3-Dichloropropene	495052755022	25.00	23.96	ug/L	-4	30	
1,1,2-Trichloroethane	495052755022	25.00	24.95	ug/L	0	30	
2-Hexanone	495052755022	25.00	22.25	ug/L	-11	40	
1,3-Dichloropropane	495052755022	25.00	24.62	ug/L	-2	30	
Tetrachloroethene	495052755022	25.00	25.63	ug/L	3	30	
Dibromochloromethane	495052755022	25.00	25.66	ug/L	3	30	
1,2-Dibromoethane	495052755022	25.00	25.24	ug/L	1	30	
Chlorobenzene	495052755022	25.00	25.87	ug/L	3	30	
1,1,1,2-Tetrachloroethane	495052755022	25.00	25.81	ug/L	3	30	
Ethylbenzene	495052755022	25.00	24.50	ug/L	-2	20	
m,p-Xylenes	495052755022	50.00	51.12	ug/L	2	30	
o-Xylene	495052755022	25.00	26.55	ug/L	6	30	
Styrene	495052755022	25.00	26.19	ug/L	5	30	
Bromoform	495052755022	25.00	27.62	ug/L	10	30	
Isopropylbenzene	495052755022	25.00	25.53	ug/L	2	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	495052755022	25.00	24.23	ug/L	-3	30	
1,2,3-Trichloropropane	495052755022	25.00	22.99	ug/L	-8	30	
Propylbenzene	495052755022	25.00	26.60	ug/L	6	30	
Bromobenzene	495052755022	25.00	26.42	ug/L	6	30	
1,3,5-Trimethylbenzene	495052755022	25.00	25.79	ug/L	3	30	
2-Chlorotoluene	495052755022	25.00	24.95	ug/L	0	30	
4-Chlorotoluene	495052755022	25.00	24.85	ug/L	-1	30	
tert-Butylbenzene	495052755022	25.00	26.20	ug/L	5	30	
1,2,4-Trimethylbenzene	495052755022	25.00	25.19	ug/L	1	30	
sec-Butylbenzene	495052755022	25.00	27.19	ug/L	9	30	
para-Isopropyl Toluene	495052755022	25.00	25.77	ug/L	3	30	
1,3-Dichlorobenzene	495052755022	25.00	26.60	ug/L	6	30	
1,4-Dichlorobenzene	495052755022	25.00	25.24	ug/L	1	30	
n-Butylbenzene	495052755022	25.00	24.07	ug/L	-4	30	
1,2-Dichlorobenzene	495052755022	25.00	26.75	ug/L	7	30	
1,2-Dibromo-3-Chloropropane	495052755022	25.00	23.88	ug/L	-4	30	
1,2,4-Trichlorobenzene	495052755022	25.00	25.16	ug/L	1	30	
Hexachlorobutadiene	495052755022	25.00	27.41	ug/L	10	30	
Naphthalene	495052755022	25.00	26.74	ug/L	7	30	
1,2,3-Trichlorobenzene	495052755022	25.00	26.21	ug/L	5	30	
tert-Butyl Alcohol (TBA)	495052755022	125.0	112.0	ug/L	-10	30	
Isopropyl Ether (DIPE)	495052755022	25.00	22.91	ug/L	-8	30	
Ethyl tert-Butyl Ether (ETBE)	495052755022	25.00	22.86	ug/L	-9	30	
Methyl tert-Amyl Ether (TAME)	495052755022	25.00	23.37	ug/L	-7	30	

495052755021: Analyst: DAR

Date: 02/06/15

Reviewer: LW

Date: 02/09/15

495052755022: Analyst: DAR

Date: 02/06/15

Reviewer: LW

Date: 02/09/15

!=warning +=high bias -=low bias v=ICV

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266019 MSVOA Water: EPA 8260B

Inst : MSVOA11 Name : 8260GX11
 Calnum : 835120089001 Date : 24-MAR-2015 12:00 Type : WATER
 Units : ug/L X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	kcn06 835120089006	24-MAR-2015 12:00	S25695 (2000000X), S26851 (2000000X), S26838 (2000000X), S25156 (1000000X), S26882 (25000X)	
L2	kcn07 835120089007	24-MAR-2015 12:29	S25695 (1000000X), S26851 (1000000X), S26838 (1000000X), S25156 (500000X), S26882 (25000X)	
L3	kcn08 835120089008	24-MAR-2015 12:57	S25695 (500000X), S26851 (2500000X), S26838 (2500000X), S25156 (2500000X), S26882 (25000X)	
L4	kcn09 835120089009	24-MAR-2015 13:26	S25695 (200000X), S26851 (100000X), S26838 (100000X), S25156 (100000X), S26882 (25000X)	
L5	kcn10 835120089010	24-MAR-2015 13:54	S25695 (100000X), S26851 (500000X), S26838 (500000X), S25156 (500000X), S26882 (25000X)	
L6	kcn11 835120089011	24-MAR-2015 14:22	S25695 (50000X), S26851 (250000X), S26838 (250000X), S25156 (250000X), S26882 (25000X)	
L7	kcn12 835120089012	24-MAR-2015 14:50	S25695 (20000X), S26851 (100000X), S26838 (100000X), S25156 (100000X), S26882 (25000X)	
L8	kcn13 835120089013	24-MAR-2015 15:19	S25695 (13330X), S26851 (6667X), S26838 (6667X), S25156 (6667X), S26882 (25000X)	
L9	kcn14 835120089014	24-MAR-2015 15:47	S25695 (10000X), S26851 (50000X), S26838 (50000X), S25156 (50000X), S26882 (25000X)	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.4176m	0.5104m	0.5321m	0.4359m	0.4989m	0.5178	0.5421	0.5225m	AVRG	2.01144			0.4972	9	15	0.05	0.99	
Chloromethane	0.5381	0.5312	0.5115m	0.4913	0.4750	0.4546	0.4539	0.4515	0.4455	AVRG		2.06776		0.4836	7	15	0.10	0.99	
Vinyl Chloride	0.4961	0.5051	0.5537	0.5307	0.4953	0.5090	0.5230	0.5309	0.5292	AVRG		1.92594		0.5192	4	15	0.05	0.99	
Bromomethane		0.2093	0.2370	0.2504	0.2661	0.2464	0.2701	0.2860	0.2973	AVRG		3.87849		0.2578	11	15	0.05	0.99	
Chloroethane		0.2677	0.2884	0.2848	0.2726	0.2716	0.2747	0.2817	0.2789	AVRG		3.60305		0.2775	3	15	0.05	0.99	
Trichlorofluoromethane		0.5796	0.6637	0.6753	0.5831	0.6436	0.6684	0.6971	0.6921	AVRG		1.53758		0.6504	7	15	0.05	0.99	
Acetone			0.1568	0.1367	0.1277	0.1044	0.1102	0.1323	0.1343	AVRG		7.75752		0.1289	14	15	0.05	0.99	
Freon 113			0.2836	0.3824	0.2520	0.3711	0.3455	0.3666	0.3793	AVRG		2.94056		0.3401	15	15	0.05	0.99	
1,1-Dichloroethene		0.4324	0.3712m	0.4004	0.3242	0.3728	0.3523	0.3707	0.3742	AVRG		2.66826		0.3748	8	15	0.05	0.99	
Methylene Chloride		0.4914	0.4501	0.4472	0.4521	0.4283	0.4274	0.4444	0.4410	AVRG		2.23342		0.4477	4	15	0.05	0.99	
Carbon Disulfide		1.3315	1.2425	1.3164	1.1447	1.2640	1.2139	1.2679	1.2665	AVRG		0.79623		1.2559	5	15	0.05	0.99	
MTBE		1.3893	1.2304	1.2483	1.2515	1.1863	1.1942	1.2602	1.2541	AVRG		0.79886		1.2518	5	15	0.05	0.99	
trans-1,2-Dichloroethene		0.5517	0.4463	0.4501	0.4091	0.4274	0.4200	0.4335	0.4304	AVRG		2.24186		0.4461	10	15	0.05	0.99	
Vinyl Acetate			0.6168	0.6389	0.6500	0.6303	0.6476	0.6630	0.6537	AVRG		1.55542		0.6429	2	15	0.05	0.99	
1,1-Dichloroethane		0.7968	0.7746	0.7643	0.7457	0.7326	0.7309	0.7667	0.7550	AVRG		1.31867		0.7583	3	15	0.10	0.99	
2-Butanone			0.1783	0.1866	0.1785	0.1673	0.1733	0.1897	0.1935	AVRG		5.52345		0.1810	5	15	0.05	0.99	
2,2-Dichloropropane		0.5863	0.5701	0.6194	0.5597	0.6072	0.5934	0.6175	0.6115	AVRG		1.67886		0.5956	4	15	0.05	0.99	
cis-1,2-Dichloroethene		0.6311m	0.5139m	0.4915	0.5032	0.4713	0.4808	0.4990	0.4920	AVRG		1.95951		0.5103	10	15	0.05	0.99	
Chloroform		0.8512	0.7596	0.7717	0.7906	0.7583	0.7597	0.7817	0.7749	AVRG		1.28048		0.7810	4	15	0.05	0.99	
Bromochloromethane		0.2524	0.2476	0.2503	0.2630	0.2487	0.2553	0.2530	0.2512	AVRG		3.95720		0.2527	2	15	0.05	0.99	
1,1,1-Trichloroethane		0.7104	0.6391	0.6846	0.6029	0.6754	0.6513	0.6686	0.6712	AVRG		1.50843		0.6629	5	15	0.05	0.99	
1,1-Dichloropropene		0.3694	0.3563	0.3998	0.3319	0.4003	0.3939	0.4072	0.4121	AVRG		2.60508		0.3839	7	15	0.05	0.99	
Carbon Tetrachloride		0.3226	0.3343	0.3882	0.3117	0.3942	0.3850	0.4122	0.4131	AVRG		2.70161		0.3701	11	15	0.05	0.99	
1,2-Dichloroethane		0.4282	0.3940	0.3951	0.3965	0.3869	0.3952	0.4098	0.4074	AVRG		2.48977		0.4016	3	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r ² %RSD	Max %RSD	Min RF	Min r ²	Flg
Benzene		1.2992	1.1879	1.2152	1.1905	1.2109	1.2263	1.2775	1.2622	AVRG		0.81056		1.2337	3	15	0.05	0.99	
Trichloroethene		0.3094	0.3029	0.3159	0.2964	0.3135	0.3124	0.3331	0.3293	AVRG		3.18357		0.3141	4	15	0.05	0.99	
1,2-Dichloropropane		0.3221	0.3063	0.3240	0.2995	0.2996	0.3076	0.3225	0.3186	AVRG		3.19953		0.3125	3	15	0.05	0.99	
Bromodichloromethane		0.4242	0.3949	0.3994	0.3965	0.3950	0.4038	0.4247	0.4157	AVRG		2.45843		0.4068	3	15	0.05	0.99	
Dibromomethane		0.2088	0.1976	0.1979	0.1965	0.1942	0.1931	0.2065	0.2027	AVRG		5.00854		0.1997	3	15	0.05	0.99	
4-Methyl-2-Pentanone			0.2474	0.2459	0.2512	0.2419	0.2570	0.2746	0.2706	AVRG		3.91359		0.2555	5	15	0.05	0.99	
cis-1,3-Dichloropropene		0.5117	0.4789	0.4898	0.5063	0.4929	0.5172	0.5410	0.5278	AVRG		1.96772		0.5082	4	15	0.05	0.99	
Toluene		1.0102	0.8938	0.9272	0.9453	0.9251	0.9122	0.9524	0.9348	AVRG		1.06652		0.9376	4	15	0.05	0.99	
trans-1,3-Dichloropropene		0.5775	0.5243	0.5309	0.5381	0.5226	0.5374	0.5689	0.5592	AVRG		1.83536		0.5449	4	15	0.05	0.99	
1,1,2-Trichloroethane		0.2003	0.1767	0.1788	0.1764	0.1730	0.1755	0.1853	0.1844	AVRG		5.51582		0.1813	5	15	0.05	0.99	
2-Hexanone			0.2127	0.2034	0.2116	0.2008	0.2043	0.2276	0.2291	AVRG		4.69965		0.2128	5	15	0.05	0.99	
1,3-Dichloropropane		0.5762	0.5244	0.5382	0.5395	0.5216	0.5314	0.5612	0.5522	AVRG		1.84130		0.5431	3	15	0.05	0.99	
Tetrachloroethene		0.3347	0.3306	0.3798	0.3278	0.3979	0.3858	0.4156	0.4155	AVRG		2.67763		0.3735	10	15	0.05	0.99	
Dibromochloromethane		0.4043	0.3704	0.3863	0.3927	0.3882	0.3995	0.4247	0.4194	AVRG		2.51147		0.3982	4	15	0.05	0.99	
1,2-Dibromoethane		0.3669	0.3350	0.3438	0.3520	0.3361	0.3402	0.3560	0.3558	AVRG		2.87187		0.3482	3	15	0.05	0.99	
Chlorobenzene		1.1322	1.0869	1.0997	1.1083	1.0860	1.0883	1.1323	1.1211	AVRG		0.90346		1.1069	2	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.3974	0.3615	0.3748	0.3810	0.3750	0.3781	0.3996	0.4141	AVRG		2.59612		0.3852	4	15	0.05	0.99	
Ethylbenzene		1.8829	1.7189	1.7953	1.7547	1.8265	1.7947	1.9055	1.9347	AVRG		0.54745		1.8266	4	15	0.05	0.99	
m,p-Xylenes	0.7494	0.6659	0.6439	0.7044	0.7126	0.7317	0.7285	0.7986	0.8134	AVRG		1.37438		0.7276	8	15	0.05	0.99	
o-Xylene		0.6682	0.6474	0.6641	0.6915	0.6852	0.6972	0.7750	0.7900	AVRG		1.42383		0.7023	7	15	0.05	0.99	
Styrene		1.1307	1.1037	1.1514	1.1970	1.1906	1.2187	1.4176	1.3018	AVRG		0.82377		1.2139	8	15	0.05	0.99	
Bromoform		0.2798	0.2423	0.2574	0.2671	0.2672	0.2869	0.3283	0.3484	AVRG		3.51294		0.2847	13	15	0.10	0.99	
Isopropylbenzene		3.2457	3.4201	3.5500	3.1998	3.5713	3.5049	3.3638	3.5541	AVRG		0.29187		3.4262	4	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		0.8332	0.8653	0.8349	0.8088	0.7719	0.7711	0.6794	0.7116	AVRG		1.27468		0.7845	8	15	0.30	0.99	
1,2,3-Trichloropropane		0.9147	0.8611	0.7973	0.7958	0.7622	0.7416	0.7373	0.7922	AVRG		1.24957		0.8003	8	15	0.05	0.99	
Propylbenzene		3.7738	3.9707	4.0121	3.6803	4.0687	3.9476	3.6356	3.9958	AVRG		0.25736		3.8856	4	15	0.05	0.99	
Bromobenzene		1.0345	0.9565	0.9790	0.9912	0.9606	0.9103	0.9004	0.9958	AVRG		1.03515		0.9660	5	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.6322	2.8359	2.7833	2.7085	2.8842	2.8133	2.8692	2.9397	AVRG		0.35609		2.8083	4	15	0.05	0.99	
2-Chlorotoluene		2.8250	2.8084	2.7169	2.6789	2.6985	2.6512	2.6636	2.6961	AVRG		0.36801		2.7173	2	15	0.05	0.99	
4-Chlorotoluene		2.5149	2.5544	2.4923	2.4889	2.4549	2.4546	2.5451	2.5474	AVRG		0.39895		2.5066	2	15	0.05	0.99	
tert-Butylbenzene		2.2558	2.3387	2.5098	2.2445	2.5771	2.5449	2.6172	2.5580	AVRG		0.40721		2.4558	6	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.6048	2.6139	2.5762	2.6790	2.7148	2.7387	3.0055	2.3688	AVRG		0.37556		2.6627	7	15	0.05	0.99	
sec-Butylbenzene		2.8769	3.2355	3.5368	3.0841	3.7706	3.7196	3.8904	3.3718	AVRG		0.29106		3.4357	10	15	0.05	0.99	
para-Isopropyl Toluene		2.4301	2.5954	2.7469	2.3719	2.9865	3.0478	3.2553	2.7826	AVRG		0.36009		2.7771	11	15	0.05	0.99	
1,3-Dichlorobenzene		1.6928	1.7431	1.7070	1.7246	1.6843	1.7136	1.7602	1.7826	AVRG		0.57936		1.7260	2	15	0.05	0.99	
1,4-Dichlorobenzene		1.7592	1.7867	1.7713	1.7823	1.7167	1.7512	1.8020	1.7749	AVRG		0.56560		1.7680	1	15	0.05	0.99	
n-Butylbenzene		2.0535	2.0338	2.1637	1.9507	2.3306	2.3795	2.5552	2.5202	AVRG		0.44476		2.2484	10	15	0.05	0.99	
1,2-Dichlorobenzene		1.6890	1.6845	1.6259	1.6343	1.5839	1.5752	1.5359	1.6678	AVRG		0.61555		1.6246	3	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane			0.1584	0.1509	0.1467	0.1369	0.1322	0.1210	0.1247	AVRG		7.20988		0.1387	10	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.7611	0.8200	0.7427	0.7547	0.7392	0.7235	0.6719	0.7103	AVRG		1.35059		0.7404	6	15	0.05	0.99	
Hexachlorobutadiene		0.3597	0.4106	0.4096	0.3722	0.4818	0.4673	0.4287	0.4468	AVRG		2.36917		0.4221	10	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max	Min	Min	FLg
															%RSD	%RSD	RF	r^2	
Naphthalene		1.8332	1.8189	1.6887	1.6624	1.5752	1.4556	1.3535	1.4390	AVRG		0.62371		1.6033	11	15	0.05	0.99	
1,2,3-Trichlorobenzene		0.5718	0.5835	0.5350	0.5436	0.5385	0.5352	0.5037	0.5566	AVRG		1.83153		0.5460	5	15	0.05	0.99	
tert-Butyl Alcohol (TEA)		0.0391	0.0385	0.0389	0.0382	0.0371	0.0378	0.0412	0.0411	AVRG		25.6435		0.0390	4	15	0.005	0.99	
Isopropyl Ether (DIPE)		1.3999	1.2549	1.2522	1.2551	1.1879	1.2160	1.2561	1.2535	AVRG		0.79400		1.2595	5	15	0.05	0.99	
Ethyl tert-Butyl Ether (ETBE)		1.3891	1.3020	1.3034	1.3273	1.2730	1.3008	1.3656	1.3504	AVRG		0.75389		1.3265	3	15	0.05	0.99	
Methyl tert-Amyl Ether (TAME)		0.9883	0.8793	0.8811	0.8990	0.8836	0.9172	0.9630	0.9544	AVRG		1.08609		0.9207	5	15	0.05	0.99	
Dibromofluoromethane	0.4311	0.4341	0.4379	0.4408	0.4411	0.4352	0.4352	0.4337	0.4341	AVRG		2.29409		0.4359	1	15	0.05	0.99	
1,2-Dichloroethane-d4	0.3334	0.3405	0.3386	0.3435	0.3438	0.3470	0.3567	0.3674	0.3665	AVRG		2.86859		0.3486	3	15	0.05	0.99	
Toluene-d8	1.4458	1.4616	1.4470	1.4411	1.4473	1.4372	1.4226	1.4309	1.4280	AVRG		0.69436		1.4402	1	15	0.05	0.99	
Bromofluorobenzene	0.9728	0.9814	1.0171	0.9515	0.9316	0.9137	0.8947	0.7669	0.8497	AVRG		1.08703		0.9199	8	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	-16	2.0000	3	5.0000	7	10.000	-12	20.000	0	50.000	4	75.000	9	100.00	5
Chloromethane	0.5000	11	1.0000	10	2.0000	6	5.0000	2	10.000	-2	20.000	-6	50.000	-6	75.000	-7	100.00	-8
Vinyl Chloride	0.5000	-4	1.0000	-3	2.0000	7	5.0000	2	10.000	-5	20.000	-2	50.000	1	75.000	2	100.00	2
Bromomethane			1.0000	-19	2.0000	-8	5.0000	-3	10.000	3	20.000	-4	50.000	5	75.000	11	100.00	15
Chloroethane			1.0000	-4	2.0000	4	5.0000	3	10.000	-2	20.000	-2	50.000	-1	75.000	2	100.00	0
Trichlorofluoromethane			1.0000	-11	2.0000	2	5.0000	4	10.000	-10	20.000	-1	50.000	3	75.000	7	100.00	6
Acetone					2.0000	22	5.0000	6	10.000	-1	20.000	-19	50.000	-15	75.000	3	100.00	4
Freon 113					2.0000	-17	5.0000	12	10.000	-26	20.000	9	50.000	2	75.000	8	100.00	12
1,1-Dichloroethene	0.5000	15	0.5000	15	2.0000	-1	5.0000	7	10.000	-13	20.000	-1	50.000	-6	75.000	-1	100.00	0
Methylene Chloride	0.5000	10	0.5000	10	2.0000	1	5.0000	0	10.000	1	20.000	-4	50.000	-5	75.000	-1	100.00	-2
Carbon Disulfide	0.5000	6	0.5000	6	2.0000	-1	5.0000	5	10.000	-9	20.000	1	50.000	-3	75.000	1	100.00	1
MTBE	0.5000	11	0.5000	11	2.0000	-2	5.0000	0	10.000	0	20.000	-5	50.000	-5	75.000	1	100.00	0
trans-1,2-Dichloroethene	0.5000	24	0.5000	24	2.0000	0	5.0000	1	10.000	-8	20.000	-4	50.000	-6	75.000	-3	100.00	-4
Vinyl Acetate					2.0000	-4	5.0000	-1	10.000	1	20.000	-2	50.000	1	75.000	3	100.00	2
1,1-Dichloroethane	0.5000	5	0.5000	5	2.0000	2	5.0000	1	10.000	-2	20.000	-3	50.000	-4	75.000	1	100.00	0
2-Butanone					2.0000	-1	5.0000	3	10.000	-1	20.000	-8	50.000	-4	75.000	5	100.00	7
2,2-Dichloropropane	0.5000	-2	0.5000	-2	2.0000	-4	5.0000	4	10.000	-6	20.000	2	50.000	0	75.000	4	100.00	3
cis-1,2-Dichloroethene	0.5000	24	0.5000	24	2.0000	1	5.0000	-4	10.000	-1	20.000	-8	50.000	-6	75.000	-2	100.00	-4
Chloroform	0.5000	9	0.5000	9	2.0000	-3	5.0000	-1	10.000	1	20.000	-3	50.000	-3	75.000	0	100.00	-1
Bromochloromethane	0.5000	0	0.5000	0	2.0000	-2	5.0000	-1	10.000	4	20.000	-2	50.000	1	75.000	0	100.00	-1
1,1,1-Trichloroethane	0.5000	7	0.5000	7	2.0000	-4	5.0000	3	10.000	-9	20.000	2	50.000	-2	75.000	1	100.00	1
1,1-Dichloropropene	0.5000	-4	0.5000	-4	2.0000	-7	5.0000	4	10.000	-14	20.000	4	50.000	3	75.000	6	100.00	7
Carbon Tetrachloride	0.5000	-13	0.5000	-13	2.0000	-10	5.0000	5	10.000	-16	20.000	6	50.000	4	75.000	11	100.00	12
1,2-Dichloroethane	0.5000	7	0.5000	7	2.0000	-2	5.0000	-2	10.000	-1	20.000	-4	50.000	-2	75.000	2	100.00	1
Benzene	0.5000	5	0.5000	5	2.0000	-4	5.0000	-1	10.000	-4	20.000	-2	50.000	-1	75.000	4	100.00	2
Trichloroethene	0.5000	-1	0.5000	-1	2.0000	-4	5.0000	1	10.000	-6	20.000	0	50.000	-1	75.000	6	100.00	5
1,2-Dichloropropane	0.5000	3	0.5000	3	2.0000	-2	5.0000	4	10.000	-4	20.000	-4	50.000	-2	75.000	3	100.00	2
Bromodichloromethane	0.5000	4	0.5000	4	2.0000	-3	5.0000	-2	10.000	-3	20.000	-3	50.000	-1	75.000	4	100.00	2
Dibromomethane	0.5000	5	0.5000	5	2.0000	-1	5.0000	-1	10.000	-2	20.000	-3	50.000	-3	75.000	3	100.00	2
4-Methyl-2-Pentanone					2.0000	-3	5.0000	-4	10.000	-2	20.000	-5	50.000	1	75.000	7	100.00	6
cis-1,3-Dichloropropene	0.5000	1	0.5000	1	2.0000	-6	5.0000	-4	10.000	0	20.000	-3	50.000	2	75.000	6	100.00	4
Toluene	0.5000	8	0.5000	8	2.0000	-5	5.0000	-1	10.000	1	20.000	-1	50.000	-3	75.000	2	100.00	0
trans-1,3-Dichloropropene	0.5000	6	0.5000	6	2.0000	-4	5.0000	-3	10.000	-1	20.000	-4	50.000	-1	75.000	4	100.00	3
1,1,2-Trichloroethane	0.5000	10	0.5000	10	2.0000	-3	5.0000	-1	10.000	-3	20.000	-5	50.000	-3	75.000	2	100.00	2
2-Hexanone					2.0000	0	5.0000	-4	10.000	-1	20.000	-6	50.000	-4	75.000	7	100.00	8
1,3-Dichloropropane	0.5000	6	0.5000	6	2.0000	-3	5.0000	-1	10.000	-1	20.000	-4	50.000	-2	75.000	3	100.00	2
Tetrachloroethene	0.5000	-10	0.5000	-10	2.0000	-11	5.0000	2	10.000	-12	20.000	7	50.000	3	75.000	11	100.00	11
Dibromochloromethane	0.5000	2	0.5000	2	2.0000	-7	5.0000	-3	10.000	-1	20.000	-3	50.000	0	75.000	7	100.00	5
1,2-Dibromoethane	0.5000	5	0.5000	5	2.0000	-4	5.0000	-1	10.000	1	20.000	-3	50.000	-2	75.000	2	100.00	2
Chlorobenzene	0.5000	2	0.5000	2	2.0000	-2	5.0000	-1	10.000	0	20.000	-2	50.000	-2	75.000	2	100.00	1
1,1,1,2-Tetrachloroethane	0.5000	3	0.5000	3	2.0000	-6	5.0000	-3	10.000	-1	20.000	-3	50.000	-2	75.000	4	100.00	8
Ethylbenzene	0.5000	3	0.5000	3	2.0000	-6	5.0000	-2	10.000	-4	20.000	0	50.000	-2	75.000	4	100.00	6

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	3	1.0000	-8	4.0000	-12	10.000	-3	20.000	-2	40.000	1	100.00	0	150.00	10	200.00	12
o-Xylene			0.5000	-5	2.0000	-8	5.0000	-5	10.000	-2	20.000	-2	50.000	-1	75.000	10	100.00	12
Styrene			0.5000	-7	2.0000	-9	5.0000	-5	10.000	-1	20.000	-2	50.000	0	75.000	17	100.00	7
Bromoform			0.5000	-2	2.0000	-15	5.0000	-10	10.000	-6	20.000	-6	50.000	1	75.000	15	100.00	22
Isopropylbenzene			0.5000	-5	2.0000	0	5.0000	4	10.000	-7	20.000	4	50.000	2	75.000	-2	100.00	4
1,1,2,2-Tetrachloroethane			0.5000	6	2.0000	10	5.0000	6	10.000	3	20.000	-2	50.000	-2	75.000	-13	100.00	-9
1,2,3-Trichloropropane			0.5000	14	2.0000	8	5.0000	0	10.000	-1	20.000	-5	50.000	-7	75.000	-8	100.00	-1
Propylbenzene			0.5000	-3	2.0000	2	5.0000	3	10.000	-5	20.000	5	50.000	2	75.000	-6	100.00	3
Bromobenzene			0.5000	7	2.0000	-1	5.0000	1	10.000	3	20.000	-1	50.000	-6	75.000	-7	100.00	3
1,3,5-Trimethylbenzene			0.5000	-6	2.0000	1	5.0000	-1	10.000	-4	20.000	3	50.000	0	75.000	2	100.00	5
2-Chlorotoluene			0.5000	4	2.0000	3	5.0000	0	10.000	-1	20.000	-1	50.000	-2	75.000	-2	100.00	-1
4-Chlorotoluene			0.5000	0	2.0000	2	5.0000	2	10.000	-1	20.000	-2	50.000	-2	75.000	2	100.00	2
tert-Butylbenzene			0.5000	-8	2.0000	-5	5.0000	2	10.000	-9	20.000	5	50.000	4	75.000	7	100.00	4
1,2,4-Trimethylbenzene			0.5000	-2	2.0000	-2	5.0000	-3	10.000	1	20.000	2	50.000	3	75.000	13	100.00	-11
sec-Butylbenzene			0.5000	-16	2.0000	-6	5.0000	3	10.000	-10	20.000	10	50.000	8	75.000	13	100.00	-2
para-Isopropyl Toluene			0.5000	-12	2.0000	-7	5.0000	-1	10.000	-15	20.000	8	50.000	10	75.000	17	100.00	0
1,3-Dichlorobenzene			0.5000	-2	2.0000	1	5.0000	-1	10.000	0	20.000	-2	50.000	-1	75.000	2	100.00	3
1,4-Dichlorobenzene			0.5000	-1	2.0000	1	5.0000	0	10.000	1	20.000	-3	50.000	-1	75.000	2	100.00	0
n-Butylbenzene			0.5000	-9	2.0000	-10	5.0000	-4	10.000	-13	20.000	4	50.000	6	75.000	14	100.00	12
1,2-Dichlorobenzene			0.5000	4	2.0000	4	5.0000	0	10.000	1	20.000	-3	50.000	-3	75.000	-5	100.00	3
1,2-Dibromo-3-Chloropropane					2.0000	14	5.0000	9	10.000	6	20.000	-1	50.000	-5	75.000	-13	100.00	-10
1,2,4-Trichlorobenzene			0.5000	3	2.0000	11	5.0000	0	10.000	2	20.000	0	50.000	-2	75.000	-9	100.00	-4
Hexachlorobutadiene			0.5000	-15	2.0000	-3	5.0000	-3	10.000	-12	20.000	14	50.000	11	75.000	2	100.00	6
Naphthalene			0.5000	14	2.0000	13	5.0000	5	10.000	4	20.000	-2	50.000	-9	75.000	-16	100.00	-10
1,2,3-Trichlorobenzene			0.5000	5	2.0000	7	5.0000	-2	10.000	0	20.000	-1	50.000	-2	75.000	-8	100.00	2
tert-Butyl Alcohol (TEA)			5.0000	0	20.000	-1	50.000	0	100.00	-2	200.00	-5	500.00	-3	750.00	6	1000.0	5
Isopropyl Ether (DIPE)			0.5000	11	2.0000	0	5.0000	-1	10.000	0	20.000	-6	50.000	-3	75.000	0	100.00	0
Ethyl tert-Butyl Ether (ETBE)			0.5000	5	2.0000	-2	5.0000	-2	10.000	0	20.000	-4	50.000	-2	75.000	3	100.00	2
Methyl tert-Amyl Ether (TAME)			0.5000	7	2.0000	-5	5.0000	-4	10.000	-2	20.000	-4	50.000	0	75.000	5	100.00	4
Dibromofluoromethane	50.000	-1	50.000	0	50.000	0	50.000	1	50.000	1	50.000	0	50.000	0	50.000	-1	50.000	0
1,2-Dichloroethane-d4	50.000	-4	50.000	-2	50.000	-3	50.000	-1	50.000	-1	50.000	0	50.000	2	50.000	5	50.000	5
Toluene-d8	50.000	0	50.000	1	50.000	0	50.000	0	50.000	0	50.000	0	50.000	-1	50.000	-1	50.000	-1
Bromofluorobenzene	50.000	6	50.000	7	50.000	11	50.000	3	50.000	1	50.000	-1	50.000	-3	50.000	-17	50.000	-8

DJA 03/25/15 [Freon 12]: Corrected fronting or tailing peak integration in multiple levels.

DJA 03/25/15 [cis-1,2-Dichloroethene]: Corrected automatically drawn baseline in multiple levels.

DJA 03/25/15 [Ethanol]: Corrected fronting or tailing peak integration in multiple levels.

DJA 03/25/15 [Chloromethane]: Corrected fronting or tailing peak integration in (kcn08).

DJA 03/25/15 [1,1-Dichloroethene]: Corrected fronting or tailing peak integration in (kcn08).

DJA 03/25/15 [Isopropanol]: Corrected fronting or tailing peak integration in (kcn08).

DJA 03/25/15 : integrated cis-1,2-Dichloroethene and 1,1-Dichloroethene down to baseline

Analyst: DJA

Date: 03/25/15

Reviewer: LW

Date: 03/25/15

m>manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor

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835120089001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA11
Calnum : 835120089001

Name : 8260GX11
Cal Date : 24-MAR-2015

Type : WATER

ICV 835120089015 (kcn15 24-MAR-2015) stds: S24978 (10000X), S26882 (2500X)
ICV 835120089016 (kcn16 24-MAR-2015) stds: S26642 (10000X), S26876 (10000X),
S26759 (10000X), S26882 (2500X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	835120089015	20.00	17.70	ug/L	-12	30	m
Chloromethane	835120089015	20.00	19.36	ug/L	-3	30	
Vinyl Chloride	835120089015	20.00	20.11	ug/L	1	20	
Bromomethane	835120089015	20.00	14.85	ug/L	-26	30	!v-
Chloroethane	835120089015	20.00	20.19	ug/L	1	30	
Trichlorofluoromethane	835120089015	20.00	19.23	ug/L	-4	30	
Acetone	835120089016	25.00	19.25	ug/L	-23	40	!v-
Freon 113	835120089016	25.00	23.47	ug/L	-6	30	
1,1-Dichloroethene	835120089016	25.00	23.65	ug/L	-5	20	
Methylene Chloride	835120089016	25.00	24.15	ug/L	-3	30	
Carbon Disulfide	835120089016	25.00	25.92	ug/L	4	30	
MTBE	835120089016	25.00	23.19	ug/L	-7	30	
trans-1,2-Dichloroethene	835120089016	25.00	23.83	ug/L	-5	30	
Vinyl Acetate	835120089016	25.00	32.30	ug/L	29	40	!v+
1,1-Dichloroethane	835120089016	25.00	23.81	ug/L	-5	30	
2-Butanone	835120089016	25.00	22.50	ug/L	-10	40	
2,2-Dichloropropane	835120089016	25.00	25.22	ug/L	1	30	
cis-1,2-Dichloroethene	835120089016	25.00	24.06	ug/L	-4	30	
Chloroform	835120089016	25.00	24.68	ug/L	-1	20	
Bromochloromethane	835120089016	25.00	25.22	ug/L	1	30	
1,1,1-Trichloroethane	835120089016	25.00	26.16	ug/L	5	30	
1,1-Dichloropropene	835120089016	25.00	24.86	ug/L	-1	30	
Carbon Tetrachloride	835120089016	25.00	27.02	ug/L	8	30	
1,2-Dichloroethane	835120089016	25.00	23.99	ug/L	-4	30	
Benzene	835120089016	25.00	25.06	ug/L	0	30	
Trichloroethene	835120089016	25.00	24.90	ug/L	0	30	
1,2-Dichloropropane	835120089016	25.00	23.15	ug/L	-7	20	
Bromodichloromethane	835120089016	25.00	23.79	ug/L	-5	30	
Dibromomethane	835120089016	25.00	23.73	ug/L	-5	30	
4-Methyl-2-Pentanone	835120089016	25.00	24.20	ug/L	-3	40	
cis-1,3-Dichloropropene	835120089016	25.00	23.71	ug/L	-5	30	
Toluene	835120089016	25.00	24.70	ug/L	-1	20	
trans-1,3-Dichloropropene	835120089016	25.00	22.11	ug/L	-12	30	
1,1,2-Trichloroethane	835120089016	25.00	23.48	ug/L	-6	30	
2-Hexanone	835120089016	25.00	23.69	ug/L	-5	40	
1,3-Dichloropropane	835120089016	25.00	24.28	ug/L	-3	30	
Tetrachloroethene	835120089016	25.00	26.10	ug/L	4	30	
Dibromochloromethane	835120089016	25.00	24.05	ug/L	-4	30	
1,2-Dibromoethane	835120089016	25.00	24.01	ug/L	-4	30	
Chlorobenzene	835120089016	25.00	24.71	ug/L	-1	30	
1,1,1,2-Tetrachloroethane	835120089016	25.00	23.82	ug/L	-5	30	
Ethylbenzene	835120089016	25.00	24.94	ug/L	0	20	
m,p-Xylenes	835120089016	50.00	49.55	ug/L	-1	30	
o-Xylene	835120089016	25.00	24.67	ug/L	-1	30	
Styrene	835120089016	25.00	24.43	ug/L	-2	30	
Bromoform	835120089016	25.00	23.75	ug/L	-5	30	
Isopropylbenzene	835120089016	25.00	26.30	ug/L	5	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	835120089016	25.00	24.85	ug/L	-1	30	
1,2,3-Trichloropropane	835120089016	25.00	23.58	ug/L	-6	30	
Propylbenzene	835120089016	25.00	25.30	ug/L	1	30	
Bromobenzene	835120089016	25.00	25.25	ug/L	1	30	
1,3,5-Trimethylbenzene	835120089016	25.00	26.63	ug/L	7	30	
2-Chlorotoluene	835120089016	25.00	24.94	ug/L	0	30	
4-Chlorotoluene	835120089016	25.00	24.86	ug/L	-1	30	
tert-Butylbenzene	835120089016	25.00	26.56	ug/L	6	30	
1,2,4-Trimethylbenzene	835120089016	25.00	25.36	ug/L	1	30	
sec-Butylbenzene	835120089016	25.00	27.18	ug/L	9	30	
para-Isopropyl Toluene	835120089016	25.00	26.79	ug/L	7	30	
1,3-Dichlorobenzene	835120089016	25.00	25.06	ug/L	0	30	
1,4-Dichlorobenzene	835120089016	25.00	24.83	ug/L	-1	30	
n-Butylbenzene	835120089016	25.00	26.03	ug/L	4	30	
1,2-Dichlorobenzene	835120089016	25.00	24.68	ug/L	-1	30	
1,2-Dibromo-3-Chloropropane	835120089016	25.00	23.49	ug/L	-6	30	
1,2,4-Trichlorobenzene	835120089016	25.00	24.53	ug/L	-2	30	
Hexachlorobutadiene	835120089016	25.00	26.82	ug/L	7	30	
Naphthalene	835120089016	25.00	22.50	ug/L	-10	30	
1,2,3-Trichlorobenzene	835120089016	25.00	24.63	ug/L	-1	30	
tert-Butyl Alcohol (TBA)	835120089016	125.0	119.3	ug/L	-5	30	
Isopropyl Ether (DIPE)	835120089016	25.00	22.65	ug/L	-9	30	
Ethyl tert-Butyl Ether (ETBE)	835120089016	25.00	23.06	ug/L	-8	30	
Methyl tert-Amyl Ether (TAME)	835120089016	25.00	22.68	ug/L	-9	30	

835120089015: Analyst: DJA Date: 03/25/15 Reviewer: LW Date: 03/25/15
835120089016: Analyst: DJA Date: 03/25/15 Reviewer: LW Date: 03/25/15

!=warning +=high bias -=low bias m=manual integration v=ICV

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.3055	1.2915	15.00	14.84	ug/L	-1	30	0.3000	
1,2,3-Trichloropropane	1.1185	1.0920	15.00	14.65	ug/L	-2	30	0.0500	
Propylbenzene	3.7870	4.1621	15.00	16.49	ug/L	10	30	0.0500	
Bromobenzene	0.9808	1.0988	15.00	16.81	ug/L	12	30	0.0500	
1,3,5-Trimethylbenzene	2.5352	2.7437	15.00	16.23	ug/L	8	30	0.0500	
2-Chlorotoluene	2.8142	3.0316	15.00	16.16	ug/L	8	30	0.0500	
4-Chlorotoluene	2.6010	2.7239	15.00	15.71	ug/L	5	30	0.0500	
tert-Butylbenzene	2.1264	2.3840	15.00	16.82	ug/L	12	30	0.0500	
1,2,4-Trimethylbenzene	2.4287	2.6532	15.00	16.39	ug/L	9	30	0.0500	
sec-Butylbenzene	3.0880	3.4536	15.00	16.78	ug/L	12	30	0.0500	
para-Isopropyl Toluene	2.3141	2.5782	15.00	16.71	ug/L	11	30	0.0500	
1,3-Dichlorobenzene	1.4963	1.6466	15.00	16.51	ug/L	10	30	0.0500	
1,4-Dichlorobenzene	1.5444	1.6970	15.00	16.48	ug/L	10	30	0.0500	
n-Butylbenzene	1.9053	2.0206	15.00	15.91	ug/L	6	30	0.0500	
1,2-Dichlorobenzene	1.5665	1.7063	15.00	16.34	ug/L	9	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.2709	0.2235	15.00	12.38	ug/L	-17	30	0.0500	
1,2,4-Trichlorobenzene	0.6580	0.6834	15.00	15.58	ug/L	4	30	0.0500	
Hexachlorobutadiene	0.4222	0.4760	15.00	16.91	ug/L	13	30	0.0500	
Naphthalene	1.7528	1.7435	15.00	14.92	ug/L	-1	30	0.0500	
1,2,3-Trichlorobenzene	0.6710	0.7006	15.00	15.66	ug/L	4	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0778	0.0544	150.0	105.0	ug/L	-30	30	0.0050	!c- !v-
Isopropyl Ether (DIPE)	4.2794	4.5767	15.00	16.04	ug/L	7	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	3.2471	3.4336	15.00	15.86	ug/L	6	30	0.0500	
Methyl tert-Amyl Ether (TAME)	1.3228	1.2801	15.00	14.52	ug/L	-3	30	0.0500	
Dibromofluoromethane	0.8065	0.8624	50.00	53.46	ug/L	7	30	0.0500	
1,2-Dichloroethane-d4	0.5248	0.4870	50.00	46.40	ug/L	-7	30	0.0500	
Toluene-d8	1.2838	1.2905	50.00	50.26	ug/L	1	30	0.0500	
Bromofluorobenzene	1.1204	1.1305	50.00	50.45	ug/L	1	30	0.0500	

ISTD (ICAL bc513)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	663015	648305	-2.22	11.24	11.25	0.01
1,4-Difluorobenzene	1319436	1368586	3.73	12.46	12.46	0.00
Chlorobenzene-d5	1199148	1236119	3.08	17.06	17.05	-0.01
1,4-Dichlorobenzene-d4	576003	546200	-5.17	20.45	20.44	-0.01

MCT 04/14/15 [Freon 12]: Combined split peak.

Analyst: MCT Date: 04/14/15 Reviewer: LW Date: 04/15/15

!=warning +=high bias -=low bias c=CCV m>manual integration v=ICV

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.3055	1.2661	15.00	14.55	ug/L	-3	30	0.3000	
1,2,3-Trichloropropane	1.1185	1.0572	15.00	14.18	ug/L	-5	30	0.0500	
Propylbenzene	3.7870	4.0047	15.00	15.86	ug/L	6	30	0.0500	
Bromobenzene	0.9808	1.0840	15.00	16.58	ug/L	11	30	0.0500	
1,3,5-Trimethylbenzene	2.5352	2.6745	15.00	15.82	ug/L	5	30	0.0500	
2-Chlorotoluene	2.8142	2.9462	15.00	15.70	ug/L	5	30	0.0500	
4-Chlorotoluene	2.6010	2.6652	15.00	15.37	ug/L	2	30	0.0500	
tert-Butylbenzene	2.1264	2.3095	15.00	16.29	ug/L	9	30	0.0500	
1,2,4-Trimethylbenzene	2.4287	2.5280	15.00	15.61	ug/L	4	30	0.0500	
sec-Butylbenzene	3.0880	3.2874	15.00	15.97	ug/L	6	30	0.0500	
para-Isopropyl Toluene	2.3141	2.4407	15.00	15.82	ug/L	5	30	0.0500	
1,3-Dichlorobenzene	1.4963	1.6366	15.00	16.41	ug/L	9	30	0.0500	
1,4-Dichlorobenzene	1.5444	1.6555	15.00	16.08	ug/L	7	30	0.0500	
n-Butylbenzene	1.9053	1.8540	15.00	14.60	ug/L	-3	30	0.0500	
1,2-Dichlorobenzene	1.5665	1.6967	15.00	16.25	ug/L	8	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.2709	0.2249	15.00	12.45	ug/L	-17	30	0.0500	
1,2,4-Trichlorobenzene	0.6580	0.6495	15.00	14.81	ug/L	-1	30	0.0500	
Hexachlorobutadiene	0.4222	0.4658	15.00	16.55	ug/L	10	30	0.0500	
Naphthalene	1.7528	1.7254	15.00	14.77	ug/L	-2	30	0.0500	
1,2,3-Trichlorobenzene	0.6710	0.6816	15.00	15.24	ug/L	2	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0778	0.0519	150.0	100.1	ug/L	-33	30	0.0050	!v- c- ***
Isopropyl Ether (DIPE)	4.2794	4.2290	15.00	14.82	ug/L	-1	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	3.2471	3.2889	15.00	15.19	ug/L	1	30	0.0500	
Methyl tert-Amyl Ether (TAME)	1.3228	1.2983	15.00	14.72	ug/L	-2	30	0.0500	
Dibromofluoromethane	0.8065	0.8236	50.00	51.06	ug/L	2	30	0.0500	
1,2-Dichloroethane-d4	0.5248	0.4900	50.00	46.69	ug/L	-7	30	0.0500	
Toluene-d8	1.2838	1.2795	50.00	49.83	ug/L	0	30	0.0500	
Bromofluorobenzene	1.1204	1.1093	50.00	49.50	ug/L	-1	30	0.0500	

ISTD (ICAL bc513)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	663015	650889	-1.83	11.24	11.25	0.01
1,4-Difluorobenzene	1319436	1306939	-0.95	12.46	12.47	0.01
Chlorobenzene-d5	1199148	1189145	-0.83	17.06	17.06	0.00
1,4-Dichlorobenzene-d4	576003	548821	-4.72	20.45	20.46	0.01

Analyst: MCT Date: 04/15/15 Reviewer: LW Date: 04/16/15

!=warning +=high bias -=low bias c=CCV v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA02 IDF : 1.0
 Seqnum : 415153005004 File : bdg04 Time : 16-APR-2015 07:39
 Cal : 415092829001 Caldate : 05-MAR-2015 Caltype : WATER
 Standards: S25695 (33330X), S26948 (33330X), S26838 (33330X), S26957 (33330X),
 S26909 (1000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	1.0126	1.1437	15.00	16.94	ug/L	13	30	0.0500	m
Chloromethane	1.4930	1.6771	15.00	16.85	ug/L	12	30	0.1000	
Vinyl Chloride	1.1208	1.3118	15.00	17.56	ug/L	17	20	0.0500	m
Bromomethane	0.5362	0.7608	15.00	21.28	ug/L	42	30	0.0500	c+ ***
Chloroethane	0.6379	0.7524	15.00	17.69	ug/L	18	30	0.0500	
Trichlorofluoromethane	1.2135	1.3652	15.00	16.88	ug/L	13	30	0.0500	
Acetone	0.4912	0.4445	15.00	13.57	ug/L	-10	40	0.0500	!v-
Freon 113	0.6196	0.7117	15.00	17.23	ug/L	15	30	0.0500	
1,1-Dichloroethene	0.6603	0.7161	15.00	16.27	ug/L	8	20	0.0500	
Methylene Chloride	0.8957	0.9911	15.00	16.60	ug/L	11	30	0.0500	
Carbon Disulfide	2.5310	2.9077	15.00	17.23	ug/L	15	30	0.0500	
MTBE	2.4536	2.5417	15.00	15.54	ug/L	4	30	0.0500	
trans-1,2-Dichloroethene	0.7631	0.8497	15.00	16.70	ug/L	11	30	0.0500	
Vinyl Acetate	1.9323	2.4301	15.00	18.86	ug/L	26	40	0.0500	!c+ !v+
1,1-Dichloroethane	1.7956	1.9333	15.00	16.15	ug/L	8	30	0.1000	
2-Butanone	0.6650	0.5965	15.00	13.45	ug/L	-10	40	0.0500	
2,2-Dichloropropane	1.1073	1.3757	15.00	18.64	ug/L	24	30	0.0500	!c+
cis-1,2-Dichloroethene	0.8844	0.9489	15.00	16.09	ug/L	7	30	0.0500	
Chloroform	1.5474	1.7061	15.00	16.54	ug/L	10	20	0.0500	
Bromochloromethane	0.4552	0.5197	15.00	17.13	ug/L	14	30	0.0500	
1,1,1-Trichloroethane	1.1836	1.3037	15.00	16.52	ug/L	10	30	0.0500	
1,1-Dichloropropene	0.5556	0.5761	15.00	15.55	ug/L	4	30	0.0500	
Carbon Tetrachloride	0.4791	0.5259	15.00	16.47	ug/L	10	30	0.0500	
1,2-Dichloroethane	0.7334	0.7568	15.00	15.48	ug/L	3	30	0.0500	
Benzene	1.5439	1.6536	15.00	16.07	ug/L	7	30	0.0500	
Trichloroethene	0.4112	0.4155	15.00	15.16	ug/L	1	30	0.0500	
1,2-Dichloropropane	0.5262	0.5340	15.00	15.22	ug/L	1	20	0.0500	
Bromodichloromethane	0.5994	0.6556	15.00	16.41	ug/L	9	30	0.0500	
Dibromomethane	0.3371	0.3619	15.00	16.10	ug/L	7	30	0.0500	
4-Methyl-2-Pentanone	0.7095	0.6104	15.00	12.90	ug/L	-14	40	0.0500	
cis-1,3-Dichloropropene	0.7152	0.7776	15.00	16.31	ug/L	9	30	0.0500	
Toluene	0.9498	1.0058	15.00	15.88	ug/L	6	20	0.0500	
trans-1,3-Dichloropropene	0.7274	0.7739	15.00	15.96	ug/L	6	30	0.0500	
1,1,2-Trichloroethane	0.2488	0.2558	15.00	15.42	ug/L	3	30	0.0500	
2-Hexanone	0.5540	0.4418	15.00	11.96	ug/L	-20	40	0.0500	
1,3-Dichloropropane	0.7585	0.7882	15.00	15.59	ug/L	4	30	0.0500	
Tetrachloroethene	0.3542	0.3992	15.00	16.91	ug/L	13	30	0.0500	
Dibromochloromethane	0.4971	0.5564	15.00	16.79	ug/L	12	30	0.0500	
1,2-Dibromoethane	0.4838	0.4953	15.00	15.36	ug/L	2	30	0.0500	
Chlorobenzene	1.0716	1.1442	15.00	16.02	ug/L	7	30	0.3000	
1,1,1,2-Tetrachloroethane	0.3999	0.4323	15.00	16.22	ug/L	8	30	0.0500	
Ethylbenzene	1.7443	1.8345	15.00	15.78	ug/L	5	20	0.0500	
m,p-Xylenes	0.6030	0.6594	30.00	32.81	ug/L	9	30	0.0500	
o-Xylene	0.6190	0.6682	15.00	16.19	ug/L	8	30	0.0500	
Styrene	1.0917	1.1651	15.00	16.01	ug/L	7	30	0.0500	
Bromoform	0.3225	0.3616	15.00	16.82	ug/L	12	30	0.1000	
Isopropylbenzene	3.2330	3.5116	15.00	16.29	ug/L	9	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.3055	1.2814	15.00	14.72	ug/L	-2	30	0.3000	
1,2,3-Trichloropropane	1.1185	1.0742	15.00	14.41	ug/L	-4	30	0.0500	
Propylbenzene	3.7870	4.1012	15.00	16.24	ug/L	8	30	0.0500	
Bromobenzene	0.9808	1.1039	15.00	16.88	ug/L	13	30	0.0500	
1,3,5-Trimethylbenzene	2.5352	2.6922	15.00	15.93	ug/L	6	30	0.0500	
2-Chlorotoluene	2.8142	3.0176	15.00	16.08	ug/L	7	30	0.0500	
4-Chlorotoluene	2.6010	2.7559	15.00	15.89	ug/L	6	30	0.0500	
tert-Butylbenzene	2.1264	2.3421	15.00	16.52	ug/L	10	30	0.0500	
1,2,4-Trimethylbenzene	2.4287	2.5396	15.00	15.68	ug/L	5	30	0.0500	
sec-Butylbenzene	3.0880	3.3039	15.00	16.05	ug/L	7	30	0.0500	
para-Isopropyl Toluene	2.3141	2.4209	15.00	15.69	ug/L	5	30	0.0500	
1,3-Dichlorobenzene	1.4963	1.6569	15.00	16.61	ug/L	11	30	0.0500	
1,4-Dichlorobenzene	1.5444	1.6709	15.00	16.23	ug/L	8	30	0.0500	
n-Butylbenzene	1.9053	1.8408	15.00	14.49	ug/L	-3	30	0.0500	
1,2-Dichlorobenzene	1.5665	1.7299	15.00	16.56	ug/L	10	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.2709	0.2272	15.00	12.58	ug/L	-16	30	0.0500	
1,2,4-Trichlorobenzene	0.6580	0.6453	15.00	14.71	ug/L	-2	30	0.0500	
Hexachlorobutadiene	0.4222	0.4804	15.00	17.07	ug/L	14	30	0.0500	
Naphthalene	1.7528	1.6538	15.00	14.15	ug/L	-6	30	0.0500	
1,2,3-Trichlorobenzene	0.6710	0.6636	15.00	14.83	ug/L	-1	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0778	0.0618	150.0	119.1	ug/L	-21	30	0.0050	!c- !v-
Isopropyl Ether (DIPE)	4.2794	4.4917	15.00	15.74	ug/L	5	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	3.2471	3.4281	15.00	15.84	ug/L	6	30	0.0500	
Methyl tert-Amyl Ether (TAME)	1.3228	1.3211	15.00	14.98	ug/L	0	30	0.0500	
Dibromofluoromethane	0.8065	0.8366	50.00	51.86	ug/L	4	30	0.0500	
1,2-Dichloroethane-d4	0.5248	0.5108	50.00	48.66	ug/L	-3	30	0.0500	
Toluene-d8	1.2838	1.2810	50.00	49.89	ug/L	0	30	0.0500	
Bromofluorobenzene	1.1204	1.1195	50.00	49.96	ug/L	0	30	0.0500	

ISTD (ICAL bc513)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	663015	603930	-8.91	11.24	11.27	0.03
1,4-Difluorobenzene	1319436	1236953	-6.25	12.46	12.48	0.02
Chlorobenzene-d5	1199148	1119861	-6.61	17.06	17.07	0.01
1,4-Dichlorobenzene-d4	576003	515090	-10.58	20.45	20.47	0.02

MCT 04/16/15 [Freon 12]: Combined split peak.

MCT 04/16/15 [Vinyl Chloride]: Combined split peak.

Analyst: MCT Date: 04/16/15 Reviewer: LW Date: 04/16/15

!=warning +=high bias -=low bias c=CCV m>manual integration v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA02 IDF : 1.0
 Seqnum : 415154447004 File : bdh04 Time : 17-APR-2015 07:48
 Cal : 415092829001 Caldate : 05-MAR-2015 Caltype : WATER
 Standards: S25695 (33330X), S26948 (33330X), S26838 (33330X), S26957 (33330X), S26909 (1000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	1.0126	1.2262	15.00	18.16	ug/L	21	30	0.0500	!c+
Chloromethane	1.4930	1.6121	15.00	16.20	ug/L	8	30	0.1000	
Vinyl Chloride	1.1208	1.3056	15.00	17.47	ug/L	16	20	0.0500	
Bromomethane	0.5362	0.5129	15.00	14.35	ug/L	-4	30	0.0500	
Chloroethane	0.6379	0.7446	15.00	17.51	ug/L	17	30	0.0500	
Trichlorofluoromethane	1.2135	1.3876	15.00	17.15	ug/L	14	30	0.0500	
Acetone	0.4912	0.4589	15.00	14.01	ug/L	-7	40	0.0500	!v-
Freon 113	0.6196	0.7436	15.00	18.00	ug/L	20	30	0.0500	
1,1-Dichloroethene	0.6603	0.7442	15.00	16.91	ug/L	13	20	0.0500	
Methylene Chloride	0.8957	1.0050	15.00	16.83	ug/L	12	30	0.0500	
Carbon Disulfide	2.5310	2.8843	15.00	17.09	ug/L	14	30	0.0500	
MTBE	2.4536	2.5836	15.00	15.79	ug/L	5	30	0.0500	
trans-1,2-Dichloroethene	0.7631	0.8588	15.00	16.88	ug/L	13	30	0.0500	
Vinyl Acetate	1.9323	2.4644	15.00	19.13	ug/L	28	40	0.0500	!c+ !v+
1,1-Dichloroethane	1.7956	1.9043	15.00	15.91	ug/L	6	30	0.1000	
2-Butanone	0.6650	0.6022	15.00	13.58	ug/L	-9	40	0.0500	
2,2-Dichloropropane	1.1073	1.3503	15.00	18.29	ug/L	22	30	0.0500	!c+
cis-1,2-Dichloroethene	0.8844	0.9746	15.00	16.53	ug/L	10	30	0.0500	
Chloroform	1.5474	1.6904	15.00	16.39	ug/L	9	20	0.0500	
Bromochloromethane	0.4552	0.5275	15.00	17.38	ug/L	16	30	0.0500	
1,1,1-Trichloroethane	1.1836	1.2892	15.00	16.34	ug/L	9	30	0.0500	
1,1-Dichloropropene	0.5556	0.5615	15.00	15.16	ug/L	1	30	0.0500	
Carbon Tetrachloride	0.4791	0.5062	15.00	15.85	ug/L	6	30	0.0500	
1,2-Dichloroethane	0.7334	0.7298	15.00	14.93	ug/L	0	30	0.0500	
Benzene	1.5439	1.5848	15.00	15.40	ug/L	3	30	0.0500	
Trichloroethene	0.4112	0.3999	15.00	14.59	ug/L	-3	30	0.0500	
1,2-Dichloropropane	0.5262	0.5255	15.00	14.98	ug/L	0	20	0.0500	
Bromodichloromethane	0.5994	0.6247	15.00	15.63	ug/L	4	30	0.0500	
Dibromomethane	0.3371	0.3482	15.00	15.49	ug/L	3	30	0.0500	
4-Methyl-2-Pentanone	0.7095	0.6032	15.00	12.75	ug/L	-15	40	0.0500	
cis-1,3-Dichloropropene	0.7152	0.7515	15.00	15.76	ug/L	5	30	0.0500	
Toluene	0.9498	0.9034	15.00	14.27	ug/L	-5	20	0.0500	
trans-1,3-Dichloropropene	0.7274	0.6781	15.00	13.98	ug/L	-7	30	0.0500	
1,1,2-Trichloroethane	0.2488	0.2259	15.00	13.62	ug/L	-9	30	0.0500	
2-Hexanone	0.5540	0.4057	15.00	10.99	ug/L	-27	40	0.0500	!c-
1,3-Dichloropropane	0.7585	0.7067	15.00	13.98	ug/L	-7	30	0.0500	
Tetrachloroethene	0.3542	0.3574	15.00	15.14	ug/L	1	30	0.0500	
Dibromochloromethane	0.4971	0.4869	15.00	14.69	ug/L	-2	30	0.0500	
1,2-Dibromoethane	0.4838	0.4513	15.00	13.99	ug/L	-7	30	0.0500	
Chlorobenzene	1.0716	1.0487	15.00	14.68	ug/L	-2	30	0.3000	
1,1,1,2-Tetrachloroethane	0.3999	0.3972	15.00	14.90	ug/L	-1	30	0.0500	
Ethylbenzene	1.7443	1.6719	15.00	14.38	ug/L	-4	20	0.0500	
m,p-Xylenes	0.6030	0.6010	30.00	29.90	ug/L	0	30	0.0500	
o-Xylene	0.6190	0.6055	15.00	14.67	ug/L	-2	30	0.0500	
Styrene	1.0917	1.0628	15.00	14.60	ug/L	-3	30	0.0500	
Bromoform	0.3225	0.3317	15.00	15.43	ug/L	3	30	0.1000	
Isopropylbenzene	3.2330	3.4949	15.00	16.22	ug/L	8	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.3055	1.3270	15.00	15.25	ug/L	2	30	0.3000	
1,2,3-Trichloropropane	1.1185	1.0964	15.00	14.70	ug/L	-2	30	0.0500	
Propylbenzene	3.7870	4.0850	15.00	16.18	ug/L	8	30	0.0500	
Bromobenzene	0.9808	1.0898	15.00	16.67	ug/L	11	30	0.0500	
1,3,5-Trimethylbenzene	2.5352	2.6881	15.00	15.90	ug/L	6	30	0.0500	
2-Chlorotoluene	2.8142	2.9930	15.00	15.95	ug/L	6	30	0.0500	
4-Chlorotoluene	2.6010	2.6568	15.00	15.32	ug/L	2	30	0.0500	
tert-Butylbenzene	2.1264	2.2942	15.00	16.18	ug/L	8	30	0.0500	
1,2,4-Trimethylbenzene	2.4287	2.4462	15.00	15.11	ug/L	1	30	0.0500	
sec-Butylbenzene	3.0880	3.3068	15.00	16.06	ug/L	7	30	0.0500	
para-Isopropyl Toluene	2.3141	2.3884	15.00	15.48	ug/L	3	30	0.0500	
1,3-Dichlorobenzene	1.4963	1.6420	15.00	16.46	ug/L	10	30	0.0500	
1,4-Dichlorobenzene	1.5444	1.6630	15.00	16.15	ug/L	8	30	0.0500	
n-Butylbenzene	1.9053	1.7953	15.00	14.13	ug/L	-6	30	0.0500	
1,2-Dichlorobenzene	1.5665	1.6952	15.00	16.23	ug/L	8	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.2709	0.2453	15.00	13.58	ug/L	-9	30	0.0500	
1,2,4-Trichlorobenzene	0.6580	0.6349	15.00	14.47	ug/L	-4	30	0.0500	
Hexachlorobutadiene	0.4222	0.4836	15.00	17.18	ug/L	15	30	0.0500	
Naphthalene	1.7528	1.6820	15.00	14.39	ug/L	-4	30	0.0500	
1,2,3-Trichlorobenzene	0.6710	0.6535	15.00	14.61	ug/L	-3	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0778	0.0654	150.0	126.0	ug/L	-16	30	0.0050	!v-
Isopropyl Ether (DIPE)	4.2794	4.4529	15.00	15.61	ug/L	4	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	3.2471	3.4369	15.00	15.88	ug/L	6	30	0.0500	
Methyl tert-Amyl Ether (TAME)	1.3228	1.2945	15.00	14.68	ug/L	-2	30	0.0500	
Dibromofluoromethane	0.8065	0.8642	50.00	53.57	ug/L	7	30	0.0500	
1,2-Dichloroethane-d4	0.5248	0.5039	50.00	48.01	ug/L	-4	30	0.0500	
Toluene-d8	1.2838	1.1870	50.00	46.23	ug/L	-8	30	0.0500	
Bromofluorobenzene	1.1204	1.1328	50.00	50.55	ug/L	1	30	0.0500	

ISTD (ICAL bc513)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	663015	589669	-11.06	11.24	11.26	0.02
1,4-Difluorobenzene	1319436	1236651	-6.27	12.46	12.47	0.01
Chlorobenzene-d5	1199148	1214044	1.24	17.06	17.07	0.01
1,4-Dichlorobenzene-d4	576003	510839	-11.31	20.45	20.47	0.02

Analyst: MCT Date: 04/17/15 Reviewer: LW Date: 04/20/15

!=warning +=high bias -=low bias c=CCV v=ICV

CURTIS & TOMPKINS SPIKE USER REPORT FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : QC784795 IDF : 1.0
 Seqnum : 495156249003.1 File : jdi03 Time : 18-APR-2015 13:20
 Cal : 495052755001 Caldate : 05-FEB-2015 Caltype : WATER
 Standards: S26759 (12500X), S26358 (12500X), S27022 (12500X), S26876 (12500X),
 S26941 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.7156	0.7656	16.00	17.12	ug/L	7	30	0.0500	?LOD u
Chloromethane	1.0892	1.2763	16.00	18.75	ug/L	17	30	0.1000	u
Vinyl Chloride	0.8493	1.0199	16.00	19.21	ug/L	20	20	0.0500	u
Bromomethane	0.5267	0.4217	16.00	12.81	ug/L	-20	30	0.0500	u
Chloroethane	0.5345	0.5847	16.00	17.50	ug/L	9	30	0.0500	u
Trichlorofluoromethane	0.9757	1.1083	16.00	18.17	ug/L	14	30	0.0500	u
Acetone	0.4133	0.3470	20.00	16.80	ug/L	-16	40	0.0500	!v- u
Freon 113	0.5238	0.5808	20.00	22.18	ug/L	11	30	0.0500	u
1,1-Dichloroethene	0.4921	0.5268	20.00	21.41	ug/L	7	20	0.0500	u
Methylene Chloride	0.6742	0.6852	20.00	20.33	ug/L	2	30	0.0500	u
Carbon Disulfide	2.0284	2.2832	20.00	22.51	ug/L	13	30	0.0500	u
MTBE	1.9346	2.0891	20.00	21.60	ug/L	8	30	0.0500	u
trans-1,2-Dichloroethene	0.5793	0.6030	20.00	20.82	ug/L	4	30	0.0500	u
Vinyl Acetate	0.9687	2.3940	20.00	49.43	ug/L	147	40	0.0500	!v+ ?LOD c+ u ***
1,1-Dichloroethane	1.3394	1.4650	20.00	21.88	ug/L	9	30	0.1000	u
2-Butanone	0.4787	0.5016	20.00	20.96	ug/L	5	40	0.0500	u
cis-1,2-Dichloroethene	0.6434	0.6624	20.00	20.59	ug/L	3	30	0.0500	u
2,2-Dichloropropane	0.8772	1.2028	20.00	27.43	ug/L	37	30	0.0500	c+ u ***
Chloroform	1.2074	1.2849	20.00	21.28	ug/L	6	20	0.0500	u
Bromochloromethane	0.3255	0.3313	20.00	20.35	ug/L	2	30	0.0500	u
1,1,1-Trichloroethane	0.8985	1.0556	20.00	23.50	ug/L	17	30	0.0500	u
1,1-Dichloropropene	0.5686	0.6004	20.00	21.12	ug/L	6	30	0.0500	u
Carbon Tetrachloride	0.4643	0.5416	20.00	23.33	ug/L	17	30	0.0500	u
1,2-Dichloroethane	0.6894	0.7151	20.00	20.75	ug/L	4	30	0.0500	u
Benzene	1.4951	1.5732	20.00	21.05	ug/L	5	30	0.0500	u
Trichloroethene	0.4003	0.4076	20.00	20.36	ug/L	2	30	0.0500	u
1,2-Dichloropropane	0.4844	0.4828	20.00	19.94	ug/L	0	20	0.0500	u
Bromodichloromethane	0.5867	0.5909	20.00	20.14	ug/L	1	30	0.0500	u
Dibromomethane	0.3006	0.2925	20.00	19.46	ug/L	-3	30	0.0500	u
4-Methyl-2-Pentanone	0.5685	0.6302	20.00	22.17	ug/L	11	40	0.0500	u
cis-1,3-Dichloropropene	0.6682	0.7125	20.00	21.33	ug/L	7	30	0.0500	u
Toluene	1.0455	1.0923	20.00	20.90	ug/L	4	20	0.0500	u
trans-1,3-Dichloropropene	0.6996	0.7254	20.00	20.74	ug/L	4	30	0.0500	u
1,1,2-Trichloroethane	0.2389	0.2312	20.00	19.35	ug/L	-3	30	0.0500	u
2-Hexanone	0.4061	0.5008	20.00	24.66	ug/L	23	40	0.0500	u
1,3-Dichloropropane	0.7738	0.7917	20.00	20.46	ug/L	2	30	0.0500	u
Tetrachloroethene	0.4072	0.4195	20.00	20.60	ug/L	3	30	0.0500	u
Dibromochloromethane	0.4812	0.4764	20.00	19.80	ug/L	-1	30	0.0500	u
1,2-Dibromoethane	0.4378	0.4347	20.00	19.86	ug/L	-1	30	0.0500	u
Chlorobenzene	1.1116	1.1254	20.00	20.25	ug/L	1	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.4039	0.4095	20.00	20.28	ug/L	1	30	0.0500	u
Ethylbenzene	1.9618	2.1344	20.00	21.76	ug/L	9	20	0.0500	u
m,p-Xylenes	0.6734	0.7374	40.00	43.80	ug/L	10	30	0.0500	u
o-Xylene	0.6543	0.6914	20.00	21.13	ug/L	6	30	0.0500	u
Styrene	1.1570	1.2221	20.00	21.13	ug/L	6	30	0.0500	u
Bromoform	0.3094	0.3115	20.00	20.14	ug/L	1	30	0.1000	u
Isopropylbenzene	3.6169	4.0646	20.00	22.48	ug/L	12	30	0.0500	u

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.1468	1.1796	20.00	20.57	ug/L	3	30	0.3000	u
1,2,3-Trichloropropane	1.1300	1.1355	20.00	20.10	ug/L	0	30	0.0500	u
Propylbenzene	4.3060	4.8925	20.00	22.72	ug/L	14	30	0.0500	u
Bromobenzene	1.0000	1.0033	20.00	20.07	ug/L	0	30	0.0500	u
1,3,5-Trimethylbenzene	2.7458	3.1590	20.00	23.01	ug/L	15	30	0.0500	u
2-Chlorotoluene	3.1782	3.4491	20.00	21.71	ug/L	9	30	0.0500	u
4-Chlorotoluene	2.8873	3.1676	20.00	21.94	ug/L	10	30	0.0500	u
tert-Butylbenzene	2.3241	2.5330	20.00	21.80	ug/L	9	30	0.0500	u
1,2,4-Trimethylbenzene	2.5829	2.7700	20.00	21.45	ug/L	7	30	0.0500	u
sec-Butylbenzene	3.5002	3.8524	20.00	22.01	ug/L	10	30	0.0500	u
para-Isopropyl Toluene	2.5906	2.7148	20.00	20.96	ug/L	5	30	0.0500	u
1,3-Dichlorobenzene	1.7299	1.7335	20.00	20.04	ug/L	0	30	0.0500	u
1,4-Dichlorobenzene	1.7260	1.7900	20.00	20.74	ug/L	4	30	0.0500	u
n-Butylbenzene	2.4296	2.4015	20.00	19.77	ug/L	-1	30	0.0500	u
1,2-Dichlorobenzene	1.6384	1.6182	20.00	19.75	ug/L	-1	30	0.0500	u
1,2-Dibromo-3-Chloropropane	0.1804	0.1897	20.00	21.03	ug/L	5	30	0.0500	u
1,2,4-Trichlorobenzene	0.8299	0.7468	20.00	18.00	ug/L	-10	30	0.0500	?LOD u
Hexachlorobutadiene	0.4197	0.3948	20.00	18.81	ug/L	-6	30	0.0500	u
Naphthalene	1.9068	1.5049	20.00	15.78	ug/L	-21	30	0.0500	?LOD u
1,2,3-Trichlorobenzene	0.7598	0.6414	20.00	16.88	ug/L	-16	30	0.0500	?LOD u
tert-Butyl Alcohol (TBA)	0.0622	0.0745	100.0	119.9	ug/L	20	30	0.0050	u
Isopropyl Ether (DIPE)	3.4273	3.8085	20.00	22.22	ug/L	11	30	0.0500	u
Ethyl tert-Butyl Ether (ETBE)	2.5339	2.7844	20.00	21.98	ug/L	10	30	0.0500	u
Methyl tert-Amyl Ether (TAME)	1.2763	1.3009	20.00	20.39	ug/L	2	30	0.0500	u
Dibromofluoromethane	0.6061	0.6319	50.00	52.13	ug/L	4	30	0.0500	u
1,2-Dichloroethane-d4	0.4953	0.5302	50.00	53.53	ug/L	7	30	0.0500	u
Toluene-d8	1.3579	1.3778	50.00	50.73	ug/L	1	30	0.0500	u
Bromofluorobenzene	1.1695	1.2060	50.00	51.56	ug/L	3	30	0.0500	u

ISTD (ICAL jb518)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	1056928	811685	-23.20	11.08	11.07	-0.01
1,4-Difluorobenzene	1663360	1352040	-18.72	12.25	12.23	-0.02
Chlorobenzene-d5	1426786	1155294	-19.03	16.18	16.16	-0.02
1,4-Dichlorobenzene-d4	723184	539328	-25.42	18.89	18.88	-0.01

Analyst: KER Date: 04/20/15 Reviewer: LW Date: 04/22/15

!=warning +=high bias -=low bias ?LOD=no LOD c=CCV u=use v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : A/A IDF : 1.0
 Seqnum : 495156249005 File : jdi05 Time : 18-APR-2015 14:32
 Cal : 495052755001 Caldate : 05-FEB-2015 Caltype : WATER
 Standards: S26757 (50000X), S26941 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Dibromofluoromethane	0.6061	0.5971	50.00	49.26	ug/L	-1	30	0.0500	
1,2-Dichloroethane-d4	0.4953	0.5370	50.00	54.21	ug/L	8	30	0.0500	
Toluene-d8	1.3579	1.3546	50.00	49.88	ug/L	0	30	0.0500	
Bromofluorobenzene	1.1695	1.3805	50.00	59.02	ug/L	18	30	0.0500	

ISTD (ICAL jb518)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	1056928	850767	-19.51	11.08	11.07	-0.01
1,4-Difluorobenzene	1663360	1361951	-18.12	12.25	12.23	-0.02
Chlorobenzene-d5	1426786	1148912	-19.48	16.18	16.16	-0.02
1,4-Dichlorobenzene-d4	723184	454532	-37.15	18.89	18.88	-0.01

LW 04/20/15 : A/A CCV - not needed and not worked up

Analyst: DJA Date: 04/20/15 Reviewer: LW Date: 04/20/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 MSVOA Water
EPA 8260B

Inst : MSVOA11 IDF : 1.0
 Seqnum : 835153190004 File : kdg04 Time : 16-APR-2015 11:33
 Cal : 835120089001 Caldate : 24-MAR-2015 Caltype : WATER
 Standards: S25695 (25000X), S26948 (25000X), S26838 (25000X), S25156 (25000X),
 S26882 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.4972	0.4990	20.00	20.07	ug/L	0	30	0.0500	
Chloromethane	0.4836	0.4439	20.00	18.36	ug/L	-8	30	0.1000	
Vinyl Chloride	0.5192	0.5279	20.00	20.34	ug/L	2	20	0.0500	
Bromomethane	0.2578	0.3110	20.00	24.12	ug/L	21	30	0.0500	!c+ !v-
Chloroethane	0.2775	0.2830	20.00	20.39	ug/L	2	30	0.0500	
Trichlorofluoromethane	0.6504	0.6639	20.00	20.42	ug/L	2	30	0.0500	
Acetone	0.1289	0.1326	20.00	20.58	ug/L	3	40	0.0500	!v-
Freon 113	0.3401	0.3628	20.00	21.34	ug/L	7	30	0.0500	
1,1-Dichloroethene	0.3748	0.3755	20.00	20.04	ug/L	0	20	0.0500	
Methylene Chloride	0.4477	0.4629	20.00	20.68	ug/L	3	30	0.0500	
Carbon Disulfide	1.2559	1.3165	20.00	20.96	ug/L	5	30	0.0500	
MTBE	1.2518	1.2257	20.00	19.58	ug/L	-2	30	0.0500	
trans-1,2-Dichloroethene	0.4461	0.4524	20.00	20.28	ug/L	1	30	0.0500	
Vinyl Acetate	0.6429	0.6206	20.00	19.31	ug/L	-3	40	0.0500	!v+
1,1-Dichloroethane	0.7583	0.7862	20.00	20.73	ug/L	4	30	0.1000	
2-Butanone	0.1810	0.1782	20.00	19.69	ug/L	-2	40	0.0500	
2,2-Dichloropropane	0.5956	0.6717	20.00	22.55	ug/L	13	30	0.0500	
cis-1,2-Dichloroethene	0.5103	0.5130	20.00	20.10	ug/L	1	30	0.0500	
Chloroform	0.7810	0.8277	20.00	21.20	ug/L	6	20	0.0500	
Bromochloromethane	0.2527	0.2681	20.00	21.22	ug/L	6	30	0.0500	
1,1,1-Trichloroethane	0.6629	0.6948	20.00	20.96	ug/L	5	30	0.0500	
1,1-Dichloropropene	0.3839	0.4111	20.00	21.42	ug/L	7	30	0.0500	
Carbon Tetrachloride	0.3701	0.3917	20.00	21.17	ug/L	6	30	0.0500	
1,2-Dichloroethane	0.4016	0.4238	20.00	21.10	ug/L	6	30	0.0500	
Benzene	1.2337	1.3074	20.00	21.19	ug/L	6	30	0.0500	
Trichloroethene	0.3141	0.3338	20.00	21.25	ug/L	6	30	0.0500	
1,2-Dichloropropane	0.3125	0.3202	20.00	20.49	ug/L	2	20	0.0500	
Bromodichloromethane	0.4068	0.4285	20.00	21.07	ug/L	5	30	0.0500	
Dibromomethane	0.1997	0.2067	20.00	20.71	ug/L	4	30	0.0500	
4-Methyl-2-Pentanone	0.2555	0.2512	20.00	19.66	ug/L	-2	40	0.0500	
cis-1,3-Dichloropropene	0.5082	0.5327	20.00	20.96	ug/L	5	30	0.0500	
Toluene	0.9376	0.9772	20.00	20.84	ug/L	4	20	0.0500	
trans-1,3-Dichloropropene	0.5449	0.5651	20.00	20.74	ug/L	4	30	0.0500	
1,1,2-Trichloroethane	0.1813	0.1889	20.00	20.83	ug/L	4	30	0.0500	
2-Hexanone	0.2128	0.2044	20.00	19.21	ug/L	-4	40	0.0500	
1,3-Dichloropropane	0.5431	0.5640	20.00	20.77	ug/L	4	30	0.0500	
Tetrachloroethene	0.3735	0.4051	20.00	21.70	ug/L	8	30	0.0500	
Dibromochloromethane	0.3982	0.4059	20.00	20.39	ug/L	2	30	0.0500	
1,2-Dibromoethane	0.3482	0.3567	20.00	20.49	ug/L	2	30	0.0500	
Chlorobenzene	1.1069	1.1388	20.00	20.58	ug/L	3	30	0.3000	
1,1,1,2-Tetrachloroethane	0.3852	0.3887	20.00	20.18	ug/L	1	30	0.0500	
Ethylbenzene	1.8266	1.9399	20.00	21.24	ug/L	6	20	0.0500	
m,p-Xylenes	0.7276	0.7620	40.00	41.89	ug/L	5	30	0.0500	
o-Xylene	0.7023	0.7146	20.00	20.35	ug/L	2	30	0.0500	
Styrene	1.2139	1.2341	20.00	20.33	ug/L	2	30	0.0500	
Bromoform	0.2847	0.2738	20.00	19.24	ug/L	-4	30	0.1000	
Isopropylbenzene	3.4262	3.8064	20.00	22.22	ug/L	11	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.7845	0.8576	20.00	21.86	ug/L	9	30	0.3000	
1,2,3-Trichloropropane	0.8003	0.8579	20.00	21.44	ug/L	7	30	0.0500	
Propylbenzene	3.8856	4.4290	20.00	22.80	ug/L	14	30	0.0500	
Bromobenzene	0.9660	1.0203	20.00	21.12	ug/L	6	30	0.0500	
1,3,5-Trimethylbenzene	2.8083	3.0529	20.00	21.74	ug/L	9	30	0.0500	
2-Chlorotoluene	2.7173	3.0038	20.00	22.11	ug/L	11	30	0.0500	
4-Chlorotoluene	2.5066	2.7190	20.00	21.70	ug/L	8	30	0.0500	
tert-Butylbenzene	2.4558	2.6348	20.00	21.46	ug/L	7	30	0.0500	
1,2,4-Trimethylbenzene	2.6627	2.8873	20.00	21.69	ug/L	8	30	0.0500	
sec-Butylbenzene	3.4357	3.8833	20.00	22.61	ug/L	13	30	0.0500	
para-Isopropyl Toluene	2.7771	3.0399	20.00	21.89	ug/L	9	30	0.0500	
1,3-Dichlorobenzene	1.7260	1.7657	20.00	20.46	ug/L	2	30	0.0500	
1,4-Dichlorobenzene	1.7680	1.8297	20.00	20.70	ug/L	3	30	0.0500	
n-Butylbenzene	2.2484	2.4733	20.00	22.00	ug/L	10	30	0.0500	
1,2-Dichlorobenzene	1.6246	1.6809	20.00	20.69	ug/L	3	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.1387	0.1450	20.00	20.90	ug/L	5	30	0.0500	
1,2,4-Trichlorobenzene	0.7404	0.7610	20.00	20.56	ug/L	3	30	0.0500	
Hexachlorobutadiene	0.4221	0.4841	20.00	22.94	ug/L	15	30	0.0500	
Naphthalene	1.6033	1.5480	20.00	19.31	ug/L	-3	30	0.0500	
1,2,3-Trichlorobenzene	0.5460	0.5643	20.00	20.67	ug/L	3	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0390	0.0369	200.0	189.1	ug/L	-5	30	0.0050	
Isopropyl Ether (DIPE)	1.2595	1.2142	20.00	19.28	ug/L	-4	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	1.3265	1.3206	20.00	19.91	ug/L	0	30	0.0500	
Methyl tert-Amyl Ether (TAME)	0.9207	0.9196	20.00	19.98	ug/L	0	30	0.0500	
Dibromofluoromethane	0.4359	0.4482	50.00	51.41	ug/L	3	30	0.0500	
1,2-Dichloroethane-d4	0.3486	0.3556	50.00	51.01	ug/L	2	30	0.0500	
Toluene-d8	1.4402	1.4517	50.00	50.40	ug/L	1	30	0.0500	
Bromofluorobenzene	0.9199	0.9678	50.00	52.60	ug/L	5	30	0.0500	

ISTD (ICAL kcn12)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	915237	900809	-1.58	10.67	10.67	0.00
1,4-Difluorobenzene	1337386	1343413	0.45	11.61	11.60	-0.01
Chlorobenzene-d5	1178204	1165676	-1.06	14.70	14.69	-0.01
1,4-Dichlorobenzene-d4	608161	570584	-6.18	16.95	16.95	0.00

Analyst: DJA Date: 04/16/15 Reviewer: LW Date: 04/17/15

!=warning +=high bias -=low bias c=CCV v=ICV

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 415150181

Date : 04/14/15
 Sequence : MSVOA02 bde

Reference : bc513
 Analyzed : 03/05/15 18:01

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	663015	11.24	1319436	12.46	1199148	17.06	576003	20.45
		LOWER LIMIT	331508	10.74	659718	11.96	599574	16.56	288002	19.95
		UPPER LIMIT	1326030	11.74	2638872	12.96	2398296	17.56	1152006	20.95
004	CCV		664525	11.24	1439964	12.46	1276241	17.05	563438	20.45
006	CCV		648305	11.25	1368586	12.46	1236119	17.05	546200	20.44
007	BS	QC784199	697148	11.24	1409681	12.46	1268724	17.05	567519	20.45
008	BSD	QC784200	686406	11.24	1408878	12.45	1265545	17.05	568598	20.45
011	BLANK	QC784201	673115	11.24	1396481	12.46	1228985	17.06	517818	20.45
012	SAMPLE	266019-001	627548	11.24	1293630	12.46	1183507	17.06	508445	20.45
013	SAMPLE	266019-002	633049	11.24	1304475	12.46	1164625	17.05	498858	20.46
014	SAMPLE	266052-006	632247	11.24	1336583	12.46	1185469	17.06	493489	20.45
015	MSS	266002-005	631722	11.25	1300356	12.46	1153257	17.05	499837	20.46
016	SAMPLE	266052-001	638805	11.24	1294800	12.46	1174717	17.06	506229	20.45
017	SAMPLE	266052-002	624741	11.25	1306329	12.46	1163574	17.06	506315	20.45
018	SAMPLE	266052-004	616575	11.25	1307488	12.46	1167521	17.05	498744	20.46
019	SAMPLE	266048-002	634561	11.25	1296567	12.46	1156979	17.06	502918	20.46
020	SAMPLE	266048-003	627195	11.24	1286279	12.46	1164873	17.06	503949	20.46
021	SAMPLE	266014-003	623858	11.24	1280525	12.47	1140788	17.06	515130	20.45
022	SAMPLE	266019-003	615226	11.25	1260493	12.46	1137650	17.06	490988	20.46
023	SAMPLE	266048-001	603620	11.25	1227208	12.46	1110546	17.05	485219	20.45
024	MS	QC784237	609095	11.24	1249002	12.46	1134858	17.06	515247	20.45
025	MSD	QC784238	620505	11.25	1277480	12.46	1161402	17.05	519806	20.45

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 415151586

Date : 04/15/15
 Sequence : MSVOA02 bdf

Reference : bc513
 Analyzed : 03/05/15 18:01

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	663015	11.24	1319436	12.46	1199148	17.06	576003	20.45
		LOWER LIMIT	331508	10.74	659718	11.96	599574	16.56	288002	19.95
		UPPER LIMIT	1326030	11.74	2638872	12.96	2398296	17.56	1152006	20.95
004	CCV		647153	11.25	1333747	12.47	1199485	17.07	545966	20.46
006	CCV		650889	11.25	1306939	12.47	1189145	17.06	548821	20.46
007	BS	QC784352	665653	11.25	1344327	12.47	1207276	17.06	555493	20.47
008	BSD	QC784353	669207	11.26	1362046	12.47	1234618	17.06	554130	20.46
011	BLANK	QC784354	628369	11.25	1290745	12.48	1158381	17.07	497934	20.46
012	SAMPLE	266052-006	635110	11.26	1276992	12.47	1150947	17.06	496246	20.47
013	SAMPLE	266052-004	598864	11.25	1264821	12.48	1117412	17.07	482439	20.46
014	SAMPLE	265997-002	622081	11.25	1251130	12.47	1123190	17.07	490022	20.47
015	SAMPLE	266090-005	598099	11.26	1238630	12.48	1104129	17.07	482050	20.46
016	SAMPLE	266090-006	601325	11.26	1226215	12.48	1096859	17.07	484281	20.46
017	SAMPLE	266090-001	586186	11.26	1200716	12.48	1087711	17.07	471892	20.46
018	SAMPLE	266073-012	584686	11.26	1174302	12.48	1089058	17.08	463159	20.47
019	SAMPLE	266073-013	586766	11.27	1193516	12.48	1074280	17.07	460251	20.47
020	SAMPLE	266073-014	582580	11.26	1172451	12.48	1073999	17.08	466956	20.47
021	SAMPLE	266073-015	576329	11.26	1166005	12.48	1076734	17.08	463716	20.47
022	SAMPLE	266019-002	577718	11.27	1181341	12.49	960245	17.07	455093	20.48
023	SAMPLE	266090-004	567081	11.27	1162371	12.48	1049630	17.07	452590	20.47
024	SAMPLE	266090-003	559656	11.26	1138360	12.48	1040910	17.08	455152	20.47
025	SAMPLE	266090-002	566741	11.26	1155113	12.47	1054984	17.08	457918	20.47

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 415153005

Date : 04/16/15
 Sequence : MSVOA02 bdg

Reference : bc513
 Analyzed : 03/05/15 18:01

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	663015	11.24	1319436	12.46	1199148	17.06	576003	20.45
		LOWER LIMIT	331508	10.74	659718	11.96	599574	16.56	288002	19.95
		UPPER LIMIT	1326030	11.74	2638872	12.96	2398296	17.56	1152006	20.95
004	CCV		603930	11.27	1236953	12.48	1119861	17.07	515090	20.47
005	BS	QC784501	571243	11.27	1218913	12.48	1112648	17.07	492911	20.48
006	BSD	QC784502	603976	11.27	1261295	12.48	1146308	17.07	520945	20.47
009	BLANK	QC784503	597435	11.26	1220238	12.48	1112123	17.07	477589	20.47
010	SAMPLE	266107-004	589415	11.26	1204237	12.47	1101006	17.08	470958	20.47
011	SAMPLE	266019-004	579001	11.26	1188186	12.48	1074037	17.07	455854	20.47
012	MSS	266019-005	564089	11.27	1140226	12.48	1045608	17.07	453091	20.47
013	SAMPLE	266090-004	546656	11.26	1134126	12.48	1042880	17.08	450014	20.47
014	SAMPLE	266135-001	560592	11.27	1138241	12.48	1039356	17.07	454674	20.47
015	SAMPLE	266135-002	552218	11.26	1116894	12.48	1007745	17.08	436658	20.48
016	SAMPLE	266107-001	550330	11.27	1100731	12.48	1006996	17.07	443120	20.48
017	SAMPLE	266087-004	533757	11.26	1076088	12.49	997272	17.08	429219	20.47
018	SAMPLE	266107-002	530222	11.27	1075906	12.49	981421	17.08	396902	20.48
019	SAMPLE	266107-003	531858	11.27	1097307	12.49	998292	17.08	418486	20.48
020	SAMPLE	266090-003	540440	11.28	1091055	12.49	999749	17.08	433903	20.48
021	SAMPLE	266020-001	523120	11.27	1092429	12.49	1000385	17.08	429073	20.47
022	MS	QC784589	528655	11.26	1084002	12.48	1003063	17.08	455424	20.47
023	MSD	QC784590	543888	11.27	1104332	12.48	1019239	17.08	460353	20.47
027	SAMPLE	265819-001	545665	11.26	1105051	12.48	1031383	17.07	448305	20.47

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 415154447

Date : 04/17/15
 Sequence : MSVOA02 bdh

Reference : bc513
 Analyzed : 03/05/15 18:01

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	663015	11.24	1319436	12.46	1199148	17.06	576003	20.45
		LOWER LIMIT	331508	10.74	659718	11.96	599574	16.56	288002	19.95
		UPPER LIMIT	1326030	11.74	2638872	12.96	2398296	17.56	1152006	20.95
004	CCV		589669	11.26	1236651	12.47	1214044	17.07	510839	20.47
005	BS	QC784671	580078	11.26	1231425	12.48	1123977	17.07	506519	20.47
006	BSD	QC784672	623559	11.26	1283190	12.48	1189707	17.08	529196	20.47
009	BLANK	QC784673	601934	11.26	1236484	12.47	1123299	17.07	475868	20.47
010	SAMPLE	266062-002	562221	11.25	1210401	12.48	1102649	17.07	459886	20.46
011	SAMPLE	266062-004	592389	11.26	1200616	12.48	1103497	17.07	474191	20.47
012	SAMPLE	266068-001	569079	11.25	1180461	12.47	1071151	17.07	454625	20.47
013	SAMPLE	266068-004	573719	11.26	1185987	12.47	1075978	17.07	460892	20.47
014	SAMPLE	266068-006	556580	11.26	1156004	12.47	1042674	17.08	446593	20.47
015	SAMPLE	266084-002	550911	11.26	1158060	12.47	1047539	17.07	442836	20.47
016	SAMPLE	266105-001	547352	11.26	1145283	12.48	1030499	17.07	444990	20.47
017	SAMPLE	266105-003	552576	11.26	1131081	12.48	1040721	17.07	458565	20.47
018	MSS	266019-005	544323	11.26	1111052	12.48	1018516	17.07	444163	20.47
019	MS	QC784685	575848	11.27	1110694	12.48	1028637	17.07	474184	20.46
020	MSD	QC784686	560532	11.26	1146147	12.48	1051887	17.07	486071	20.47
021	SAMPLE	266090-002	550756	11.26	1114002	12.49	1037725	17.08	453773	20.47
022	SAMPLE	266019-004	559154	11.27	1143849	12.48	1048827	17.08	447958	20.47
023	SAMPLE	266108-002	516720	11.26	1104748	12.48	1020933	17.07	434983	20.47

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 495156249

Date : 04/18/15
 Sequence : MSVOA10 jdi

Reference : jb518
 Analyzed : 02/06/15 02:47

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	1056928	11.08	1663360	12.25	1426786	16.18	723184	18.89
		LOWER LIMIT	528464	10.58	831680	11.75	713393	15.68	361592	18.39
		UPPER LIMIT	2113856	11.58	3326720	12.75	2853572	16.68	1446368	19.39
001	IB		716926	11.08	1223251	12.24	1030139	16.16	380024	18.88
003	CCV/BS	QC784795	811685	11.07	1352040	12.23	1155294	16.16	539328	18.88
004	BSD	QC784796	817176	11.08	1355126	12.24	1150803	16.17	532289	18.88
005	CCV	A/A	850767	11.07	1361951	12.23	1148912	16.16	454532	18.88
006	IB		809252	11.07	1297219	12.23	1102562	16.16	425417	18.88
007	BLANK	QC784794	819186	11.07	1309450	12.24	1114085	16.17	431275	18.88
008	SAMPLE	266156-001	788418	11.08	1298274	12.24	1086578	16.17	428079	18.88
009	SAMPLE	266156-002	789257	11.08	1277566	12.24	1075264	16.17	417237	18.88
010	SAMPLE	266156-003	807135	11.07	1301071	12.24	1091287	16.17	425885	18.88
011	SAMPLE	266156-004	794789	11.07	1304978	12.24	1090615	16.16	428801	18.89
012	SAMPLE	266156-005	778218	11.07	1244495	12.24	1037504	16.17	404986	18.88
013	SAMPLE	266156-006	811259	11.07	1332723	12.24	1107326	16.17	410581	18.89
014	SAMPLE	266019-003	763653	11.08	1259835	12.24	1057703	16.17	399457	18.88
015	IB		760535	11.07	1273043	12.24	1074703	16.17	403421	18.88
016	IB		777642	11.07	1282362	12.24	1095197	16.16	412625	18.89
017	LOQ	265722-001	780192	11.07	1261987	12.23	1073610	16.16	449922	18.88
018	LOQ	265722-001	730508	11.08	1267369	12.24	1091312	16.16	466292	18.89

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 835153190

Date : 04/16/15
 Sequence : MSVOA11 kdg

Reference : kcn12
 Analyzed : 03/24/15 14:50

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	915237	10.67	1337386	11.61	1178204	14.70	608161	16.95
		LOWER LIMIT	457619	10.17	668693	11.11	589102	14.20	304081	16.45
		UPPER LIMIT	1830474	11.17	2674772	12.11	2356408	15.20	1216322	17.45
004	CCV		900809	10.67	1343413	11.60	1165676	14.69	570584	16.95
005	BS	QC784558	883739	10.67	1334409	11.60	1145533	14.70	540285	16.95
006	BSD	QC784559	897099	10.67	1353343	11.60	1171862	14.70	570486	16.94
008	BLANK	QC784560	862634	10.67	1320323	11.60	1131350	14.69	515133	16.95
009	SAMPLE	265932-002	845123	10.67	1303422	11.60	1115956	14.70	515442	16.95
010	SAMPLE	266105-004	853986	10.67	1307623	11.60	1120561	14.69	504786	16.94
011	SAMPLE	266108-003	840036	10.67	1274753	11.60	1095185	14.70	509222	16.95
012	SAMPLE	266105-005	844223	10.67	1284109	11.61	1104047	14.70	507950	16.95
013	SAMPLE	266073-003	851998	10.67	1318758	11.60	1127203	14.69	521451	16.95
014	SAMPLE	266073-005	840289	10.67	1294360	11.60	1105944	14.69	506962	16.95
015	SAMPLE	266073-009	842178	10.67	1297150	11.60	1109056	14.69	508259	16.95
016	SAMPLE	266073-011	842464	10.67	1305775	11.60	1114005	14.70	508198	16.95
017	SAMPLE	266073-001	847338	10.67	1308014	11.60	1115178	14.70	512034	16.95
018	SAMPLE	266019-006	834123	10.67	1287712	11.60	1113287	14.69	510425	16.95
019	SAMPLE	266019-007	845594	10.67	1298500	11.60	1113036	14.70	515546	16.95
020	SAMPLE	266109-001	841534	10.67	1294250	11.61	1121435	14.70	505680	16.95
021	SAMPLE	266108-001	839582	10.67	1303597	11.60	1112324	14.70	510474	16.95
022	SAMPLE	266108-002	822726	10.67	1255328	11.60	1084539	14.70	497324	16.95
023	SAMPLE	266105-001	838851	10.67	1288330	11.60	1113365	14.70	504884	16.95
024	SAMPLE	266105-002	839506	10.67	1297752	11.61	1113829	14.70	502535	16.95
025	SAMPLE	265932-001	832151	10.67	1286000	11.61	1118172	14.70	508907	16.95
026	SAMPLE	265932-003	839467	10.67	1299557	11.61	1119332	14.70	505436	16.95
027	SAMPLE	266105-003	847621	10.67	1312795	11.61	1121284	14.70	508583	16.95
028	IB		830164	10.67	1285326	11.61	1113669	14.70	504263	16.95
029	IB		838388	10.67	1299722	11.60	1115665	14.70	508593	16.95
030	IB		845614	10.67	1322583	11.61	1123189	14.70	509635	16.95

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 415092829

Instrument : MSVOA02 Begun : 03/05/15 11:09
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	bc501	X	IB			03/05/15 11:09	1.0	1
002	bc502	X	IB			03/05/15 11:44	1.0	1
003	bc503	TUN	BFB			03/05/15 12:15	1.0	2
004	bc504	X	IB			03/05/15 12:42	1.0	1
005	bc505	X	IB			03/05/15 13:17	1.0	1
006	bc506	IB	CALIB			03/05/15 13:52	1.0	1
007	bc507	ICAL				03/05/15 14:27	1.0	3 4 5 6 1
008	bc508	ICAL				03/05/15 15:03	1.0	3 4 5 6 1
009	bc509	ICAL				03/05/15 15:38	1.0	3 4 5 6 1
010	bc510	ICAL				03/05/15 16:14	1.0	3 4 5 6 1
011	bc511	ICAL				03/05/15 16:50	1.0	3 4 5 6 1
012	bc512	ICAL				03/05/15 17:26	1.0	3 4 5 6 1
013	bc513	ICAL				03/05/15 18:01	1.0	3 4 5 6 1
014	bc514	ICAL				03/05/15 18:37	1.0	3 4 5 6 1
015	bc515	ICAL				03/05/15 19:12	1.0	3 4 5 6 1
016	bc516	ICV	GAS			03/05/15 19:47	1.0	7 1
017	bc517	ICV	MIX			03/05/15 20:23	1.0	8 9 10 1
018	bc518	X	IB			03/05/15 20:58	1.0	1
019	bc519	X	IB			03/05/15 21:33	1.0	1

MCT 03/12/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.

Analyst: MCT Date: 03/12/15 Reviewer: TKM Date: 03/12/15

Standards used: 1=S26528 2=S26000 3=S25695 4=S26560 5=S26570 6=S26571 7=S26359 8=S26569 9=S26642 10=S26759

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 415150181

Instrument : MSVOA02
 Method : EPA 8260B

Begun : 04/14/15 07:01
 SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	bde01	X	IB			04/14/15 07:01	1.0	1	
002	bde02	X	IB			04/14/15 07:36	1.0	1	
003	bde03	TUN	BFB			04/14/15 08:18	1.0	2	
004	bde04	CCV				04/14/15 08:47	1.0	3 4 5 6 1	cc+
005	bde05	TUN	BFB			04/14/15 09:21	1.0	2	
006	bde06	CCV				04/14/15 09:49	1.0	3 4 5 6 1	
007	bde07	BS	QC784199	Water	222234	04/14/15 10:38	1.0	7 8 9 10 1	
008	bde08	BSD	QC784200	Water	222234	04/14/15 11:12	1.0	7 8 9 10 1	
009	bde09	X	ICAL			04/14/15 11:48	1.0	11 1	
010	bde10	X	IB			04/14/15 12:22	1.0	1	
011	bde11	BLANK	QC784201	Water	222234	04/14/15 12:57	1.0	1	
012	bde12	SAMPLE	266019-001	Water	222234	04/14/15 13:32	1.0	1	
013	bde13	SAMPLE	266019-002	Water	222234	04/14/15 14:07	1.0	1	1:TCE=100
014	bde14	SAMPLE	266052-006	Water	222234	04/14/15 14:42	1.0	1	
015	bde15	MSS	266002-005	Water	222234	04/14/15 15:17	1.0	1	
016	bde16	SAMPLE	266052-001	Water	222234	04/14/15 15:52	1.0	1	
017	bde17	SAMPLE	266052-002	Water	222234	04/14/15 16:27	1.0	1	
018	bde18	SAMPLE	266052-004	Water	222234	04/14/15 17:01	1.0	1	
019	bde19	SAMPLE	266048-002	Water	222234	04/14/15 17:36	1.0	1	
020	bde20	SAMPLE	266048-003	Water	222234	04/14/15 18:12	1.0	1	
021	bde21	SAMPLE	266014-003	Water	222234	04/14/15 18:46	2.500	1	
022	bde22	SAMPLE	266019-003	Water	222234	04/14/15 19:22	2.500	1	
023	bde23	SAMPLE	266048-001	Water	222234	04/14/15 19:58	8.333	1	
024	bde24	MS	QC784237	Water	222234	04/14/15 20:33	1.0	7 8 9 10 1	
025	bde25	MSD	QC784238	Water	222234	04/14/15 21:08	1.0	7 8 9 10 1	
026	bde26	X	IB			04/14/15 21:43	1.0	1	
027	bde27	X	IB			04/14/15 22:18	1.0	1	
028	bde28	X	IB			04/14/15 22:53	1.0	1	
029	bde29	X	IB			04/14/15 23:27	1.0	1	

MCT 04/14/15 : Adjusted tune : file bde05.

MCT 04/15/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 29.

Analyst: MCT Date: 04/15/15 Reviewer: LW Date: 04/15/15

Standards used: 1=S26909 2=S26000 3=S25695 4=S26948 5=S26838 6=S26957 7=S26876 8=S27022 9=S26759 10=S26358 11=S27011

Flags used: +=high bias cc=CCV CCC failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 415151586

Instrument : MSVOA02
 Method : EPA 8260B

Begun : 04/15/15 06:26
 SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	bdf01	X	IB			04/15/15 06:26	1.0	1	
002	bdf02	X	IB			04/15/15 07:01	1.0	1	
003	bdf03	TUN	BFB			04/15/15 07:33	1.0	2	
004	bdf04	CCV				04/15/15 08:06	1.0	3 4 5 6 1	cc+
005	bdf05	TUN	BFB			04/15/15 08:41	1.0	2	
006	bdf06	CCV				04/15/15 09:09	1.0	3 4 5 6 1	
007	bdf07	BS	QC784352	Water	222274	04/15/15 09:58	1.0	7 8 9 10 1	
008	bdf08	BSD	QC784353	Water	222274	04/15/15 10:32	1.0	7 8 9 10 1	
009	bdf09	X	ICAL			04/15/15 11:07	1.0	11 1	
010	bdf10	X	IB			04/15/15 11:42	1.0	1	
011	bdf11	BLANK	QC784354	Water	222274	04/15/15 12:17	1.0	1	
012	bdf12	SAMPLE	266052-006	Water	222274	04/15/15 12:52	1.0	1	
013	bdf13	SAMPLE	266052-004	Water	222274	04/15/15 13:27	1.0	1	
014	bdf14	SAMPLE	265997-002	Water	222274	04/15/15 14:03	1.0	1	
015	bdf15	SAMPLE	266090-005	Water	222274	04/15/15 14:38	1.0	1	
016	bdf16	SAMPLE	266090-006	Water	222274	04/15/15 15:13	1.0	1	
017	bdf17	SAMPLE	266090-001	Water	222274	04/15/15 15:49	1.0	1	
018	bdf18	SAMPLE	266073-012	Water	222274	04/15/15 16:25	1.0	1	
019	bdf19	SAMPLE	266073-013	Water	222274	04/15/15 17:00	1.0	1	
020	bdf20	SAMPLE	266073-014	Water	222274	04/15/15 17:36	1.0	1	
021	bdf21	SAMPLE	266073-015	Water	222274	04/15/15 18:11	1.0	1	
022	bdf22	SAMPLE	266019-002	Water	222274	04/15/15 18:47	2.0	1	
023	bdf23	SAMPLE	266090-004	Water	222274	04/15/15 19:22	2.0	1	
024	bdf24	SAMPLE	266090-003	Water	222274	04/15/15 19:58	10.0	1	
025	bdf25	SAMPLE	266090-002	Water	222274	04/15/15 20:33	20.0	1	1:CLBZ=150
026	bdf26	X	IB			04/15/15 21:09	1.0	1	
027	bdf27	X	IB			04/15/15 21:44	1.0	1	
028	bdf28	X	IB			04/15/15 22:19	1.0	1	
029	bdf29	X	IB			04/15/15 22:54	1.0	1	

MCT 04/15/15 : Adjusted tune : file bdf05.

MCT 04/16/15 : Matrix spikes were not performed for this analysis in batch 222274 due to insufficient sample amount.

MCT 04/16/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 29.

Analyst: MCT Date: 04/16/15 Reviewer: LW Date: 04/16/15

Standards used: 1=S26909 2=S26000 3=S25695 4=S26948 5=S26838 6=S26957 7=S26876 8=S27022 9=S26759 10=S26358 11=S27011

Flags used: +=high bias cc=CCV CCC failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 415153005

Instrument : MSVOA02
 Method : EPA 8260B

Begun : 04/16/15 06:05
 SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	bdg01	X	IB			04/16/15 06:05	1.0	1	
002	bdg02	X	IB			04/16/15 06:40	1.0	1	
003	bdg03	TUN	BFB			04/16/15 07:12	1.0	2	
004	bdg04	CCV				04/16/15 07:39	1.0	3 4 5 6 1	
005	bdg05	BS	QC784501	Water	222308	04/16/15 08:29	1.0	7 8 9 10 1	
006	bdg06	BSD	QC784502	Water	222308	04/16/15 09:04	1.0	7 8 9 10 1	
007	bdg07	X	ICAL			04/16/15 09:39	1.0	11 1	
008	bdg08	X	IB			04/16/15 10:14	1.0	1	
009	bdg09	BLANK	QC784503	Water	222308	04/16/15 10:49	1.0	1	
010	bdg10	SAMPLE	266107-004	Water	222308	04/16/15 11:25	1.0	1	
011	bdg11	SAMPLE	266019-004	Water	222308	04/16/15 12:00	1.0	1	1:TCE=160
012	bdg12	MSS	266019-005	Water	222308	04/16/15 12:36	1.0	1	
013	bdg13	SAMPLE	266090-004	Water	222308	04/16/15 13:12	1.0	1	
014	bdg14	SAMPLE	266135-001	Water	222308	04/16/15 13:48	8.333	1	headspace <= 1 mL, pH > 2
015	bdg15	SAMPLE	266135-002	Water	222308	04/16/15 14:24	333.3	1	headspace > 1 mL, pH > 2
016	bdg16	SAMPLE	266107-001	Water	222308	04/16/15 15:00	1.0	1	
017	bdg17	SAMPLE	266087-004	Water	222308	04/16/15 15:37	1.0	1	
018	bdg18	SAMPLE	266107-002	Water	222308	04/16/15 16:13	2.0	1	
019	bdg19	SAMPLE	266107-003	Water	222308	04/16/15 16:49	2.0	1	
020	bdg20	SAMPLE	266090-003	Water	222308	04/16/15 17:26	2.500	1	1:CLBZ=310
021	bdg21	SAMPLE	266020-001	Water	222308	04/16/15 18:02	5.0	1	foamer
022	bdg22	MS	QC784589	Water	222308	04/16/15 18:38	1.0	7 8 9 10 1	
023	bdg23	MSD	QC784590	Water	222308	04/16/15 19:14	1.0	7 8 9 10 1	<<t
024	bdg24	X	IB			04/16/15 19:50	1.0	1	
025	bdg25	X	IB			04/16/15 20:26	1.0	1	
026	bdg26	X	IB			04/16/15 21:02	1.0	1	
027	bdg27	SAMPLE	265819-001	Water	222308	04/16/15 21:38	1.0	1	<<t , pH > 2

KER 04/16/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 15.

LW 04/16/15 : Sequence reviewed for 266135

MCT 04/17/15 : Matrix spikes QC784589, QC784590 (batch 222308) were not reported because the parent sample was reanalyzed in another batch.

MCT 04/17/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 16 through 27.

Analyst: KER Date: 04/16/15 Reviewer: LW Date: 04/17/15

Standards used: 1=S26909 2=S26000 3=S25695 4=S26948 5=S26838 6=S26957 7=S26876 8=S27022 9=S26759 10=S26358 11=S27011

Flags used: <<t=out of clock

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 415154447

Instrument : MSVOA02 Begun : 04/17/15 06:07
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	bdh01	X	IB			04/17/15 06:07	1.0	1	
002	bdh02	X	IB			04/17/15 06:41	1.0	1	
003	bdh03	TUN	BFB			04/17/15 07:18	1.0	2	
004	bdh04	CCV				04/17/15 07:48	1.0	3 4 5 6 1	
005	bdh05	BS	QC784671	Water	222354	04/17/15 08:37	1.0	7 8 9 10 1	
006	bdh06	BSD	QC784672	Water	222354	04/17/15 09:11	1.0	7 8 9 10 1	
007	bdh07	X	ICAL			04/17/15 09:46	1.0	11 1	
008	bdh08	X	IB			04/17/15 10:21	1.0	1	
009	bdh09	BLANK	QC784673	Water	222354	04/17/15 10:56	1.0	1	
010	bdh10	SAMPLE	266062-002	Water	222354	04/17/15 11:31	1.0	1	
011	bdh11	SAMPLE	266062-004	Water	222354	04/17/15 12:06	1.0	1	
012	bdh12	SAMPLE	266068-001	Water	222354	04/17/15 12:41	1.0	1	
013	bdh13	SAMPLE	266068-004	Water	222354	04/17/15 13:16	1.0	1	
014	bdh14	SAMPLE	266068-006	Water	222354	04/17/15 13:52	1.0	1	
015	bdh15	SAMPLE	266084-002	Water	222354	04/17/15 14:27	1.0	1	
016	bdh16	SAMPLE	266105-001	Water	222354	04/17/15 15:02	1.0	1	
017	bdh17	SAMPLE	266105-003	Water	222354	04/17/15 15:38	1.0	1	high SO2
018	bdh18	MSS	266019-005	Water	222354	04/17/15 16:14	1.0	1	high SO2
019	bdh19	MS	QC784685	Water	222354	04/17/15 16:49	1.0	7 8 9 10 1	
020	bdh20	MSD	QC784686	Water	222354	04/17/15 17:25	1.0	7 8 9 10 1	
021	bdh21	SAMPLE	266090-002	Water	222354	04/17/15 18:00	50.0	1	
022	bdh22	SAMPLE	266019-004	Water	222354	04/17/15 18:36	2.0	1	
023	bdh23	SAMPLE	266108-002	Water	222354	04/17/15 19:11	4.0	1	
024	bdh24	X	IB			04/17/15 19:46	1.0	1	
025	bdh25	X	IB			04/17/15 20:21	1.0	1	
026	bdh26	X	IB			04/17/15 20:56	1.0	1	
027	bdh27	X	IB			04/17/15 21:31	1.0	1	

NJT 04/18/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 27.

Analyst: NJT Date: 04/18/15 Reviewer: LW Date: 04/20/15

Standards used: 1=S26909 2=S26000 3=S25695 4=S26948 5=S26838 6=S26957 7=S26876 8=S27022 9=S26759 10=S26358 11=S27011

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 495052755

Instrument : MSVOA10 Begun : 02/05/15 15:15
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	jb501	X	IB			02/05/15 15:15	1.0	1	
002	jb502	TUN	BFB			02/05/15 17:15	1.0	2	t
003	jb503	TUN	BFB			02/05/15 18:32	1.0	2	
004	jb504	IB	LOWPT			02/05/15 19:08	1.0	1	
005	jb505	IB	LOWPT			02/05/15 20:05	1.0	1	
006	jb506	TUN	BFB			02/05/15 20:36	1.0	2	
007	jb507	X	IB			02/05/15 21:07	1.0	1	
008	jb508	X	IB			02/05/15 21:38	1.0	1	
009	jb509	X	IB			02/05/15 22:09	1.0	1	
010	jb510	X	IB			02/05/15 22:40	1.0	1	
011	jb511	IB	CALIB IB			02/05/15 23:11	1.0	1	
012	jb512	ICAL	0.25/0.5PPB			02/05/15 23:42	1.0	3 4 1	
013	jb513	ICAL	0.5/1PPB			02/06/15 00:13	1.0	5 6 3 4 1	
014	jb514	ICAL	2PPB			02/06/15 00:44	1.0	5 6 3 4 1	
015	jb515	ICAL	5PPB			02/06/15 01:14	1.0	5 6 3 4 1	
016	jb516	ICAL	10PPB			02/06/15 01:45	1.0	5 6 3 4 1	
017	jb517	ICAL	20PPB			02/06/15 02:16	1.0	5 6 3 4 1	
018	jb518	ICAL	50PPB			02/06/15 02:47	1.0	5 6 3 4 1	
019	jb519	ICAL	75PPB			02/06/15 03:18	1.0	5 6 3 4 1	
020	jb520	ICAL	100PPB			02/06/15 03:49	1.0	5 6 3 4 1	
021	jb521	ICV	20PPB			02/06/15 04:19	1.0	7 1	
022	jb522	ICV	25PPB			02/06/15 04:50	1.0	8 9 10 1	
023	jb523	X	IB			02/06/15 05:21	1.0	1	
024	jb524	X	IB			02/06/15 05:52	1.0	1	
025	jb525	X	IB			02/06/15 06:23	1.0	1	
026	jb526	X	IB			02/06/15 06:54	1.0	1	
027	jb527	X	IB			02/06/15 07:25	1.0	1	

DAR 02/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 27.

Analyst: DAR Date: 02/06/15 Reviewer: LW Date: 02/09/15

Standards used: 1=S26526 2=S26000 3=S26396 4=S24979 5=S24977 6=S26560 7=S24978 8=S26221 9=S26275 10=S26249

Flags used: t=tune failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 495156249

Instrument : MSVOA10 Begun : 04/18/15 12:09
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	jdi01	IB				04/18/15 12:09	1.0	1	?t
002	jdi02	TUN	BFB			04/18/15 12:56	1.0	2	
003	jdi03	CCV/BS	QC784795	Water	222382	04/18/15 13:20	1.0	3 4 5 6 1	
004	jdi04	BSD	QC784796	Water	222382	04/18/15 14:01	1.0	3 4 5 6 1	
005	jdi05	CCV	A/A			04/18/15 14:32	1.0	7 1	
006	jdi06	IB				04/18/15 15:03	1.0	1	
007	jdi07	BLANK	QC784794	Water	222382	04/18/15 15:34	1.0	1	
008	jdi08	SAMPLE	266156-001	Water	222382	04/18/15 16:05	1.0	1	
009	jdi09	SAMPLE	266156-002	Water	222382	04/18/15 16:36	1.0	1	
010	jdi10	SAMPLE	266156-003	Water	222382	04/18/15 17:07	1.0	1	
011	jdi11	SAMPLE	266156-004	Water	222382	04/18/15 17:38	1.0	1	
012	jdi12	SAMPLE	266156-005	Water	222382	04/18/15 18:09	1.0	1	
013	jdi13	SAMPLE	266156-006	Water	222382	04/18/15 18:39	1.0	1	
014	jdi14	SAMPLE	266019-003	Water	222382	04/18/15 19:10	2.0	1	
015	jdi15	IB				04/18/15 19:41	1.0	1	
016	jdi16	IB				04/18/15 20:12	1.0	1	
017	jdi17	LOQ	265722-001	Water	222382	04/18/15 20:43	1.0	3 4 6 1	
018	jdi18	LOQ	265722-001	Water	222382	04/19/15 13:55	1.0	3 4 6 1	<<t

KER 04/20/15 : Matrix spikes were not performed for this analysis in batch 222382 due to insufficient sample amount.

KER 04/20/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 18.

Analyst: KER Date: 04/20/15 Reviewer: LW Date: 04/20/15

Standards used: 1=S26941 2=S26000 3=S26759 4=S26358 5=S27022 6=S26876 7=S26757

Flags used: <<t=out of clock ?t=missing tune

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 835120089

Instrument : MSVOA11 Begun : 03/24/15 09:29
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	kcn01	TUN	BFB			03/24/15 09:29	1.0	1
002	kcn02	TUN	BFB			03/24/15 09:45	1.0	1
003	kcn03	TUN	BFB			03/24/15 10:41	1.0	1
004	kcn04	X	IB			03/24/15 11:04	1.0	2
005	kcn05	IB	CALIB			03/24/15 11:32	1.0	2
006	kcn06	ICAL				03/24/15 12:00	1.0	3 4 5 6 2
007	kcn07	ICAL				03/24/15 12:29	1.0	3 4 5 6 2
008	kcn08	ICAL				03/24/15 12:57	1.0	3 4 5 6 2
009	kcn09	ICAL				03/24/15 13:26	1.0	3 4 5 6 2
010	kcn10	ICAL				03/24/15 13:54	1.0	3 4 5 6 2
011	kcn11	ICAL				03/24/15 14:22	1.0	3 4 5 6 2
012	kcn12	ICAL				03/24/15 14:50	1.0	3 4 5 6 2
013	kcn13	ICAL				03/24/15 15:19	1.0	3 4 5 6 2
014	kcn14	ICAL				03/24/15 15:47	1.0	3 4 5 6 2
015	kcn15	ICV				03/24/15 16:15	1.0	7 2
016	kcn16	ICV				03/24/15 16:43	1.0	8 9 10 2
017	kcn17	X	IB			03/24/15 17:12	1.0	2
018	kcn18	X	IB			03/24/15 17:40	1.0	2
019	kcn19	X	IB			03/24/15 18:08	1.0	2

DJA 03/25/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.

Analyst: DJA Date: 03/25/15 Reviewer: LW Date: 03/25/15

Standards used: 1=S26000 2=S26882 3=S25695 4=S26851 5=S26838 6=S25156 7=S24978 8=S26642 9=S26876 10=S26759

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 835153190

Instrument : MSVOA11 Begun : 04/16/15 09:10
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	kdg01	X	HIGH GAS			04/16/15 09:10	1.0	1	
002	kdg02	X	IB			04/16/15 09:38	1.0	1	
003	kdg03	TUN	BFB			04/16/15 10:56	1.0	2	
004	kdg04	CCV				04/16/15 11:33	1.0	3 4 5 6 1	
005	kdg05	BS	QC784558	Water	222321	04/16/15 12:11	1.0	7 8 9 10 1	
006	kdg06	BSD	QC784559	Water	222321	04/16/15 12:40	1.0	7 8 9 10 1	
007	kdg07	X	IB			04/16/15 13:08	1.0	1	
008	kdg08	BLANK	QC784560	Water	222321	04/16/15 13:36	1.0	1	
009	kdg09	SAMPLE	265932-002	Water	222321	04/16/15 14:04	1.0	1	headspace > 1 mL
010	kdg10	SAMPLE	266105-004	Water	222321	04/16/15 14:33	1.0	1	
011	kdg11	SAMPLE	266108-003	Water	222321	04/16/15 15:01	1.0	1	
012	kdg12	SAMPLE	266105-005	Water	222321	04/16/15 15:30	1.0	1	
013	kdg13	SAMPLE	266073-003	Water	222321	04/16/15 15:58	1.0	1	
014	kdg14	SAMPLE	266073-005	Water	222321	04/16/15 16:26	1.0	1	
015	kdg15	SAMPLE	266073-009	Water	222321	04/16/15 16:55	1.0	1	
016	kdg16	SAMPLE	266073-011	Water	222321	04/16/15 17:23	1.0	1	
017	kdg17	SAMPLE	266073-001	Water	222321	04/16/15 17:51	1.0	1	
018	kdg18	SAMPLE	266019-006	Water	222321	04/16/15 18:20	1.0	1	
019	kdg19	SAMPLE	266019-007	Water	222321	04/16/15 18:48	1.0	1	
020	kdg20	SAMPLE	266109-001	Water	222321	04/16/15 19:16	1.0	1	
021	kdg21	SAMPLE	266108-001	Water	222321	04/16/15 19:44	1.0	1	
022	kdg22	SAMPLE	266108-002	Water	222321	04/16/15 20:13	1.0	1	2:PCE=220
023	kdg23	SAMPLE	266105-001	Water	222321	04/16/15 20:41	1.0	1	
024	kdg24	SAMPLE	266105-002	Water	222321	04/16/15 21:09	1.0	1	
025	kdg25	SAMPLE	265932-001	Water	222321	04/16/15 21:37	10.0	1	foamer
026	kdg26	SAMPLE	265932-003	Water	222321	04/16/15 22:06	62.50	1	
027	kdg27	SAMPLE	266105-003	Water	222321	04/16/15 22:34	2.0	1	
028	kdg28	IB				04/16/15 23:02	222300	1	<<t
029	kdg29	IB				04/16/15 23:30	222300	1	<<t
030	kdg30	IB				04/16/15 23:58	222300	1	<<t

DJA 04/17/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 30.

DJA 04/17/15 : Matrix spikes were not performed for this analysis in batch 222321 due to insufficient sample amount.

Analyst: DJA Date: 04/17/15 Reviewer: LW Date: 04/17/15

Standards used: 1=S26882 2=S26000 3=S25695 4=S26948 5=S26838 6=S25156 7=S26876 8=S27022 9=S26759 10=S24978

Flags used: <<t=out of clock

MSVOA WATER Prepsheet

Batch #: 222234
 Prep Date: 4/14/15
 Instrument: MS2

Dilutions prepared & pH of dilutions checked (initials/date): ms 4/14/15
 For Undiluted samples, pH checked (initials/date): MS 4/15/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$ Rush
18 266014-3	B	✓			6	1	2.5x	OD				
266002-SUSP A	A	✓					1x					
-SUSP B	B	✓					↓					
-SUSP D	D	✓					↓					
266048-1 A	A	✓			10		8.3x					
-2	↓	✓					1x					
-3 A	A	✓					↓					
266052-1 A	A	✓					1x					
-2	↓	✓					↓					
-4	↓	✓					↓					
-6	↓	✓					↓					
266019-1 A	A	✓					1x					
-2 B	B	✓					↓					
-3	↓	✓			10		2.5x					

MSVOA WATER Prepsheet

Batch #: 222274
 Prep Date: 4/15/15
 Instrument: MS62

Dilutions prepared & pH of dilutions checked (initials/date): WCF 4/15/15
 For Undiluted samples, pH checked (initials/date): JAC 4/16/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
18 1	266019-2	✓			3	1	2X	ICE > LA				
2	52-6	✓				1	1X	C.O (ICE)				
203	-4	✓				1	1X	C.O (chlorobenzene)				
18 4	997-2	✓				1	1X	ICE (C.O)				
5	6090-1	✓					1X					
6	-2	✓			9		20X					
7	-3	✓			5		10X					
8	-4	✓			4		2X					
9	-5	✓					1X					
10	-6	✓					1X					
11	6073-12	✓					1X					
12	-13	✓										
13	-14	✓										
14	-15	✓										
15												
16												
17												
18												
19												
20												
21												
22												

MSVOA WATER Prepsheet

Batch #: 222308
 Prep Date: 4/16/15
 Instrument: WR62

Dilutions prepared & pH of dilutions checked (initials/date): MC 4/16/15
 For Undiluted samples, pH checked (initials/date): _____

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
2256090-8	B	✓			12	1	50X	chlorobenzene > UR				
	-4 B					1	1X	OD.				
	-3 B	✓			9	1	2.5X	CARBON TETRA. 4.0				
6019-5MS	A						1X					
	-5MS B,C	✓						> SET I				
	-5MS D	✓						SET I				
	-5MS							SET I				
	-5MS							SET I				
	-6 B							→ BUT OFF				
	-7 ↓							↓				
266107-1	A						1X					
	-2 ↓	✓			5		2X					
	-3 ↓	✓			6							
	-4 A						1X					
6019-4	B						1X					
6087-4	B					1	1X	OD				
266135-1	A				6 ml	8	8.3X	Magnesium Chloride ASFP ↓				
	-2 A				2 ml	12	333X	↓				
265819-1	B					1	1X	STORAGE BEASTIL, CREAM STATION ENRICH				

MSVOA WATER Prepsheet

Batch #: 222308
 Prep Date: 4/16/15
 Instrument: WR62

Dilutions prepared & pH of dilutions checked (initials/date): MCI 4/16/15
 For Undiluted samples, pH checked (initials/date): 224/7/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
226090-2	B	✓			12	1	50X	chloroform > LR put off; on a list				
	-4 B	✓				1	1X	ob.				
	-3 B	✓			9	1	2.5X	CARBON TETRA. c-o				
204	6019-5MS A	✓					1X					
5	-5MS B,C	✓						> SET I				
6	-5MS D	✓						SET I				
7	-5MS											
8	-5MS											
9	-6 B	✓						→ BUT OFF				
10	-7 ↓	✓						↓				
11	266107-1 A	✓					1X					
12	-2 ↓	✓			5		2X					
13	-3 ↓	✓			6							
14	-4 A	✓					1X					
15	6019-4 B	✓					1X					
2016	6087-4 B	✓				1	1X	OD				
17	266135-1 A		6 ml		8		8.3X	Methylum Chloride ASFP ↓				
18	-2 A		12 ml		12		333X	↓				
2019	265819-1 B		6			1	1X	RODAGE BEASTLE, CLEMSTATION FAHOP				
20												
21	266020-1 B	✓			12	1	5	FOLMER, Confusion poured by MHL				
22												

MSVOA WATER Prepsheet

Batch #: 222321
 Prep Date: 4/16/15
 Instrument: MSI

Dilutions prepared & pH of dilutions checked (initials/date): **BA 4/16/15**
 For Undiluted samples, pH checked (initials/date): **BA 4/16/15**

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
201 266073-9	C	✓				1	1x	OP				
	-11	✓				1						
	-5	✓				1						
	-3	✓				1						
	-1	✓				1		j used last				
16 265932-2	B	✓		5x		2	1x	TBA cov, TB				
	-3	✓			1	2	62.5x					
	-1	✓			2	2	10x	↓ j foamer				
9 266019-6	A	✓					1x	in vac				
	-7	✓					1x	↓				
11 26409-1	A	✓					1x					
12 266105-1	A	✓					1x					
	-2	✓					1x					
	-3	✓			3		2x					
	-4	✓					1x					
	-5	✓					1x					
17 266106-1	A	✓					1x					
	-2	✓					↓					
	-3	✓						TB				

MSVOA WATER Prepsheet

Batch #: 222354
 Prep Date: 4/17/15
 Instrument: MSF2

Dilutions prepared & pH of dilutions checked (initials/date): mes 4/17/15
 For Undiluted samples, pH checked (initials/date): ADT 4/18/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
1 26019-4	C	✓			11	1	2X	ICE > LR				
182 -5MS	I	✓				1	1X	C.O				
3 -5MS	FG	✓				1						
4 -5MS	H	✓				1						
205 266090-2	B	✓			12	1	50X	CHLORO BENENE > LR PREPARED DEAMF 4/16			4/20	
6 062-4	C	✓				1	1X	Bromomethane VE				
7 -2	C	✓				1	1X					
8 068-1	C	✓				1						
9 -4	↓	✓				1						
2010 -6	↓	✓				1						
2011 084-2	B	✓				1	1X	OD				
12 6105-1	C	✓				1	1X	ICE C.O ✓				
2013 -3	B	✓				1	1X	OD				
2014 108-2	B	✓			12	1	4X	ICE > LR				
15												
16												
17												
18												
19												
20												
21												
22												

MSVOA WATER Prepsheet

Batch #: 222382
Prep Date: 4-18-15
Instrument: 10

Dilutions prepared & pH of dilutions checked (initials/date): STY/18
For Undiluted samples, pH checked (initials/date): _____

Sample ID	Vial	pH <2	pH >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$ Rush
266156-1	A	✓					1x	ZIA did not open ream on 6			4/20/15	✓
↓	B	✓					↓	test pH from there ✓			↓	↓
↓	↓	✓					↓	✓			↓	↓
↓	↓	✓					↓				↓	↓
↓	↓	✓					↓				↓	↓
↓	↓	✓					↓				↓	↓
266019-3	C	✓				1	2x					
265722-1	↓	---						LOQ				
↓	↓	---						↓				



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266019

ANALYTICAL REPORT

Metals

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

Sample ID
20150410B178
20150410TP1

Lab ID
266019-003
266019-005

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Date: 04/24/2015

Will S Rice
Project Manager
will.rice@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

**CASE NARRATIVE
METALS (EPA 6020 AND EPA 7470A)**

Laboratory number: 266019
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/10/15
Samples Received: 04/10/15

This data package contains sample and QC results for two water samples, requested for the above referenced project on 04/10/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Metals (EPA 6020 and EPA 7470A):

Low recoveries were observed for potassium in the MS/MSD for batch 222258; the parent sample was not a project sample, the BS/BSD were within limits, and the associated RPD was within limits.

Responses exceeding the instrument's linear range were observed for a number of analytes in the MS/MSD for batch 222258 and the MS/MSD of 20150410TP1 (lab # 266019-005).

High % differences were observed for iron, potassium, and sodium in the serial dilution of 20150410TP1 (lab # 266019-005).

Zinc was detected above the RL in the method blank for batch 222258; this analyte was not detected in samples at or above the RL. Many analytes were detected between the MDL and the RL in the method blank for batch 222258.

Calcium was detected above the RL in the method blank for batch 222258; this analyte was detected in samples at a level at least 10 times that of the blank. Many analytes were detected between the MDL and the RL in the method blank for batch 222258.

No other analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

Chain of Custody Record No. 6087

200019

Lab PO#: 15-DAK 32	Lab: C+T	No./Container Types: 6087		Preservative Added						
Project name: Phase 2	TIEMI technical contact: SARA WOLLEY	Field samplers: DAYNA ARAÇON QUINN JOHNSON	Analysis Required							
Project (CTO) number: 103S225323.05	TIEMI project manager: JASON BRODERSEN	Field samplers' signatures: <i>[Signature]</i>	VOA X SVOA X Pest/PCBs X Metals Dissolved X TPH Purgeables TPH Extractables							
Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	40 ml VOA	1 liter Amber	500 ml Poly	Sieve	Glass Jar
20150410TB		4/10/15	0930	WATER		3				
20150410B185			1050			3				
20150410B178			1201			3	1			
20150410B120			1240			3				
20150410TP1			1328			3	3			
20150410TP2			1421			3				
20150410TP2D			1425			3				

Relinquished by: <i>[Signature]</i>	Name (print): Dayna Aragon	Company Name: Tetra Tech	Date: 4/10/15	Time: 1517
Received by: <i>[Signature]</i>	Pat Gonzalez	CAT	4/10/15	1519
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Turnaround time/remarks:				

Fed Ex #: hand delivered

COOLER RECEIPT CHECKLIST



Login # 2166019 Date Received 4/10/15 Number of coolers 1
Client Tetra Tech Project 2015 Groundwater

Date Opened 4/10 By (print) SL (sign) [Signature]
Date Logged in 4/10 By (print) IF (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples X NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Cloth material, Foam blocks, Cardboard, Bags, Styrofoam, None, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: X Wet Blue/Gel None Temp(°C)

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

X Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 266019

Sample	pH: <2	>9	>12	Other
-003a	[]	[]	[]	_____
b	[]	[]	[]	_____
c	[]	[]	[]	_____
d	∞	[]	[]	_____
-005a	[]	[]	[]	_____
b	[]	[]	[]	_____
c	[]	[]	[]	_____
d	[]	[]	[]	_____
e	[]	[]	[]	_____
f	[]	[]	[]	_____
g	[]	[]	[]	_____
h	[]	[]	[]	_____
i	[]	[]	[]	_____
j	∞	[]	[]	_____
k	∞	[]	[]	_____
l	∞	[]	[]	_____

Analyst: W. Curtis
 Date: _____

Results & QC Summary

Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150410B178	Units:	ug/L
Lab ID:	266019-003	Sampled:	04/10/15
Matrix:	Filtrate	Received:	04/10/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	9.0 J	50	8.6	5.000	222258	04/14/15	04/16/15	EPA 6020
Antimony	0.21 J	1.0	0.12	5.000	222258	04/14/15	04/16/15	EPA 6020
Arsenic	1.7	1.0	0.18	5.000	222258	04/14/15	04/20/15	EPA 6020
Barium	17	1.0	0.18	5.000	222258	04/14/15	04/16/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222258	04/14/15	04/16/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222258	04/14/15	04/16/15	EPA 6020
Calcium	170,000	6,000	2,000	500.0	222258	04/14/15	04/20/15	EPA 6020
Chromium	0.26 J	1.0	0.11	5.000	222258	04/14/15	04/16/15	EPA 6020
Cobalt	0.82 J	1.0	0.056	5.000	222258	04/14/15	04/16/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222258	04/14/15	04/20/15	EPA 6020
Iron	800	50	16	5.000	222258	04/14/15	04/16/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222258	04/14/15	04/16/15	EPA 6020
Magnesium	160,000	5,000	1,200	500.0	222258	04/14/15	04/20/15	EPA 6020
Manganese	2,200	61	20	500.0	222258	04/14/15	04/20/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222359	04/17/15	04/17/15	EPA 7470A
Molybdenum	1.6	1.0	0.23	5.000	222258	04/14/15	04/20/15	EPA 6020
Nickel	4.2	1.0	0.34	5.000	222258	04/14/15	04/16/15	EPA 6020
Potassium	1,200	50	15	5.000	222258	04/14/15	04/21/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222258	04/14/15	04/16/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222258	04/14/15	04/16/15	EPA 6020
Sodium	160,000	50,000	1,200	500.0	222258	04/14/15	04/20/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222258	04/14/15	04/16/15	EPA 6020
Vanadium	1.6	1.0	0.11	5.000	222258	04/14/15	04/16/15	EPA 6020
Zinc	ND	12	4.1	5.000	222258	04/14/15	04/21/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150410TP1	Units:	ug/L
Lab ID:	266019-005	Sampled:	04/10/15
Matrix:	Filtrate	Received:	04/10/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	9.1 J	50	8.6	5.000	222258	04/14/15	04/16/15	EPA 6020
Antimony	0.23 J	1.0	0.12	5.000	222258	04/14/15	04/16/15	EPA 6020
Arsenic	3.8	1.0	0.14	5.000	222258	04/14/15	04/16/15	EPA 6020
Barium	26	1.0	0.18	5.000	222258	04/14/15	04/16/15	EPA 6020
Beryllium	0.11 J	1.0	0.091	5.000	222258	04/14/15	04/16/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222258	04/14/15	04/16/15	EPA 6020
Calcium	140,000	6,000	2,000	500.0	222258	04/14/15	04/20/15	EPA 6020
Chromium	0.16 J	1.0	0.11	5.000	222258	04/14/15	04/16/15	EPA 6020
Cobalt	0.29 J	1.0	0.056	5.000	222258	04/14/15	04/16/15	EPA 6020
Copper	0.30 J	1.0	0.26	5.000	222258	04/14/15	04/20/15	EPA 6020
Iron	3,000	50	16	5.000	222258	04/14/15	04/16/15	EPA 6020
Lead	0.076 J	1.0	0.074	5.000	222258	04/14/15	04/16/15	EPA 6020
Magnesium	120,000	5,000	660	500.0	222258	04/14/15	04/17/15	EPA 6020
Manganese	3,700	61	20	500.0	222258	04/14/15	04/20/15	EPA 6020
Mercury	0.026 J	0.20	0.021	1.000	222359	04/17/15	04/17/15	EPA 7470A
Molybdenum	1.1	1.0	0.23	5.000	222258	04/14/15	04/20/15	EPA 6020
Nickel	2.4	1.0	0.34	5.000	222258	04/14/15	04/16/15	EPA 6020
Potassium	1,000	50	15	5.000	222258	04/14/15	04/21/15	EPA 6020
Selenium	0.23 J	1.0	0.20	5.000	222258	04/14/15	04/16/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222258	04/14/15	04/16/15	EPA 6020
Sodium	160,000	50,000	1,200	500.0	222258	04/14/15	04/20/15	EPA 6020
Thallium	0.087 J	1.0	0.020	5.000	222258	04/14/15	04/16/15	EPA 6020
Vanadium	1.1	1.0	0.11	5.000	222258	04/14/15	04/16/15	EPA 6020
Zinc	ND	12	4.1	5.000	222258	04/14/15	04/21/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Type:	BLANK	Diln Fac:	5.000
Lab ID:	QC784300	Batch#:	222258
Matrix:	Filtrate	Prepared:	04/14/15
Units:	ug/L		

Analyte	Result	RL	MDL	Analyzed
Aluminum	ND	50	8.6	04/16/15
Antimony	ND	1.0	0.12	04/16/15
Arsenic	0.31 J	1.0	0.14	04/16/15
Barium	ND	1.0	0.18	04/16/15
Beryllium	ND	1.0	0.091	04/16/15
Cadmium	ND	1.0	0.14	04/16/15
Calcium	85 b	60	20	04/20/15
Chromium	0.22 J	1.0	0.11	04/16/15
Cobalt	ND	1.0	0.056	04/16/15
Copper	ND	1.0	0.26	04/20/15
Iron	29 J	50	16	04/16/15
Lead	ND	1.0	0.074	04/16/15
Magnesium	27 J	50	6.6	04/16/15
Manganese	0.19 J	1.0	0.11	04/16/15
Molybdenum	ND	1.0	0.27	04/17/15
Nickel	ND	1.0	0.34	04/16/15
Potassium	43 J	50	15	04/17/15
Selenium	ND	1.0	0.20	04/16/15
Silver	ND	1.0	0.040	04/16/15
Sodium	39 J	75	24	04/17/15
Thallium	ND	1.0	0.020	04/16/15
Vanadium	0.42 J	1.0	0.11	04/16/15
Zinc	6.4 J	12	4.1	04/17/15

J= Estimated value

b= See narrative

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Type:	BLANK	Diln Fac:	5.000
Lab ID:	QC784301	Batch#:	222258
Matrix:	Filtrate	Prepared:	04/14/15
Units:	ug/L		

Analyte	Result	RL	MDL	Analyzed
Aluminum	ND	50	8.6	04/16/15
Antimony	ND	1.0	0.12	04/16/15
Arsenic	ND	1.0	0.14	04/16/15
Barium	ND	1.0	0.18	04/16/15
Beryllium	ND	1.0	0.091	04/16/15
Cadmium	ND	1.0	0.14	04/16/15
Calcium	26 J	50	13	04/17/15
Chromium	0.17 J	1.0	0.11	04/16/15
Cobalt	ND	1.0	0.056	04/16/15
Copper	ND	1.0	0.26	04/20/15
Iron	22 J	50	16	04/16/15
Lead	0.087 J	1.0	0.074	04/16/15
Magnesium	29 J	50	6.6	04/16/15
Manganese	0.22 J	1.0	0.11	04/16/15
Molybdenum	0.97 J	1.0	0.23	04/20/15
Nickel	ND	1.0	0.34	04/16/15
Potassium	16 J	50	15	04/17/15
Selenium	ND	1.0	0.20	04/16/15
Silver	ND	1.0	0.040	04/16/15
Sodium	31 J	75	24	04/17/15
Thallium	ND	1.0	0.020	04/16/15
Vanadium	0.41 J	1.0	0.11	04/16/15
Zinc	12 b	12	4.1	04/17/15

J= Estimated value

b= See narrative

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Matrix:	Filtrate	Batch#:	222258
Units:	ug/L	Prepared:	04/14/15
Diln Fac:	5.000		

Type: BS Lab ID: QC784302

Analyte	Spiked	Result	%REC	Limits	Analyzed
Aluminum	10,000	9,440	94	80-124	04/16/15
Antimony	100.0	91.60	92	80-120	04/16/15
Arsenic	100.0	99.15	99	80-120	04/16/15
Barium	100.0	96.45	96	80-120	04/16/15
Beryllium	100.0	97.30	97	80-120	04/16/15
Cadmium	100.0	93.85	94	80-120	04/16/15
Calcium	10,000	10,210	102	80-124	04/16/15
Chromium	100.0	104.8	105	80-121	04/16/15
Cobalt	100.0	107.8	108	80-123	04/16/15
Copper	100.0	109.6	110	80-130	04/16/15
Iron	10,000	10,820	108	80-133	04/16/15
Lead	100.0	98.10	98	80-122	04/16/15
Magnesium	10,000	9,675	97	80-123	04/16/15
Manganese	100.0	104.6	105	80-125	04/16/15
Molybdenum	100.0	102.0	102	80-120	04/20/15
Nickel	100.0	109.0	109	80-129	04/16/15
Potassium	10,000	10,470	105	80-123	04/17/15
Selenium	100.0	102.3	102	80-126	04/16/15
Silver	100.0	94.60	95	79-120	04/16/15
Sodium	10,000	12,330	123	80-126	04/16/15
Thallium	50.00	46.62	93	80-120	04/16/15
Vanadium	100.0	103.2	103	80-120	04/16/15
Zinc	100.0	113.1	113	80-130	04/16/15

Type: BSD Lab ID: QC784303

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Aluminum	10,000	9,430	94	80-124	0	20	04/16/15
Antimony	100.0	93.75	94	80-120	2	20	04/16/15
Arsenic	100.0	97.35	97	80-120	2	20	04/16/15
Barium	100.0	94.30	94	80-120	2	20	04/16/15
Beryllium	100.0	95.60	96	80-120	2	20	04/16/15
Cadmium	100.0	92.80	93	80-120	1	20	04/16/15
Calcium	10,000	10,220	102	80-124	0	20	04/16/15
Chromium	100.0	97.10	97	80-121	8	20	04/16/15
Cobalt	100.0	99.00	99	80-123	8	20	04/16/15
Copper	100.0	100.8	101	80-130	8	20	04/16/15
Iron	10,000	10,820	108	80-133	0	20	04/16/15
Lead	100.0	98.60	99	80-122	1	20	04/16/15
Magnesium	10,000	9,610	96	80-123	1	20	04/16/15
Manganese	100.0	99.05	99	80-125	5	20	04/16/15
Molybdenum	100.0	102.9	103	80-120	1	20	04/20/15
Nickel	100.0	100.0	100	80-129	9	23	04/16/15
Potassium	10,000	10,060	101	80-123	4	20	04/17/15
Selenium	100.0	104.9	105	80-126	3	20	04/16/15
Silver	100.0	95.65	96	79-120	1	20	04/16/15
Sodium	10,000	11,520	115	80-126	7	20	04/16/15
Thallium	50.00	46.27	93	80-120	1	20	04/16/15
Vanadium	100.0	94.90	95	80-120	8	20	04/16/15
Zinc	100.0	103.6	104	80-130	9	20	04/16/15

RPD= Relative Percent Difference

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	ZZZZZZZZZZ	Batch#:	222258
MSS Lab ID:	265932-004	Sampled:	04/08/15
Matrix:	Filtrate	Received:	04/08/15
Units:	ug/L	Prepared:	04/14/15

Type: MS Lab ID: QC784304

Analyte	MSS Result	Spiked	Result	%REC	Limits	Diln	Fac	Analyzed
Aluminum	11.78	10,000	9,065	91	80-123	5.000		04/16/15
Antimony	0.1670	100.0	93.15	93	75-120	5.000		04/16/15
Arsenic	43.82	100.0	146.7	103	80-120	5.000		04/16/15
Barium	24.22	100.0	116.3	92	80-122	5.000		04/16/15
Beryllium	0.1265	100.0	96.85	97	80-121	5.000		04/16/15
Cadmium	<0.1395	100.0	88.50	89	80-120	5.000		04/16/15
Calcium	709,000	10,000	574,000 >LR	-1350	NM 65-136	5.000		04/16/15
Chromium	0.8495	100.0	98.25	97	80-122	5.000		04/16/15
Cobalt	102.2	100.0	193.2	91	80-121	5.000		04/16/15
Copper	<0.2604	100.0	95.80	96	76-124	5.000		04/20/15
Iron	3,030	10,000	12,260	92	80-132	5.000		04/16/15
Lead	<0.07440	100.0	89.70	90	80-120	5.000		04/16/15
Magnesium	1,081,000	10,000	843,000 >LR	-2375	NM 74-129	5.000		04/16/15
Manganese	51,400	100.0	41,870 >LR	-9530	NM 80-125	50.00		04/22/15
Molybdenum	2.000	100.0	101.8	100	80-120	5.000		04/20/15
Nickel	195.4	100.0	281.5	86	79-126	5.000		04/16/15
Potassium	39,110	10,000	42,150	30 *	80-124	50.00		04/22/15
Selenium	0.7760	100.0	103.6	103	77-125	5.000		04/16/15
Silver	0.05550	100.0	87.35	87	66-120	5.000		04/16/15
Sodium	4,329,000	10,000	3,532,000 >LR	-7965	NM 71-129	50.00		04/22/15
Thallium	<0.01976	50.00	48.67	97	80-120	5.000		04/16/15
Vanadium	0.8170	100.0	99.90	99	80-121	5.000		04/16/15
Zinc	<4.068	100.0	97.10	97	75-126	5.000		04/16/15

*= Value outside of QC limits; see narrative

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	ZZZZZZZZZZ	Batch#:	222258
MSS Lab ID:	265932-004	Sampled:	04/08/15
Matrix:	Filtrate	Received:	04/08/15
Units:	ug/L	Prepared:	04/14/15

Type: MSD Lab ID: QC784305

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Diln	Fac	Analyzed
Aluminum	10,000	8,840	88	80-123	3	22	5.000		04/16/15
Antimony	100.0	91.10	91	75-120	2	20	5.000		04/16/15
Arsenic	100.0	147.2	103	80-120	0	26	5.000		04/16/15
Barium	100.0	113.4	89	80-122	3	28	5.000		04/16/15
Beryllium	100.0	93.35	93	80-121	4	23	5.000		04/16/15
Cadmium	100.0	85.95	86	80-120	3	21	5.000		04/16/15
Calcium	10,000	560,500 >LR	-1485	NM	65-136	NC	37	5.000	04/16/15
Chromium	100.0	100.7	100	80-122	2	30	5.000		04/16/15
Cobalt	100.0	197.5	95	80-121	2	25	5.000		04/16/15
Copper	100.0	96.80	97	76-124	1	29	5.000		04/20/15
Iron	10,000	12,130	91	80-132	1	27	5.000		04/16/15
Lead	100.0	85.95	86	80-120	4	20	5.000		04/16/15
Magnesium	10,000	820,500 >LR	-2600	NM	74-129	NC	27	5.000	04/16/15
Manganese	100.0	46,060 >LR	-5340	NM	80-125	NC	25	50.00	04/22/15
Molybdenum	100.0	99.85	98	80-120	2	20	5.000		04/20/15
Nickel	100.0	288.3	93	79-126	2	30	5.000		04/16/15
Potassium	10,000	44,370	53 *	80-124	5	35	50.00		04/22/15
Selenium	100.0	106.5	106	77-125	3	28	5.000		04/16/15
Silver	100.0	84.05	84	66-120	4	29	5.000		04/16/15
Sodium	10,000	3,864,000 >LR	-4650	NM	71-129	NC	28	50.00	04/22/15
Thallium	50.00	48.10	96	80-120	1	20	5.000		04/16/15
Vanadium	100.0	103.8	103	80-121	4	31	5.000		04/16/15
Zinc	100.0	98.90	99	75-126	2	27	5.000		04/16/15

*= Value outside of QC limits; see narrative

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150410TP1	Batch#:	222258
MSS Lab ID:	266019-005	Sampled:	04/10/15
Matrix:	Filtrate	Received:	04/10/15
Units:	ug/L	Prepared:	04/14/15
Diln Fac:	5.000		

Type: MS Lab ID: QC784306

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analyzed
Aluminum	9.105	10,000	9,630	96	80-123	04/16/15
Antimony	0.2340	100.0	96.70	96	75-120	04/16/15
Arsenic	3.786	100.0	109.4	106	80-120	04/16/15
Barium	26.26	100.0	122.8	96	80-122	04/16/15
Beryllium	0.1100	100.0	100.8	101	80-121	04/16/15
Cadmium	<0.1395	100.0	95.05	95	80-120	04/16/15
Calcium	138,400	10,000	119,000 >LR	-194 NM	65-136	04/16/15
Chromium	0.1620	100.0	101.6	101	80-122	04/16/15
Cobalt	0.2935	100.0	101.3	101	80-121	04/16/15
Copper	0.2960	100.0	102.6	102	76-124	04/16/15
Iron	3,003	10,000	12,500	95	80-132	04/16/15
Lead	0.07600	100.0	98.60	99	80-120	04/16/15
Magnesium	118,100	10,000	94,950	-232 NM	74-129	04/16/15
Manganese	3,711	100.0	3,114 >LR	-598 NM	80-125	04/16/15
Molybdenum	1.056	100.0	106.0	105	80-120	04/20/15
Nickel	2.354	100.0	103.5	101	79-126	04/16/15
Potassium	1,049	10,000	10,730	97	80-124	04/21/15
Selenium	0.2340	100.0	87.65	87	77-125	04/16/15
Silver	<0.04048	100.0	95.95	96	66-120	04/16/15
Sodium	159,600	10,000	165,600 >LR	60 NM	71-129	04/16/15
Thallium	0.08650	50.00	49.11	98	80-120	04/16/15
Vanadium	1.073	100.0	102.2	101	80-121	04/16/15
Zinc	<4.068	100.0	105.8	106	75-126	04/16/15

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150410TP1	Batch#:	222258
MSS Lab ID:	266019-005	Sampled:	04/10/15
Matrix:	Filtrate	Received:	04/10/15
Units:	ug/L	Prepared:	04/14/15
Diln Fac:	5.000		

Type: MSD Lab ID: QC784307

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Aluminum	10,000	9,665	97	80-123	0	22	04/16/15
Antimony	100.0	96.90	97	75-120	0	20	04/16/15
Arsenic	100.0	104.5	101	80-120	5	26	04/16/15
Barium	100.0	121.8	96	80-122	1	28	04/16/15
Beryllium	100.0	99.85	100	80-121	1	23	04/16/15
Cadmium	100.0	95.10	95	80-120	0	21	04/16/15
Calcium	10,000	123,900 >LR	-145 NM	65-136	NC	37	04/16/15
Chromium	100.0	98.65	98	80-122	3	30	04/16/15
Cobalt	100.0	98.30	98	80-121	3	25	04/16/15
Copper	100.0	110.5	110	76-124	7	29	04/16/15
Iron	10,000	12,440	94	80-132	0	27	04/16/15
Lead	100.0	97.50	97	80-120	1	20	04/16/15
Magnesium	10,000	99,250	-189 NM	74-129	4	27	04/16/15
Manganese	100.0	3,138 >LR	-574 NM	80-125	NC	25	04/16/15
Molybdenum	100.0	102.0	101	80-120	4	20	04/20/15
Nickel	100.0	101.0	99	79-126	2	30	04/16/15
Potassium	10,000	11,260	102	80-124	5	35	04/21/15
Selenium	100.0	87.60	87	77-125	0	28	04/16/15
Silver	100.0	94.40	94	66-120	2	29	04/16/15
Sodium	10,000	164,800 >LR	52 NM	71-129	NC	28	04/16/15
Thallium	50.00	48.11	96	80-120	2	20	04/16/15
Vanadium	100.0	99.85	99	80-121	2	31	04/16/15
Zinc	100.0	105.8	106	75-126	0	27	04/16/15

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150410TP1	Units:	ug/L
Type:	Serial Dilution	Batch#:	222258
MSS Lab ID:	266019-005	Sampled:	04/10/15
Lab ID:	QC784308	Received:	04/10/15
Matrix:	Filtrate		

Analyte	MSS Result	MSS RL	Result	RL	% Diff	Lim	Diln	Fac	Analyzed
Aluminum	9.105	50.00	ND	250.0	NC	10	25.00		04/16/15
Antimony	0.2340	1.000	1.013 J	2.500	NC	10	25.00		04/16/15
Arsenic	3.786	1.000	2.340 J	2.500	NC	10	25.00		04/16/15
Barium	26.26	1.000	27.38	2.628	4	10	25.00		04/16/15
Beryllium	0.1100	1.000	ND	2.500	NC	10	25.00		04/16/15
Cadmium	ND	1.000	ND	2.500	NC	10	25.00		04/16/15
Calcium	138,400	6,011	129,500	25,000	6	10	2,500		04/17/15
Chromium	0.1620	1.000	0.7525 J	2.500	NC	10	25.00		04/16/15
Cobalt	0.2935	1.000	0.3200 J	2.500	NC	10	25.00		04/16/15
Copper	0.2960	1.000	54.50	18.54	NC	10	25.00		04/16/15
Iron	3,003	50.00	3,785	250.0	26 *	10	25.00		04/16/15
Lead	0.07600	1.000	ND	2.500	NC	10	25.00		04/16/15
Magnesium	118,100	5,000	124,400	25,000	5	10	2,500		04/17/15
Manganese	3,711	60.83	3,770	304.2	2	10	2,500		04/20/15
Molybdenum	1.056	1.000	1.340 J	5.000	NC	10	25.00		04/20/15
Nickel	2.354	1.016	2.335 J	5.078	NC	10	25.00		04/16/15
Potassium	1,049	50.00	1,187	250.0	13 *	10	25.00		04/21/15
Selenium	0.2340	1.000	1.225 J	2.980	NC	10	25.00		04/16/15
Silver	ND	1.000	ND	2.500	NC	10	25.00		04/16/15
Sodium	159,600	50,000	127,400 J	250,000	20 *	10	2,500		04/20/15
Thallium	0.08650	1.000	0.3375 J	1.250	NC	10	25.00		04/16/15
Vanadium	1.073	1.000	1.600 J	2.500	NC	10	25.00		04/16/15
Zinc	ND	12.21	43.25 J	61.03	NC	10	25.00		04/16/15

*= Value outside of QC limits; see narrative

J= Estimated value

NC= Not Calculated

ND= Not Detected at or above MDL

RL= Reporting Limit

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150410TP1	Units:	ug/L
Type:	Post Digest Spike	Batch#:	222258
MSS Lab ID:	266019-005	Sampled:	04/10/15
Lab ID:	QC784309	Received:	04/10/15
Matrix:	Filtrate		

Analyte	MSS Result	Spiked	Result	%REC	Limits	Diln	Fac	Analyzed
Aluminum	9.105	25,000	23,310	93	75-125	5.000		04/16/15
Antimony	0.2340	250.0	235.5	94	75-125	5.000		04/16/15
Arsenic	3.786	250.0	251.7	99	75-125	5.000		04/16/15
Barium	26.26	250.0	263.9	95	75-125	5.000		04/16/15
Beryllium	0.1100	250.0	241.6	97	75-125	5.000		04/16/15
Cadmium	<0.1395	250.0	229.0	92	75-125	5.000		04/16/15
Calcium	138,400	2,500,000	2,752,000	105	75-125	500.0		04/20/15
Chromium	0.1620	250.0	247.0	99	75-125	5.000		04/16/15
Cobalt	0.2935	250.0	246.8	99	75-125	5.000		04/16/15
Copper	0.2960	250.0	257.2	103	75-125	5.000		04/16/15
Iron	3,003	25,000	27,850	99	75-125	5.000		04/16/15
Lead	0.07600	250.0	237.3	95	75-125	5.000		04/16/15
Magnesium	118,100	2,500,000	2,761,000	106	75-125	500.0		04/20/15
Manganese	3,711	25,000	29,150	102	75-125	500.0		04/20/15
Molybdenum	1.056	250.0	259.4	103	75-125	5.000		04/20/15
Nickel	2.354	250.0	250.8	99	75-125	5.000		04/16/15
Potassium	1,049	25,000	27,420	105	75-125	5.000		04/21/15
Selenium	0.2340	250.0	253.1	101	75-125	5.000		04/16/15
Silver	<0.04048	250.0	232.5	93	75-125	5.000		04/16/15
Sodium	159,600	2,500,000	2,683,000	101	75-125	500.0		04/20/15
Thallium	0.08650	125.0	120.1	96	75-125	5.000		04/16/15
Vanadium	1.073	250.0	249.8	99	75-125	5.000		04/16/15
Zinc	<4.068	250.0	249.0	100	75-125	5.000		04/16/15

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	222359
Lab ID:	QC784693	Prepared:	04/17/15
Matrix:	Filtrate	Analyzed:	04/17/15
Units:	ug/L		

Result	RL	MDL
ND	0.20	0.021

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals			
Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	222359
Matrix:	Water	Prepared:	04/17/15
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC784694	2.500	2.569	103	80-120		
BSD	QC784695	2.500	2.522	101	80-120	2	24

RPD= Relative Percent Difference

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	222359
Field ID:	20150410TP1	Sampled:	04/10/15
MSS Lab ID:	266019-005	Received:	04/10/15
Matrix:	Filtrate	Prepared:	04/17/15
Units:	ug/L	Analyzed:	04/17/15
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC784696	0.02581	2.500	2.581	102	60-130		
MSD	QC784697		2.500	2.605	103	60-130	1	34

RPD= Relative Percent Difference

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266019	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Units:	ug/L
Field ID:	20150410TP1	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	222359
MSS Lab ID:	266019-005	Sampled:	04/10/15
Lab ID:	QC784698	Received:	04/10/15
Matrix:	Filtrate	Analyzed:	04/17/15

MSS Result	MSS RL	Result	RL	% Diff	Lim
0.02581	0.2000	ND	1.000	NC	10

NC= Not Calculated
 ND= Not Detected at or above MDL
 RL= Reporting Limit

REPORTING SUMMARY FOR 266019 METALS Filtrate
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	A	S	A	B	B	C	C	C	C	F	P	M	M	H	M	N	K	S	A	N	T	V	Z
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	O	I	E	G	A	L	N	
266019-003	MET26	04/16/15	22:46	5.0	+	+		+	+	+		+	+						+		+	+		+	+	
266019-003	MET54	04/17/15	16:56	1.0														+								
266019-003	MET16	04/20/15	16:10	500.0						+					+	+							+			
266019-003	MET16	04/20/15	21:08	5.0			+					+						+								
266019-003	MET26	04/21/15	11:35	5.0																						+
266019-003	MET26	04/21/15	12:58	5.0																	+					
266019-005	MET26	04/16/15	21:58	5.0	+	+	+	+	+	+		+	+						+		+	+		+	+	
266019-005	MET26	04/17/15	10:21	5.0																						
266019-005	MET26	04/17/15	10:45	500.0											+											
266019-005	MET54	04/17/15	16:52	1.0															+							
266019-005	MET16	04/20/15	16:17	500.0						+								+						+		
266019-005	MET16	04/20/15	19:05	5.0								+							+							
266019-005	MET26	04/21/15	10:47	5.0																						+
266019-005	MET26	04/21/15	12:00	5.0																	+					
266019-005	MET26	04/21/15	12:29	5.0																						
QC784300	MET26	04/16/15	21:40	5.0	+	+	+	+	+	+		+	+	+	+				+		+	+		+	+	
QC784300	MET26	04/17/15	09:19	5.0																						+
QC784300	MET26	04/17/15	09:43	5.0															+		+		+			
QC784300	MET16	04/20/15	14:31	5.0						+		+														
QC784300	MET16	04/21/15	14:16	5.0																						
QC784301	MET26	04/16/15	21:44	5.0	+	+	+	+	+	+		+	+	+	+				+		+	+		+	+	
QC784301	MET26	04/17/15	09:24	5.0						+												+				
QC784301	MET26	04/17/15	09:48	5.0																			+		+	
QC784301	MET16	04/20/15	14:37	5.0								+							+							
QC784301	MET16	04/21/15	14:23	5.0																						
QC784302	MET26	04/16/15	21:49	5.0	+	+	+	+	+	+		+	+	+	+	+			+		+	+	+	+	+	+
QC784302	MET26	04/17/15	09:29	5.0																		+				
QC784302	MET16	04/20/15	15:45	5.0															+							
QC784303	MET26	04/16/15	21:54	5.0	+	+	+	+	+	+		+	+	+	+	+			+		+	+	+	+	+	+
QC784303	MET26	04/17/15	09:33	5.0																		+				
QC784303	MET16	04/20/15	15:51	5.0															+							
QC784304	MET26	04/16/15	23:15	5.0	+	+	+	+	+	+		+	+	+					+		+	+		+	+	+
QC784304	MET26	04/17/15	10:12	5.0																						
QC784304	MET16	04/20/15	18:38	5.0								+							+							
QC784304	MET26	04/21/15	09:54	5.0																						
QC784304	MET26	04/21/15	10:13	50.0																						
QC784304	MET26	04/22/15	11:59	50.0														+			+		+			
QC784304	MET26	04/22/15	12:13	500.0																						
QC784305	MET26	04/16/15	23:25	5.0	+	+	+	+	+	+		+	+	+					+		+	+		+	+	+
QC784305	MET26	04/17/15	10:17	5.0																						
QC784305	MET16	04/20/15	18:51	5.0								+							+							
QC784305	MET26	04/21/15	10:03	5.0																						
QC784305	MET26	04/21/15	10:23	50.0																						
QC784305	MET26	04/22/15	12:04	50.0														+			+		+			
QC784305	MET26	04/22/15	12:17	500.0																						

REPORTING SUMMARY FOR 266019 METALS Filtrate
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	A	S	A	B	B	C	C	C	C	F	P	M	M	H	M	N	K	S	A	N	T	V	Z
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	O	I	E	G	A	L	N	
QC784306	MET26	04/16/15 22:03	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+	
QC784306	MET26	04/17/15 10:26	5.0																							
QC784306	MET16	04/20/15 19:18	5.0															+								
QC784306	MET26	04/21/15 10:57	5.0																							
QC784306	MET26	04/21/15 12:10	5.0																	+						
QC784307	MET26	04/16/15 22:08	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+	
QC784307	MET26	04/17/15 10:31	5.0																							
QC784307	MET16	04/20/15 19:30	5.0															+								
QC784307	MET26	04/21/15 11:06	5.0																							
QC784307	MET26	04/21/15 12:20	5.0																		+					
QC784308	MET26	04/16/15 22:12	25.0	+	+	+	+	+	+		+	+	+	+	+			+		+	+		+	+	+	
QC784308	MET26	04/17/15 10:35	25.0																							
QC784308	MET26	04/17/15 10:50	2500						+						+											
QC784308	MET16	04/20/15 16:23	2500													+						+				
QC784308	MET16	04/20/15 19:43	25.0															+								
QC784308	MET26	04/21/15 11:16	25.0																							
QC784308	MET26	04/21/15 12:39	25.0																		+					
QC784309	MET26	04/16/15 22:17	5.0	+	+	+	+	+	+		+	+	+	+	+			+		+	+		+	+	+	
QC784309	MET26	04/17/15 10:40	5.0																							
QC784309	MET26	04/17/15 11:09	500.0																							
QC784309	MET16	04/20/15 16:29	500.0						+						+	+						+				
QC784309	MET16	04/20/15 19:56	5.0															+								
QC784309	MET26	04/21/15 11:26	5.0																							
QC784309	MET26	04/21/15 12:49	5.0																		+					
QC784691	MET54	04/17/15 16:46	1.0															+								
QC784692	MET54	04/17/15 16:47	1.0															+								
QC784693	MET54	04/17/15 16:48	1.0															+								
QC784694	MET54	04/17/15 16:49	1.0															+								
QC784695	MET54	04/17/15 16:51	1.0															+								
QC784696	MET54	04/17/15 16:53	1.0															+								
QC784697	MET54	04/17/15 16:54	1.0															+								
QC784698	MET54	04/17/15 16:55	5.0															+								

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015153627

Instrument : MET26
 Method : EPA 6020

Begun : 04/16/15 16:27
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d16q00001	X	RINSE			04/16/15 16:27	1.0	1	
002	15d16q00002	TUN				04/16/15 16:31	1.0	2	
003	15d16q00003	X	RINSE			04/16/15 16:36	1.0	1	
004	15d16q00004	ICALBLK	CALBLANK			04/16/15 16:40	1.0	1	
005	15d16q00005	ICAL				04/16/15 16:45	1.0	3 1	
006	15d16q00006	ICAL				04/16/15 16:50	1.0	4 1	
007	15d16q00007	ICAL				04/16/15 16:55	1.0	5 1	
008	15d16q00008	ICAL				04/16/15 16:59	1.0	6 1	
009	15d16q00009	ICAL				04/16/15 17:04	1.0	7 1	
010	15d16q00010	ICAL				04/16/15 17:08	1.0	8 1	
011	15d16q00011	X	RINSE			04/16/15 17:13	1.0	1	
012	15d16q00012	ICV				04/16/15 17:18	1.0	9 1	
013	15d16q00013	XCRI				04/16/15 17:23	1.0	10 1	
014	15d16q00014	XICB				04/16/15 17:28	1.0	1	
015	15d16q00015	ICB				04/16/15 17:33	1.0	1	
016	15d16q00016	CRI				04/16/15 17:37	1.0	10 1	
017	15d16q00017	ICSA				04/16/15 17:42	1.0	11 1	8:CA=270000
018	15d16q00018	ICSAB				04/16/15 18:00	1.0	12 1	8:CA=270000
019	15d16q00019	X	RINSE			04/16/15 18:04	1.0	1	
020	15d16q00020	X	RINSE			04/16/15 18:09	1.0	1	
021	15d16q00021	X	RINSE			04/16/15 18:14	1.0	1	
022	15d16q00022	X	RINSE			04/16/15 18:19	1.0	1	
023	15d16q00023	X	RINSE			04/16/15 18:24	1.0	1	
024	15d16q00024	XCCV				04/16/15 18:29	1.0	13 1	
025	15d16q00025	X	RINSE			04/16/15 18:34	1.0	1	
026	15d16q00026	BLANK	QC784043	Water	222198	04/16/15 18:39	5.0	1	
027	15d16q00027	BS	QC784044	Water	222198	04/16/15 18:43	5.0	1	
028	15d16q00028	BSD	QC784045	Water	222198	04/16/15 18:48	5.0	1	
029	15d16q00029	MSS	265999-001	Water	222198	04/16/15 18:53	5.0	1	
030	15d16q00030	MS	QC784046	Water	222198	04/16/15 18:57	5.0	1	
031	15d16q00031	MSD	QC784047	Water	222198	04/16/15 19:02	5.0	1	
032	15d16q00032	SER	QC784048	Water	222198	04/16/15 19:07	25.0	1	
033	15d16q00033	PDS	QC784049	Water	222198	04/16/15 19:12	5.0	14 15 16 1	
034	15d16q00034	SAMPLE	265999-002	Water	222198	04/16/15 19:16	5.0	1	1:NA=27000
035	15d16q00035	SAMPLE	265878-002	Water	222198	04/16/15 19:21	5.0	1	
036	15d16q00036	CCV				04/16/15 19:26	1.0	13 1	
037	15d16q00037	X	XCCB			04/16/15 19:31	1.0	1	
038	15d16q00038	CCB				04/16/15 19:35	1.0	1	
039	15d16q00039	SAMPLE	265880-002	Water	222198	04/16/15 19:40	5.0	1	
040	15d16q00040	SAMPLE	265919-001	Water	222198	04/16/15 19:45	5.0	1	1:ZN=340
041	15d16q00041	SAMPLE	265919-001	Water	222198	04/16/15 19:50	500.0	1	
042	15d16q00042	SAMPLE	265920-001	Water	222198	04/16/15 19:55	5.0	1	
043	15d16q00043	SAMPLE	265924-001	Water	222198	04/16/15 19:59	5.0	1	
044	15d16q00044	SAMPLE	265940-001	Water	222198	04/16/15 20:04	5.0	1	1:CA=22000
045	15d16q00045	SAMPLE	265942-001	Water	222198	04/16/15 20:09	5.0	1	
046	15d16q00046	SAMPLE	265948-001	Water	222198	04/16/15 20:13	5.0	1	1:NA=88000
047	15d16q00047	SAMPLE	265948-002	Water	222198	04/16/15 20:18	5.0	1	1:NA=39000
048	15d16q00048	SAMPLE	265948-003	Water	222198	04/16/15 20:23	5.0	1	1:NA=38000
049	15d16q00049	CCV				04/16/15 20:28	1.0	13 1	
050	15d16q00050	X	XCCB			04/16/15 20:32	1.0	1	
051	15d16q00051	CCB				04/16/15 20:37	1.0	1	
052	15d16q00052	SAMPLE	266000-001	Water	222198	04/16/15 20:42	5.0	1	1:CA=32000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015153627

Instrument : MET26
 Method : EPA 6020

Begun : 04/16/15 16:27
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d16q00053	SAMPLE	266000-002	Water	222198	04/16/15 20:47	5.0	1	1:CA=34000
054	15d16q00054	SAMPLE	266025-001	Water	222198	04/16/15 20:52	5.0	1	
055	15d16q00055	SAMPLE	266025-002	Water	222198	04/16/15 20:56	5.0	1	3:NA=220000
056	15d16q00056	SAMPLE	266028-001	Water	222198	04/16/15 21:01	5.0	1	
057	15d16q00057	CCV				04/16/15 21:06	1.0	13 1	
058	15d16q00058	X	XCCB			04/16/15 21:11	1.0	1	
059	15d16q00059	CCB				04/16/15 21:16	1.0	1	
060	15d16q00060	ICSA				04/16/15 21:20	1.0	11 1	8:CA=260000
061	15d16q00061	ICSAB				04/16/15 21:25	1.0	12 1	8:CA=270000
062	15d16q00062	X	RINSE			04/16/15 21:30	1.0	1	
063	15d16q00063	X	RINSE			04/16/15 21:35	1.0	1	
064	15d16q00064	BLANK	QC784300	Filtrate	222258	04/16/15 21:40	5.0	1	
065	15d16q00065	BLANK	QC784301	Filtrate	222258	04/16/15 21:44	5.0	1	
066	15d16q00066	BS	QC784302	Filtrate	222258	04/16/15 21:49	5.0	1	
067	15d16q00067	BSD	QC784303	Filtrate	222258	04/16/15 21:54	5.0	1	
068	15d16q00068	MSS	266019-005	Filtrate	222258	04/16/15 21:58	5.0	1	3:NA=31000
069	15d16q00069	MS	QC784306	Filtrate	222258	04/16/15 22:03	5.0	1	3:NA=33000
070	15d16q00070	MSD	QC784307	Filtrate	222258	04/16/15 22:08	5.0	1	3:NA=33000
071	15d16q00071	SER	QC784308	Filtrate	222258	04/16/15 22:12	25.0	1	
072	15d16q00072	PDS	QC784309	Filtrate	222258	04/16/15 22:17	5.0	14 15 16 1	1:NA=37000
073	15d16q00073	SAMPLE	265939-001	Filtrate	222258	04/16/15 22:22	5.0	1	
074	15d16q00074	CCV				04/16/15 22:27	1.0	13 1	
075	15d16q00075	X	XCCB			04/16/15 22:32	1.0	1	
076	15d16q00076	CCB				04/16/15 22:36	1.0	1	
077	15d16q00077	SAMPLE	265994-001	Filtrate	222258	04/16/15 22:41	5.0	1	4:NA=550000
078	15d16q00078	SAMPLE	266019-003	Filtrate	222258	04/16/15 22:46	5.0	1	4:NA=35000
079	15d16q00079	CCV				04/16/15 22:51	1.0	13 1	
080	15d16q00080	X	XCCB			04/16/15 22:56	1.0	1	
081	15d16q00081	CCB				04/16/15 23:01	1.0	1	
082	15d16q00082	MSS	265932-004	Filtrate	222258	04/16/15 23:05	5.0	1	4:NA=770000
083	15d16q00083	X	RINSE			04/16/15 23:10	1.0	1	
084	15d16q00084	MS	QC784304	Filtrate	222258	04/16/15 23:15	5.0	1	4:NA=730000
085	15d16q00085	X	RINSE			04/16/15 23:20	1.0	1	
086	15d16q00086	MSD	QC784305	Filtrate	222258	04/16/15 23:25	5.0	1	4:NA=750000
087	15d16q00087	X	RINSE			04/16/15 23:29	1.0	1	
088	15d16q00088	SAMPLE	265932-001	Filtrate	222258	04/16/15 23:34	5.0	1	4:NA=160000
089	15d16q00089	X	RINSE			04/16/15 23:39	1.0	1	
090	15d16q00090	SAMPLE	265932-003	Filtrate	222258	04/16/15 23:44	5.0	1	7:NA=290000
091	15d16q00091	X	RINSE			04/16/15 23:49	1.0	1	
092	15d16q00092	CCV				04/16/15 23:54	1.0	13 1	
093	15d16q00093	X	XCCB			04/16/15 23:58	1.0	1	
094	15d16q00094	CCB				04/17/15 00:03	1.0	1	
095	15d16q00095	ICSA				04/17/15 00:08	1.0	11 1	8:CA=270000
096	15d16q00096	ICSAB				04/17/15 00:13	1.0	12 1	13:CA=270000
097	15d16q00097	X	RINSE			04/17/15 00:18	1.0	1	
098	15d16q00098	X	RINSE			04/17/15 00:22	1.0	1	
099	15d16q00099	X	RINSE			04/17/15 00:27	1.0	1	
100	15d16q00100	X	RINSE			04/17/15 00:32	1.0	1	
101	15d16q00101	X	RINSE			04/17/15 00:37	1.0	1	
102	15d16q00102	X	RINSE			04/17/15 00:42	1.0	1	
103	15d16q00103	X	RINSE			04/17/15 00:47	1.0	1	
104	15d16q00104	X	RINSE			04/17/15 00:52	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015153627

Instrument : MET26 Begun : 04/16/15 16:27
Method : EPA 6020 SOP Version : icpms_rv10

NT 04/17/15 : I verified that the vials loaded on the instrument matched the
sequence data entry, for runs 1 through 104.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015153627

Date : 04/16/15
 Sequence : MET26 15d16q00

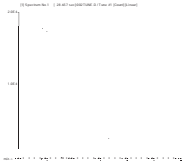
Reference : 15d16q00004
 Analyzed : 04/16/15 16:40

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	175699	413140	43861	298802	79548	21838	844647	908425	787096	1335782
		LOWER LIMIT	52710	123942	13158	89641	23864	6551	253394	272528	236129	400735
		UPPER LIMIT	210839	495768	52633	358562	95458	26206	1013576	1090110	944515	1602938
015	ICB		173384	412091	45940	304777	80583	22525	851179	907073	780081	1320115
017	ICSA		128662	344335	39217	273047	72019	22328	662799	684603	657597	1124042
018	ICSAB		115303	313840	39490	251046	66715	21815	611801	638704	608760	1053539
026	BLANK	QC784043	138968	347749	40066	262035	69268	19408	726356	796004	669179	1160879
027	BS	QC784044	136906	349703	40048	264664	68969	19473	716694	779872	666008	1148603
028	BSD	QC784045	139995	359563	38916	290822	73403	18829	733069	796819	679537	1175416
030	MS	QC784046	131644	342238	35204	265909	68898	18090	700016	762406	651222	1126524
031	MSD	QC784047	127258	343019	39967	251553	66544	19163	700665	757889	652440	1127959
032	SER	QC784048	131753	330877	40647	260086	69543	19979	698476	772054	638180	1092893
033	PDS	QC784049	123331	321174	39580	253795	66123	18942	648338	702266	609862	1043539
036	CCV		121313	322824	38312	251703	64945	18395	658838	710884	618818	1070004
038	CCB		138143	349818	40341	262151	69401	19515	731169	790805	671470	1150490
043	SAMPLE	265924-001	139182	357978	38753	284431	72969	19370	738733	804275	682137	1173372
049	CCV		124087	326578	39275	256759	66282	18490	670780	729029	630168	1095783
051	CCB		123408	313691	38461	242884	64922	18646	668046	738160	607364	1059667
056	SAMPLE	266028-001	114348	312533	35380	232601	60476	17190	640764	713728	595235	1041781
057	CCV		112877	306427	35027	233870	60110	16990	637726	702085	595493	1046283
059	CCB		124470	310790	39531	246683	64630	18803	667705	748836	607521	1062673
060	ICSA		106106	305477	32530	235917	61215	18680	591631	622272	585595	1013213
061	ICSAB		94220	266377	32991	225952	59254	18198	527591	563460	521264	909704
064	BLANK	QC784300	112758	296753	33207	236630	60688	15912	628509	707037	583076	1008206
065	BLANK	QC784301	107494	269503	35032	217458	57237	16757	588727	661982	537499	925527
066	BS	QC784302	116695	304890	33382	227546	59923	16480	644004	714090	592886	1042492
067	BSD	QC784303	116891	302946	35488	223536	59052	16992	641150	716707	589438	1027000
068	MSS	266019-005	111949	298967	34706	224324	59295	16628	592933	648605	552102	1006099
069	MS	QC784306	112912	300982	34135	235444	60784	16170	615712	669255	576173	1011343
070	MSD	QC784307	114388	294859	34116	230989	59460	16555	608244	663422	572259	1002486
071	SER	QC784308	116419	300992	35458	193287	56838	17051	634780	697510	579492	1016726
072	PDS	QC784309	114145	300882	33431	224645	58785	16399	613642	663278	580030	1014029
074	CCV		116088	301539	33961	229159	59228	16658	625734	682163	586310	1029294
076	CCB		120211	305709	35045	234239	61708	17044	655714	728717	596504	1046309
077	SAMPLE	265994-001	91306	246795	33287	204784	52855	15429	517484	547122	485396	844396
078	SAMPLE	266019-003	108840	294889	30895	213427	55752	15282	614370	669459	568511	1004823
079	CCV		112915	302247	34030	225558	59138	16447	624483	682259	582203	1037249
081	CCB		126599	314841	33168	229649	61153	16597	678089	746637	618750	1088758
082	MSS	265932-004	98407	282562	29694	208452	52378	14343	561649	578565	542944	937502
084	MS	QC784304	98966	292590	30941	207321	51775	14640	577588	584594	559186	958301
086	MSD	QC784305	108035	314155	30675	212938	52255	14814	616221	614200	594525	1028525
088	SAMPLE	265932-001	104808	288158	30570	211412	55577	15147	590441	617653	554363	980860
090	SAMPLE	265932-003	96267	293406	30016	209678	53983	15426	579610	611865	743187	989943
092	CCV		117585	312059	32095	225453	58616	16189	649719	701047	606183	1069761
094	CCB		122784	313570	32374	224517	60156	16293	668323	730398	607844	1074495
095	ICSA		102646	286729	30079	214756	56070	16605	566774	590236	559767	975137
096	ICSAB		91912	268143	28463	207957	55116	15908	539869	563376	529593	942593

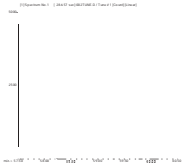
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D16q00.B\002TUNE.D
 Date Acquired: Apr 16 2015 04:31 pm
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

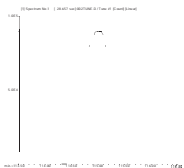
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	18726	18682	18995	19094	18805	0.69	5.00	
59 Co	27946	28156	27983	28292	27893	2.11	5.00	
115 In	471088	469678	472794	476072	475021	0.49	5.00	
205 Tl	35025	34900	34985	35138	34779	1.22	5.00	



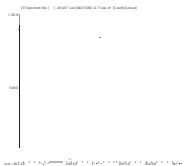
7 Li
Mass Calib.
 Actual: 6.95
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266019 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015153627001
 Units : ug/L
 Date : 16-APR-2015 16:40
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d16q00005	1015153627005	16-APR-2015 16:45	S27043, S26751	
L2	15d16q00006	1015153627006	16-APR-2015 16:50	S27044, S26751	
L3	15d16q00007	1015153627007	16-APR-2015 16:55	S27045, S26751	
L4	15d16q00008	1015153627008	16-APR-2015 16:59	S27046, S26751	
L5	15d16q00009	1015153627009	16-APR-2015 17:04	S27041, S26751	
L6	15d16q00010	1015153627010	16-APR-2015 17:08	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0055	0.0055	0.0058	0.0046	0.0045	0.0049	BLNK	-0.3335	206.992		0.0051	0.999	0.995	
Antimony	A	0.0030	0.0030	0.0028	0.0029	0.0029	0.0031	BLNK	-0.0065	330.890		0.0029	0.999	0.995	
Barium	A	8.0E-4	6.8E-4	6.9E-4	6.9E-4	6.7E-4	7.2E-4	BLNK	-0.0059	1412.75		7.1E-4	0.999	0.995	
Beryllium	A	0.0039	0.0035	0.0035	0.0036	0.0037	0.0039	BLNK	-0.0132	259.983		0.0037	0.999	0.995	
Cadmium	A	9.2E-4	7.6E-4	8.4E-4	7.7E-4	7.4E-4	7.9E-4	BLNK	-0.0033	1279.58		8.0E-4	0.999	0.995	
Calcium	A	7.3E-4	3.1E-4	2.5E-4	1.8E-4	1.8E-4	1.8E-4	BLNK	-30.464	5680.00		3.0E-4	1.000	0.995	
Lead	A	0.0154	0.0083	0.0077	0.0067	0.0065	0.0069	BLNK	-0.1321	147.693		0.0086	0.999	0.995	
Magnesium	A	0.0053	0.0047	0.0048	0.0038	0.0037	0.0040	BLNK	-1.9903	254.019		0.0044	0.999	0.995	
Molybdenum	A	0.0036	0.0023	0.0023	0.0022	0.0021	0.0023	BLNK	-0.0602	440.007		0.0025	0.999	0.995	
Potassium	A	0.0960	0.0246	0.0158	0.0056	0.0049	0.0053	BLNK	-179.26	193.807		0.0254	0.999	0.995	
Silver	A	0.0039	0.0037	0.0037	0.0036	0.0034	0.0037	BLNK	-0.0070	277.391		0.0037	0.999	0.995	
Thallium	A	0.0082	0.0074	0.0073	0.0071	0.0071	0.0076	BLNK	-0.0098	133.921		0.0074	0.999	0.995	
Arsenic	E	0.0090	0.0056	0.0058	0.0054	0.0051	0.0052	BLNK	-0.0925	193.229		0.0060	1.000	0.995	
Chromium	E	0.0637	0.0308	0.0270	0.0229	0.0208	0.0217	BLNK	-0.1907	46.5568		0.0312	1.000	0.995	
Cobalt	E	0.0346	0.0340	0.0358	0.0344	0.0314	0.0322	BLNK	-0.0076	31.2035		0.0337	1.000	0.995	
Copper	E	0.4384	0.1010	0.0621	0.0284	0.0224	0.0226	BLNK	-2.4162	44.9765		0.1125	1.000	0.995	
Manganese	E	0.0165	0.0152	0.0151	0.0151	0.0140	0.0146	BLNK	-0.0134	68.9859		0.0151	1.000	0.995	
Nickel	E	0.0100	0.0104	0.0098	0.0093	0.0083	0.0085	BLNK	-0.0369	118.041		0.0094	1.000	0.995	
Sodium	E	0.0209	0.0082	0.0064	0.0050	0.0041	0.0041	BLNK	-40.077	243.553		0.0081	1.000	0.995	
Vanadium	E	0.0639	0.0276	0.0225	0.0189	0.0173	0.0181	BLNK	-0.2780	55.8121		0.0280	0.999	0.995	
Zinc	E		0.0122	0.0057	0.0047	0.0042	0.0043	BLNK	-0.2309	235.674		0.0062	1.000	0.995	
Iron	H	0.0097	0.0083	0.0079	0.0071	0.0065	0.0061	BLNK	-3.2853	161.754		0.0076	0.999	0.995	
Selenium	H	0.0012	0.0010	0.0010	0.0012	0.0010	0.0012	BLNK	-0.0061	1084.67		0.0010	0.999	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	10	50.000	13	100.00	19	1000.0	-6	10000	-6	20000	2
Antimony	A	0.1000	-7	0.5000	-3	1.0000	-7	10.000	-3	100.00	-6	200.00	1
Barium	A	0.1000	8	0.5000	-5	1.0000	-3	10.000	-3	100.00	-5	200.00	1
Beryllium	A	0.1000	-12	0.5000	-11	1.0000	-10	10.000	-7	100.00	-4	200.00	1
Cadmium	A	0.1000	15	0.5000	-4	1.0000	7	10.000	-2	100.00	-5	200.00	1
Calcium	A	10.000	9	50.000	13	100.00	9	1000.0	1	10000	2	20000	0
Lead	A	0.1000	-5	0.5000	-3	1.0000	1	10.000	-2	100.00	-4	200.00	1
Magnesium	A	10.000	15	50.000	15	100.00	20	1000.0	-3	10000	-5	20000	1
Molybdenum	A	0.1000	-3	0.5000	-10	1.0000	-5	10.000	-6	100.00	-6	200.00	1
Potassium	A	10.000	-33	50.000	19	100.00	27	1000.0	-9	10000	-6	20000	1
Silver	A	0.1000	2	0.5000	0	1.0000	1	10.000	-1	100.00	-5	200.00	1
Thallium	A	0.0500	-10	0.2500	-4	0.5000	-4	5.0000	-6	50.000	-5	100.00	1
Arsenic	E	0.1000	-19	0.5000	-10	1.0000	2	10.000	3	100.00	-1	200.00	0
Chromium	E	0.1000	6	0.5000	5	1.0000	7	10.000	5	100.00	-3	200.00	1
Cobalt	E	0.1000	0	0.5000	4	1.0000	11	10.000	7	100.00	-2	200.00	1
Copper	E	0.1000	-544	0.5000	-129	1.0000	-62	10.000	4	100.00	-2	200.00	0
Manganese	E	0.1000	0	0.5000	2	1.0000	3	10.000	4	100.00	-3	200.00	1
Nickel	E	0.1000	-19	0.5000	15	1.0000	13	10.000	9	100.00	-2	200.00	0
Sodium	E	10.000	8	50.000	20	100.00	16	1000.0	19	10000	-1	20000	0
Vanadium	E	0.1000	-22	0.5000	-2	1.0000	-2	10.000	3	100.00	-4	200.00	1
Zinc	E			0.5000	142	1.0000	12	10.000	8	100.00	-1	200.00	0
Iron	H	10.000	24	50.000	27	100.00	25	1000.0	14	10000	5	20000	-1
Selenium	H	0.1000	23	0.5000	9	1.0000	7	10.000	8	100.00	4	200.00	-1

NT 04/17/15 : Low Cu bias in Calibration.

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015153627001

Cal Date : 16-APR-2015

ICV 1015153627012 (15d16q00012 16-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	9441	ug/L	-6	10	
Antimony	A	100.0	96.12	ug/L	-4	10	
Barium	A	100.0	96.11	ug/L	-4	10	
Beryllium	A	100.0	96.68	ug/L	-3	10	
Cadmium	A	100.0	95.59	ug/L	-4	10	
Calcium	A	10000	10280	ug/L	3	10	
Lead	A	100.0	96.32	ug/L	-4	10	
Magnesium	A	10000	9565	ug/L	-4	10	
Molybdenum	A	100.0	95.27	ug/L	-5	10	
Potassium	A	10000	9572	ug/L	-4	10	
Silver	A	100.0	96.87	ug/L	-3	10	
Thallium	A	50.00	48.23	ug/L	-4	10	
Arsenic	E	100.0	103.9	ug/L	4	10	
Chromium	E	100.0	106.8	ug/L	7	10	
Cobalt	E	100.0	107.9	ug/L	8	10	
Copper	E	100.0	107.2	ug/L	7	10	
Manganese	E	100.0	107.4	ug/L	7	10	
Nickel	E	100.0	108.1	ug/L	8	10	
Sodium	E	10000	10900	ug/L	9	10	
Vanadium	E	100.0	106.3	ug/L	6	10	
Zinc	E	100.0	108.0	ug/L	8	10	
Iron	H	10000	10600	ug/L	6	10	
Selenium	H	100.0	105.3	ug/L	5	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015153627015
Cal : 1015153627001

File : 15d16q00015
Caldate : 16-APR-2015

IDF : 1.0
Time : 16-APR-2015 17:33

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	---	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	[0.08330]	0.1000	0.05000	ug/L	!ICB
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	175699	173384	-1.32
Scandium	A	413140	412091	-0.25
Scandium	E	43861	45940	4.74
Scandium	H	298802	304777	2.00
Germanium	H	79548	80583	1.30
Germanium	E	21838	22525	3.15
Indium	A	844647	851179	0.77
Bismuth	A	908425	907073	-0.15
Yttrium	A	787096	780081	-0.89
Terbium	A	1335782	1320115	-1.17

!=warning ICB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015153627057 File : 15d16q00057 Time : 16-APR-2015 21:06
 Cal : 1015153627001 Caldate : 16-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0051	0.0045	10000	9271	ug/L	-7	10	
Antimony	A	0.0029	0.0029	100.0	95.02	ug/L	-5	10	
Barium	A	7.1E-4	6.8E-4	100.0	95.47	ug/L	-5	10	
Beryllium	A	0.0037	0.0039	100.0	100.8	ug/L	1	10	
Cadmium	A	8.0E-4	7.3E-4	100.0	93.94	ug/L	-6	10	
Calcium	A	3.0E-4	1.8E-4	10000	10110	ug/L	1	10	
Lead	A	0.0086	0.0066	100.0	97.67	ug/L	-2	10	
Magnesium	A	0.0044	0.0037	10000	9332	ug/L	-7	10	
Molybdenum	A	0.0025	0.0022	100.0	94.65	ug/L	-5	10	
Potassium	A	0.0254	0.0050	10000	9435	ug/L	-6	10	
Silver	A	0.0037	0.0034	100.0	93.90	ug/L	-6	10	
Thallium	A	0.0074	0.0071	50.00	47.37	ug/L	-5	10	
Arsenic	E	0.0060	0.0053	100.0	102.5	ug/L	3	10	
Chromium	E	0.0312	0.0219	100.0	102.0	ug/L	2	10	
Cobalt	E	0.0337	0.0329	100.0	102.7	ug/L	3	10	
Copper	E	0.1125	0.0244	100.0	107.5	ug/L	8	10	
Manganese	E	0.0151	0.0150	100.0	103.3	ug/L	3	10	
Nickel	E	0.0094	0.0087	100.0	102.5	ug/L	3	10	
Sodium	E	0.0081	0.0044	10000	10670	ug/L	7	10	
Vanadium	E	0.0280	0.0184	100.0	102.4	ug/L	2	10	
Zinc	E	0.0062	0.0043	100.0	102.0	ug/L	2	10	
Iron	H	0.0076	0.0065	10000	10480	ug/L	5	10	
Selenium	H	0.0010	9.8E-4	100.0	106.7	ug/L	7	10	

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	175699	112877	-35.76
Scandium	A	413140	306427	-25.83
Scandium	E	43861	35027	-20.14
Scandium	H	298802	233870	-21.73
Germanium	H	79548	60110	-24.44
Germanium	E	21838	16990	-22.20
Indium	A	844647	637726	-24.50
Bismuth	A	908425	702085	-22.71
Yttrium	A	787096	595493	-24.34
Terbium	A	1335782	1046283	-21.67

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015153627059
Cal : 1015153627001

File : 15d16q00059
Caldate : 16-APR-2015

IDF : 1.0
Time : 16-APR-2015 21:16

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	0.4250	0.1000	---	ug/L	CCB ***
Potassium	A	16.72	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	175699	124470	-29.16
Scandium	A	413140	310790	-24.77
Scandium	E	43861	39531	-9.87
Scandium	H	298802	246683	-17.44
Germanium	H	79548	64630	-18.75
Germanium	E	21838	18803	-13.90
Indium	A	844647	667705	-20.95
Bismuth	A	908425	748836	-17.57
Yttrium	A	787096	607521	-22.81
Terbium	A	1335782	1062673	-20.45

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015153627060
 Cal : 1015153627001
 Standards: S26727, S26751

File : 15d16q00060
 Caldate : 16-APR-2015

IDF : 1.0
 Time : 16-APR-2015 21:20

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4318	0.1000	ug/L	
Barium	A	1.610	0.1000	ug/L	
Beryllium	A	[0.01410]	0.1000	ug/L	
Cadmium	A	4.007	0.1000	ug/L	
Lead	A	0.1990	0.1000	ug/L	
Silver	A	[0.06290]	0.1000	ug/L	
Thallium	A	[0.02180]	0.05000	ug/L	
Arsenic	E	0.7315	0.1000	ug/L	
Chromium	E	0.9624	0.1000	ug/L	
Cobalt	E	1.251	0.1000	ug/L	
Copper	E	6.287	0.1000	ug/L	
Manganese	E	7.955	0.1000	ug/L	
Nickel	E	1.281	0.1000	ug/L	
Vanadium	E	0.2266	0.1000	ug/L	
Zinc	E	1.197	0.5000	ug/L	
Selenium	H	0.1042	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	90030	ug/L	90
Calcium	A	300000	259400	ug/L	86
Magnesium	A	100000	88190	ug/L	88
Molybdenum	A	2000	1778	ug/L	89
Potassium	A	100000	91130	ug/L	91
Sodium	E	250000	257400	ug/L	103
Phosphorus	E	100000	103600	ug/L	104
Iron	H	250000	242500	ug/L	97

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	175699	106106	-39.61
Scandium	A	413140	305477	-26.06
Scandium	E	43861	32530	-25.83
Scandium	H	298802	235917	-21.05
Germanium	H	79548	61215	-23.05
Germanium	E	21838	18680	-14.46
Indium	A	844647	591631	-29.96
Bismuth	A	908425	622272	-31.50
Yttrium	A	787096	585595	-25.60
Terbium	A	1335782	1013213	-24.15

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015153627061 File : 15d16q00061
 Cal : 1015153627001 Caldate : 16-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 16-APR-2015 21:25

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	95910	ug/L	-4		
Cadmium	A	100.0	99.13	ug/L	-1	20	
Calcium	A	300000	274900	ug/L	-8		
Magnesium	A	100000	94300	ug/L	-6		
Molybdenum	A	2000	1901	ug/L	-5		
Potassium	A	100000	96910	ug/L	-3		
Silver	A	50.00	47.38	ug/L	-5	20	
Arsenic	E	100.0	88.88	ug/L	-11	20	
Chromium	E	200.0	188.4	ug/L	-6	20	
Cobalt	E	200.0	184.7	ug/L	-8	20	
Copper	E	200.0	184.9	ug/L	-8	20	
Manganese	E	200.0	194.8	ug/L	-3	20	
Nickel	E	200.0	181.4	ug/L	-9	20	
Sodium	E	250000	239800	ug/L	-4		
Vanadium	E	200.0	193.1	ug/L	-3	20	
Zinc	E	100.0	88.69	ug/L	-11	20	
Iron	H	250000	243300	ug/L	-3		
Selenium	H	100.0	96.79	ug/L	-3	20	

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	298802	225952	-24.38
Scandium	A	413140	266377	-35.52
Scandium	E	43861	32991	-24.78
Germanium	H	79548	59254	-25.51
Germanium	E	21838	18198	-16.67
Indium	A	844647	527591	-37.54
Yttrium	A	787096	521264	-33.77

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015153627074 File : 15d16q00074 Time : 16-APR-2015 22:27
 Cal : 1015153627001 Caldate : 16-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0051	0.0047	10000	9685	ug/L	-3	10	
Antimony	A	0.0029	0.0030	100.0	98.56	ug/L	-1	10	
Barium	A	7.1E-4	7.0E-4	100.0	98.40	ug/L	-2	10	
Beryllium	A	0.0037	0.0038	100.0	99.37	ug/L	-1	10	
Cadmium	A	8.0E-4	7.6E-4	100.0	97.18	ug/L	-3	10	
Calcium	A	3.0E-4	1.9E-4	10000	10600	ug/L	6	10	
Lead	A	0.0086	0.0068	100.0	100.3	ug/L	0	10	
Magnesium	A	0.0044	0.0039	10000	9800	ug/L	-2	10	
Molybdenum	A	0.0025	0.0022	100.0	97.81	ug/L	-2	10	
Potassium	A	0.0254	0.0052	10000	9942	ug/L	-1	10	
Silver	A	0.0037	0.0035	100.0	97.54	ug/L	-2	10	
Thallium	A	0.0074	0.0074	50.00	49.42	ug/L	-1	10	
Arsenic	E	0.0060	0.0053	100.0	102.6	ug/L	3	10	
Chromium	E	0.0312	0.0223	100.0	103.8	ug/L	4	10	
Cobalt	E	0.0337	0.0335	100.0	104.6	ug/L	5	10	
Copper	E	0.1125	0.0248	100.0	109.1	ug/L	9	10	
Manganese	E	0.0151	0.0151	100.0	103.9	ug/L	4	10	
Nickel	E	0.0094	0.0089	100.0	105.6	ug/L	6	10	
Sodium	E	0.0081	0.0044	10000	10780	ug/L	8	10	
Vanadium	E	0.0280	0.0185	100.0	103.1	ug/L	3	10	
Zinc	E	0.0062	0.0044	100.0	103.8	ug/L	4	10	
Iron	H	0.0076	0.0066	10000	10710	ug/L	7	10	
Selenium	H	0.0010	9.9E-4	100.0	107.1	ug/L	7	10	

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	175699	116088	-33.93
Scandium	A	413140	301539	-27.01
Scandium	E	43861	33961	-22.57
Scandium	H	298802	229159	-23.31
Germanium	H	79548	59228	-25.54
Germanium	E	21838	16658	-23.72
Indium	A	844647	625734	-25.92
Bismuth	A	908425	682163	-24.91
Yttrium	A	787096	586310	-25.51
Terbium	A	1335782	1029294	-22.94

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015153627076
Cal : 1015153627001

File : 15d16q00076
Caldate : 16-APR-2015

IDF : 1.0
Time : 16-APR-2015 22:36

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	[0.05740]	0.1000	0.05000	ug/L	!CCB
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	[5.022]	10.00	5.000	ug/L	!CCB
Molybdenum	A	0.1904	0.1000	---	ug/L	CCB ***
Potassium	A	14.92	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	[0.05820]	0.1000	0.05000	ug/L	!CCB
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	175699	120211	-31.58
Scandium	A	413140	305709	-26.00
Scandium	E	43861	35045	-20.10
Scandium	H	298802	234239	-21.61
Germanium	H	79548	61708	-22.43
Germanium	E	21838	17044	-21.95
Indium	A	844647	655714	-22.37
Bismuth	A	908425	728717	-19.78
Yttrium	A	787096	596504	-24.21
Terbium	A	1335782	1046309	-21.67

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015153627079 File : 15d16q00079 Time : 16-APR-2015 22:51
 Cal : 1015153627001 Caldate : 16-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0051	0.0046	10000	9578	ug/L	-4	10	
Antimony	A	0.0029	0.0030	100.0	99.29	ug/L	-1	10	
Barium	A	7.1E-4	6.9E-4	100.0	98.03	ug/L	-2	10	
Beryllium	A	0.0037	0.0038	100.0	98.92	ug/L	-1	10	
Cadmium	A	8.0E-4	7.6E-4	100.0	97.55	ug/L	-2	10	
Calcium	A	3.0E-4	1.9E-4	10000	10540	ug/L	5	10	
Lead	A	0.0086	0.0068	100.0	100.2	ug/L	0	10	
Magnesium	A	0.0044	0.0038	10000	9676	ug/L	-3	10	
Molybdenum	A	0.0025	0.0022	100.0	97.95	ug/L	-2	10	
Potassium	A	0.0254	0.0052	10000	9834	ug/L	-2	10	
Silver	A	0.0037	0.0036	100.0	98.62	ug/L	-1	10	
Thallium	A	0.0074	0.0074	50.00	49.76	ug/L	0	10	
Arsenic	E	0.0060	0.0053	100.0	102.0	ug/L	2	10	
Chromium	E	0.0312	0.0219	100.0	101.7	ug/L	2	10	
Cobalt	E	0.0337	0.0329	100.0	102.7	ug/L	3	10	
Copper	E	0.1125	0.0268	100.0	117.9	ug/L	18	10	c+ ***
Manganese	E	0.0151	0.0147	100.0	101.5	ug/L	2	10	
Nickel	E	0.0094	0.0088	100.0	103.7	ug/L	4	10	
Sodium	E	0.0081	0.0044	10000	10650	ug/L	7	10	
Vanadium	E	0.0280	0.0182	100.0	101.5	ug/L	2	10	
Zinc	E	0.0062	0.0044	100.0	102.8	ug/L	3	10	
Iron	H	0.0076	0.0066	10000	10700	ug/L	7	10	
Selenium	H	0.0010	9.8E-4	100.0	106.1	ug/L	6	10	

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	175699	112915	-35.73
Scandium	A	413140	302247	-26.84
Scandium	E	43861	34030	-22.41
Scandium	H	298802	225558	-24.51
Germanium	H	79548	59138	-25.66
Germanium	E	21838	16447	-24.69
Indium	A	844647	624483	-26.07
Bismuth	A	908425	682259	-24.90
Yttrium	A	787096	582203	-26.03
Terbium	A	1335782	1037249	-22.35

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015153627081
Cal : 1015153627001

File : 15d16q00081
Caldate : 16-APR-2015

IDF : 1.0
Time : 16-APR-2015 23:01

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	0.1009	0.1000	---	ug/L	CCB ***
Potassium	A	14.23	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	8.601	0.1000	0.5000	ug/L	CCB ***
Manganese	E	0.1006	0.1000	0.05000	ug/L	CCB ***
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	35.74	10.00	15.00	ug/L	CCB ***
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	175699	126599	-27.95
Scandium	A	413140	314841	-23.79
Scandium	E	43861	33168	-24.38
Scandium	H	298802	229649	-23.14
Germanium	H	79548	61153	-23.12
Germanium	E	21838	16597	-24.00
Indium	A	844647	678089	-19.72
Bismuth	A	908425	746637	-17.81
Yttrium	A	787096	618750	-21.39
Terbium	A	1335782	1088758	-18.49

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015153627092 File : 15d16q00092 Time : 16-APR-2015 23:54
 Cal : 1015153627001 Caldate : 16-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0051	0.0046	10000	9507	ug/L	-5	10	
Antimony	A	0.0029	0.0030	100.0	99.08	ug/L	-1	10	
Barium	A	7.1E-4	7.0E-4	100.0	98.50	ug/L	-1	10	
Beryllium	A	0.0037	0.0036	100.0	94.86	ug/L	-5	10	
Cadmium	A	8.0E-4	7.6E-4	100.0	97.39	ug/L	-3	10	
Calcium	A	3.0E-4	1.9E-4	10000	10590	ug/L	6	10	
Lead	A	0.0086	0.0067	100.0	99.18	ug/L	-1	10	
Magnesium	A	0.0044	0.0038	10000	9580	ug/L	-4	10	
Molybdenum	A	0.0025	0.0022	100.0	97.08	ug/L	-3	10	
Potassium	A	0.0254	0.0052	10000	9905	ug/L	-1	10	
Silver	A	0.0037	0.0035	100.0	96.70	ug/L	-3	10	
Thallium	A	0.0074	0.0073	50.00	49.11	ug/L	-2	10	
Arsenic	E	0.0060	0.0053	100.0	103.1	ug/L	3	10	
Chromium	E	0.0312	0.0229	100.0	106.4	ug/L	6	10	
Cobalt	E	0.0337	0.0346	100.0	108.1	ug/L	8	10	
Copper	E	0.1125	0.0291	100.0	128.4	ug/L	28	10	c+ ***
Manganese	E	0.0151	0.0153	100.0	105.3	ug/L	5	10	
Nickel	E	0.0094	0.0092	100.0	108.7	ug/L	9	10	
Sodium	E	0.0081	0.0045	10000	11030	ug/L	10	10	
Vanadium	E	0.0280	0.0191	100.0	106.1	ug/L	6	10	
Zinc	E	0.0062	0.0045	100.0	106.3	ug/L	6	10	
Iron	H	0.0076	0.0065	10000	10460	ug/L	5	10	
Selenium	H	0.0010	9.5E-4	100.0	103.5	ug/L	4	10	

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	175699	117585	-33.08
Scandium	A	413140	312059	-24.47
Scandium	E	43861	32095	-26.83
Scandium	H	298802	225453	-24.55
Germanium	H	79548	58616	-26.31
Germanium	E	21838	16189	-25.87
Indium	A	844647	649719	-23.08
Bismuth	A	908425	701047	-22.83
Yttrium	A	787096	606183	-22.98
Terbium	A	1335782	1069761	-19.92

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015153627094
Cal : 1015153627001

File : 15d16q00094
Caldate : 16-APR-2015

IDF : 1.0
Time : 17-APR-2015 00:03

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	[5.474]	10.00	5.000	ug/L	!CCB
Molybdenum	A	[0.08700]	0.1000	---	ug/L	!CCB
Potassium	A	23.62	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	20.13	0.1000	0.5000	ug/L	CCB ***
Manganese	E	0.3014	0.1000	0.05000	ug/L	CCB ***
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	78.22	10.00	15.00	ug/L	CCB ***
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	175699	122784	-30.12
Scandium	A	413140	313570	-24.10
Scandium	E	43861	32374	-26.19
Scandium	H	298802	224517	-24.86
Germanium	H	79548	60156	-24.38
Germanium	E	21838	16293	-25.39
Indium	A	844647	668323	-20.88
Bismuth	A	908425	730398	-19.60
Yttrium	A	787096	607844	-22.77
Terbium	A	1335782	1074495	-19.56

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015153627095
 Cal : 1015153627001
 Standards: S26727, S26751

File : 15d16q00095
 Caldate : 16-APR-2015

IDF : 1.0
 Time : 17-APR-2015 00:08

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4747	0.1000	ug/L	
Barium	A	1.839	0.1000	ug/L	
Beryllium	A	[0.01760]	0.1000	ug/L	
Cadmium	A	3.083	0.1000	ug/L	
Lead	A	0.1944	0.1000	ug/L	
Silver	A	[0.07900]	0.1000	ug/L	
Thallium	A	[0.02400]	0.05000	ug/L	
Arsenic	E	0.6962	0.1000	ug/L	
Chromium	E	0.8825	0.1000	ug/L	
Cobalt	E	1.223	0.1000	ug/L	
Copper	E	21.58	0.1000	ug/L	
Manganese	E	7.592	0.1000	ug/L	
Nickel	E	1.268	0.1000	ug/L	
Vanadium	E	0.1398	0.1000	ug/L	
Zinc	E	0.9648	0.5000	ug/L	
Selenium	H	[0.09270]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	92110	ug/L	92
Calcium	A	300000	269000	ug/L	90
Magnesium	A	100000	90410	ug/L	90
Molybdenum	A	2000	1846	ug/L	92
Potassium	A	100000	95070	ug/L	95
Sodium	E	250000	249100	ug/L	100
Phosphorus	E	100000	95660	ug/L	96
Iron	H	250000	246600	ug/L	99

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	175699	102646	-41.58
Scandium	A	413140	286729	-30.60
Scandium	E	43861	30079	-31.42
Scandium	H	298802	214756	-28.13
Germanium	H	79548	56070	-29.51
Germanium	E	21838	16605	-23.96
Indium	A	844647	566774	-32.90
Bismuth	A	908425	590236	-35.03
Yttrium	A	787096	559767	-28.88
Terbium	A	1335782	975137	-27.00

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015153627096
 Cal : 1015153627001
 Standards: S26728, S26751

File : 15d16q00096
 Caldate : 16-APR-2015

IDF : 1.0
 Time : 17-APR-2015 00:13

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	92300	ug/L	-8		
Cadmium	A	100.0	94.32	ug/L	-6	20	
Calcium	A	300000	268500	ug/L	-10		
Magnesium	A	100000	90680	ug/L	-9		
Molybdenum	A	2000	1840	ug/L	-8		
Potassium	A	100000	95170	ug/L	-5		
Silver	A	50.00	45.38	ug/L	-9	20	
Arsenic	E	100.0	92.90	ug/L	-7	20	
Chromium	E	200.0	204.6	ug/L	2	20	
Cobalt	E	200.0	200.4	ug/L	0	20	
Copper	E	200.0	216.6	ug/L	8	20	
Manganese	E	200.0	206.5	ug/L	3	20	
Nickel	E	200.0	197.4	ug/L	-1	20	
Sodium	E	250000	250200	ug/L	0		
Vanadium	E	200.0	208.2	ug/L	4	20	
Zinc	E	100.0	96.09	ug/L	-4	20	
Iron	H	250000	248500	ug/L	-1		
Selenium	H	100.0	97.25	ug/L	-3	20	

ISTD (ICALBLK 15d16q00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	298802	207957	-30.40
Scandium	A	413140	268143	-35.10
Scandium	E	43861	28463	-35.11
Germanium	H	79548	55116	-30.71
Germanium	E	21838	15908	-27.15
Indium	A	844647	539869	-36.08
Yttrium	A	787096	529593	-32.72

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015154524

Instrument : MET26
 Method : EPA 6020

Begun : 04/17/15 07:24
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d17h00001	X	RINSE			04/17/15 07:24	1.0	1	
002	15d17h00002	TUN				04/17/15 07:28	1.0	2	
003	15d17h00003	X	RINSE			04/17/15 07:33	1.0	1	
004	15d17h00004	ICALBLK	CALBLANK			04/17/15 07:38	1.0	1	
005	15d17h00005	ICAL				04/17/15 07:43	1.0	3 1	
006	15d17h00006	ICAL				04/17/15 07:47	1.0	4 1	
007	15d17h00007	ICAL				04/17/15 07:52	1.0	5 1	
008	15d17h00008	ICAL				04/17/15 07:57	1.0	6 1	
009	15d17h00009	ICAL				04/17/15 08:01	1.0	7 1	
010	15d17h00010	ICAL				04/17/15 08:08	1.0	8 1	
011	15d17h00011	X	RINSE			04/17/15 08:13	1.0	1	
012	15d17h00012	ICV				04/17/15 08:19	1.0	9 1	
013	15d17h00013	XCRI				04/17/15 08:24	1.0	10 1	
014	15d17h00014	XICB				04/17/15 08:29	1.0	1	
015	15d17h00015	ICB				04/17/15 08:34	1.0	1	
016	15d17h00016	CRI				04/17/15 08:38	1.0	10 1	
017	15d17h00017	ICSA				04/17/15 08:43	1.0	11 1	8:CA=280000
018	15d17h00018	ICSAB				04/17/15 08:48	1.0	12 1	13:CA=290000
019	15d17h00019	X	RINSE			04/17/15 08:53	1.0	1	
020	15d17h00020	X	RINSE			04/17/15 09:00	1.0	1	
021	15d17h00021	X	RINSE			04/17/15 09:05	1.0	1	
022	15d17h00022	X	RINSE			04/17/15 09:10	1.0	1	
023	15d17h00023	X	RINSE			04/17/15 09:15	1.0	1	
024	15d17h00024	BLANK	QC784300	Filtrate	222258	04/17/15 09:19	5.0	1	
025	15d17h00025	BLANK	QC784301	Filtrate	222258	04/17/15 09:24	5.0	1	
026	15d17h00026	BS	QC784302	Filtrate	222258	04/17/15 09:29	5.0	1	
027	15d17h00027	BSD	QC784303	Filtrate	222258	04/17/15 09:33	5.0	1	
028	15d17h00028	X	RINSE			04/17/15 09:38	1.0	1	
029	15d17h00029	BLANK	QC784300	Filtrate	222258	04/17/15 09:43	5.0	1	
030	15d17h00030	BLANK	QC784301	Filtrate	222258	04/17/15 09:48	5.0	1	
031	15d17h00031	CCV				04/17/15 09:53	1.0	13 1	
032	15d17h00032	X	XCCB			04/17/15 09:58	1.0	1	
033	15d17h00033	CCB				04/17/15 10:03	1.0	1	
034	15d17h00034	MSS	265932-004	Filtrate	222258	04/17/15 10:07	5.0	1	4:NA=850000
035	15d17h00035	MS	QC784304	Filtrate	222258	04/17/15 10:12	5.0	1	4:NA=870000
036	15d17h00036	MSD	QC784305	Filtrate	222258	04/17/15 10:17	5.0	1	4:NA=840000
037	15d17h00037	MSS	266019-005	Filtrate	222258	04/17/15 10:21	5.0	1	3:NA=33000
038	15d17h00038	MS	QC784306	Filtrate	222258	04/17/15 10:26	5.0	1	4:NA=34000
039	15d17h00039	MSD	QC784307	Filtrate	222258	04/17/15 10:31	5.0	1	4:NA=38000
040	15d17h00040	SER	QC784308	Filtrate	222258	04/17/15 10:35	25.0	1	
041	15d17h00041	PDS	QC784309	Filtrate	222258	04/17/15 10:40	5.0	14 15 16 1	1:NA=46000
042	15d17h00042	MSS	266019-005	Filtrate	222258	04/17/15 10:45	500.0	1	
043	15d17h00043	SER	QC784308	Filtrate	222258	04/17/15 10:50	2500	1	
044	15d17h00044	CCV				04/17/15 10:55	1.0	13 1	
045	15d17h00045	X	XCCB			04/17/15 10:59	1.0	1	
046	15d17h00046	CCB				04/17/15 11:04	1.0	1	
047	15d17h00047	PDS	QC784309	Filtrate	222258	04/17/15 11:09	500.0	14 15 16 1	
048	15d17h00048	SAMPLE	265932-001	Filtrate	222258	04/17/15 11:14	5.0	1	4:NA=160000
049	15d17h00049	SAMPLE	265932-003	Filtrate	222258	04/17/15 11:19	5.0	1	7:NA=310000
050	15d17h00050	SAMPLE	265932-003	Filtrate	222258	04/17/15 11:23	500.0	1	
051	15d17100001	X	RINSE			04/17/15 11:41	1.0	1	
052	15d17100002	SAMPLE	265939-001	Filtrate	222258	04/17/15 11:46	5.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015154524

Instrument : MET26
 Method : EPA 6020

Begun : 04/17/15 07:24
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d17100003	SAMPLE	265994-001	Filtrate	222258	04/17/15 11:50	5.0	1	4:NA=580000
054	15d17100004	CCV				04/17/15 11:55	1.0	13 1	
055	15d17100005	X	XCCB			04/17/15 12:00	1.0	1	
056	15d17100006	CCB				04/17/15 12:05	1.0	1	
057	15d17100007	ICSA				04/17/15 12:09	1.0	11 1	8:CA=270000
058	15d17100008	ICSAB				04/17/15 12:14	1.0	12 1	11:CA=270000
059	15d17100009	X	RINSE			04/17/15 12:19	1.0	1	
060	15d17100010	X	RINSE			04/17/15 12:24	1.0	1	
061	15d17100011	BLANK	QC784570	Filtrate	222325	04/17/15 12:29	5.0	1	
062	15d17100012	BS	QC784571	Filtrate	222325	04/17/15 12:33	5.0	1	
063	15d17100013	BSD	QC784572	Filtrate	222325	04/17/15 12:38	5.0	1	
064	15d17100014	CCV				04/17/15 12:43	1.0	13 1	
065	15d17100015	X	XCCB			04/17/15 12:48	1.0	1	
066	15d17100016	CCB				04/17/15 12:53	1.0	1	
067	15d17100017	MSS	266087-001	Filtrate	222325	04/17/15 12:57	5.0	1	4:NA=33000
068	15d17100018	MS	QC784573	Filtrate	222325	04/17/15 13:02	5.0	1	4:NA=35000
069	15d17100019	MSD	QC784574	Filtrate	222325	04/17/15 13:07	5.0	1	4:NA=33000
070	15d17100020	SER	QC784575	Filtrate	222325	04/17/15 13:11	25.0	1	
071	15d17100021	PDS	QC784576	Filtrate	222325	04/17/15 13:16	5.0	14 15 16 1	
072	15d17100022	SAMPLE	266068-003	Filtrate	222325	04/17/15 13:21	5.0	1	
073	15d17100023	SAMPLE	266068-005	Filtrate	222325	04/17/15 13:25	5.0	1	
074	15d17100024	SAMPLE	266087-002	Filtrate	222325	04/17/15 13:30	5.0	1	
075	15d17100025	SAMPLE	266087-003	Filtrate	222325	04/17/15 13:35	5.0	1	
076	15d17100026	SAMPLE	266087-004	Filtrate	222325	04/17/15 13:40	5.0	1	1:NA=20000
077	15d17100027	CCV				04/17/15 13:44	1.0	13 1	
078	15d17100028	X	XCCB			04/17/15 13:49	1.0	1	
079	15d17100029	CCB				04/17/15 13:54	1.0	1	
080	15d17100030	SAMPLE	266087-006	Filtrate	222325	04/17/15 13:59	5.0	1	
081	15d17100031	SAMPLE	266087-007	Filtrate	222325	04/17/15 14:04	5.0	1	
082	15d17100032	SAMPLE	266087-009	Filtrate	222325	04/17/15 14:08	5.0	1	4:CA=51000
083	15d17100033	SAMPLE	266091-002	Filtrate	222325	04/17/15 14:13	5.0	1	4:NA=130000
084	15d17100034	SAMPLE	266091-004	Filtrate	222325	04/17/15 14:18	5.0	1	1:NA=22000
085	15d17100035	SAMPLE	266091-005	Filtrate	222325	04/17/15 14:22	5.0	1	1:NA=21000
086	15d17100036	SAMPLE	266091-006	Filtrate	222325	04/17/15 14:27	5.0	1	4:NA=1500000
087	15d17100037	SAMPLE	266091-007	Filtrate	222325	04/17/15 14:32	5.0	1	4:NA=1500000
088	15d17100038	SAMPLE	266091-008	Filtrate	222325	04/17/15 14:37	5.0	1	
089	15d17100039	SAMPLE	266091-009	Filtrate	222325	04/17/15 14:41	5.0	1	1:NA=67000
090	15d17100040	CCV				04/17/15 14:46	1.0	13 1	
091	15d17100041	X	XCCB			04/17/15 14:51	1.0	1	
092	15d17100042	CCB				04/17/15 14:56	1.0	1	
093	15d17100043	SAMPLE	266091-010	Filtrate	222325	04/17/15 15:01	5.0	1	4:NA=38000
094	15d17100044	SAMPLE	266091-012	Filtrate	222325	04/17/15 15:06	5.0	1	
095	15d17100045	CCV				04/17/15 15:10	1.0	13 1	
096	15d17100046	X	XCCB			04/17/15 15:15	1.0	1	
097	15d17100047	CCB				04/17/15 15:20	1.0	1	
098	15d17100048	ICSA				04/17/15 15:25	1.0	11 1	8:CA=270000
099	15d17100049	ICSAB				04/17/15 15:30	1.0	12 1	8:CA=260000
100	15d17100050	X	RINSE			04/17/15 15:34	1.0	1	
101	15d17100051	X	RINSE			04/17/15 15:39	1.0	1	
102	15d17100052	CCV				04/17/15 15:44	1.0	13 1	
103	15d17100053	X	XCCB			04/17/15 15:49	1.0	1	
104	15d17100054	CCB				04/17/15 15:54	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015154524

Instrument : MET26 Begun : 04/17/15 07:24
 Method : EPA 6020 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d17100055	ICSA				04/17/15 15:59	1.0	11 1	8:FE=310000
106	15d17100056	ICSAB				04/17/15 16:03	1.0	12 1	10:CA=270000
107	15d17100057	X	RINSE			04/17/15 16:08	1.0	1	
108	15d17100058	X	RINSE			04/17/15 16:13	1.0	1	
109	15d17100059	X	RINSE			04/17/15 16:18	1.0	1	
110	15d17100060	X	RINSE			04/17/15 16:23	1.0	1	
111	15d17100061	X	RINSE			04/17/15 16:28	1.0	1	
112	15d17100062	X	RINSE			04/17/15 16:33	1.0	1	
113	15d17100063	X	RINSE			04/17/15 16:38	1.0	1	
114	15d17100064	X	RINSE			04/17/15 16:43	1.0	1	

CRT 04/20/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 106.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015154524

Date : 04/17/15
 Sequence : MET26 15d17h00

Reference : 15d17h00004
 Analyzed : 04/17/15 07:38

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	112485	303675	34509	236448	62158	17130	651653	701152	596632	1014322
		LOWER LIMIT	33746	91103	10353	70934	18647	5139	195496	210346	178990	304297
		UPPER LIMIT	134982	364410	41411	283738	74590	20556	781984	841382	715958	1217186
015	ICB		112798	304346	34452	227026	60973	17081	652261	702636	594809	1028178
017	ICSA		88192	265280	30598	217113	56542	17688	523441	540154	523288	863868
018	ICSAB		81483	246209	28720	203592	54188	16654	497556	513748	493160	851042
024	BLANK	QC784300	94489	264147	30993	195592	51813	14966	572480	620157	525477	893813
025	BLANK	QC784301	96229	268635	31212	204068	53756	15107	578016	628444	533112	904132
026	BS	QC784302	95964	270797	31082	207251	54388	15388	575582	623902	529443	909846
027	BSD	QC784303	95637	266392	31073	205652	54091	15204	571099	618537	526152	904112
029	BLANK	QC784300	96886	268117	31274	205781	53738	15097	574871	627472	531511	905569
030	BLANK	QC784301	96466	265119	31347	205233	54181	15200	574781	624029	527240	900439
031	CCV		91728	260876	30735	203168	53232	14885	552065	592639	516810	884753
033	CCB		99089	270340	31286	207872	54872	15394	587009	643260	536906	921958
034	MSS	265932-004	77715	243196	26363	182227	45336	12486	486115	490906	467504	806867
035	MS	QC784304	76631	240502	26918	186218	45929	13016	485595	495267	474565	814949
036	MSD	QC784305	77856	258282	28807	185006	46651	13390	508174	512906	496566	851271
037	MSS	266019-005	82760	247349	28414	192269	50362	13692	529646	568971	492772	832066
038	MS	QC784306	87751	252413	28300	196724	50891	13882	537998	574033	501757	865451
039	MSD	QC784307	85512	247208	27518	187125	49441	13673	523097	560564	491691	858980
040	SER	QC784308	89007	250884	28146	190305	51371	14101	546326	587927	502164	863583
041	PDS	QC784309	88065	253655	25983	187635	49159	13037	525784	559838	492228	861312
042	MSS	266019-005	90456	252297	26412	156442	44825	13710	549633	598645	501021	873699
043	SER	QC784308	90899	249805	28212	190121	50768	14088	545566	590770	499463	847526
044	CCV		93358	266746	29456	193961	50538	14379	560890	594935	525504	900811
046	CCB		89545	236910	28736	198498	51559	14048	520158	568444	473412	823316
047	PDS	QC784309	94039	261125	27648	191314	50265	13727	549851	590035	509368	885275
048	SAMPLE	265932-001	79664	228497	26178	178264	45889	12706	473339	494890	449693	783032
049	SAMPLE	265932-003	78302	240966	26279	182054	46338	13556	481848	193422 *	623720	817793
050	SAMPLE	265932-003	90899	249325	27489	187762	49941	13632	539862	591243	498135	874300
053	SAMPLE	265994-001	104056	313046	37755	232121	60438	17157	602004	614079	578095	951060
054	CCV		124661	350831	38996	260418	68103	19110	697984	808461	667266	1114439
056	CCB		126865	342737	39544	264029	68914	18929	704819	741117	652440	1101653
057	ICSA		106798	318293	35926	246420	62906	19851	603096	672824	605162	1018321
058	ICSAB		93084	284927	33537	234611	60783	18738	551622	614378	548142	925968
061	BLANK	QC784570	101750	289765	35232	218881	58507	16399	601238	653678	561012	944940
062	BS	QC784571	98821	279328	35274	229409	58967	16382	579608	636130	539306	917004
063	BSD	QC784572	101601	287185	35254	228328	58475	16493	595950	649635	553211	947442
064	CCV		97091	280900	34488	223517	56920	16064	568044	617933	538491	923700
066	CCB		103150	290740	35445	229085	59016	16459	607782	661375	561626	956307
067	MSS	266087-001	92962	269979	33179	222874	56552	15582	547365	577923	515226	880525
068	MS	QC784573	90042	257602	33391	215912	54505	15649	518028	564389	493107	845034
069	MSD	QC784574	100833	288546	33539	215902	55094	15947	578486	617874	548238	943948
070	SER	QC784575	100012	281859	33880	221352	58731	16327	584101	628501	540748	919280
071	PDS	QC784576	95285	275884	32978	239959	58471	15261	544018	597986	519984	895329
072	SAMPLE	266068-003	106438	292033	33934	225035	58284	16145	600131	665480	554877	950949
073	SAMPLE	266068-005	107740	295520	33778	223409	58000	16181	608720	673262	560806	964831
074	SAMPLE	266087-002	104958	291553	34733	232446	59098	16581	598064	645452	553759	952094
075	SAMPLE	266087-003	101260	291238	33577	220172	56943	15951	586581	637450	544959	936986
076	SAMPLE	266087-004	103104	285924	33620	222676	57828	16244	592574	637923	546312	948422
077	CCV		110506	297679	36444	231228	59379	17021	610595	662364	572477	989569

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015154524

Date : 04/17/15
 Sequence : MET26 15d17h00

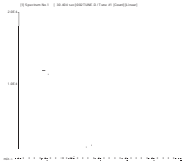
Reference : 15d17h00004
 Analyzed : 04/17/15 07:38

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
079	CCB		114255	305587	34450	248060	63273	16519	636580	691490	585027	1020517
080	SAMPLE	266087-006	106768	298072	33642	218455	57415	16113	596759	648757	552661	963678
081	SAMPLE	266087-007	112017	308332	34159	221308	57216	16020	633704	687432	585243	1005656
082	SAMPLE	266087-009	104622	294807	32655	213567	55224	15744	593599	638623	557319	964018
083	SAMPLE	266091-002	106014	293388	32172	221271	55616	15467	572817	590576	554173	946606
084	SAMPLE	266091-004	126463	324823	32284	221347	58574	16241	657056	710675	606547	1051871
085	SAMPLE	266091-005	122591	321198	33486	240199	63393	16787	652610	704048	602390	1045448
086	SAMPLE	266091-006	125320	350071	36227	234189	58616	17151	651284	602057	643936	1030363
087	SAMPLE	266091-007	124927	384207 *	42035 *	278379	67286	19127	709563	634797	705034	1112220
088	SAMPLE	266091-008	96443	299819	37270	260461	65841	17063	633358	672811	588679	999944
089	SAMPLE	266091-009	88994	285343	35545	232361	59142	16396	580909	621123	547442	929504
090	CCV		96280	297098	35951	234568	59344	16979	611549	646705	580399	997753
092	CCB		93910	280447	34627	225620	58154	16291	588058	636474	547785	918549
093	SAMPLE	266091-010	89818	270511	33180	215785	55667	15637	553117	588479	521248	886789
094	SAMPLE	266091-012	94865	285257	34257	220301	57196	16188	597067	642372	555717	936111
095	CCV		96154	292348	36116	230327	58798	16845	594809	631091	567207	958412
097	CCB		101569	294784	35870	238735	61572	17012	619023	663783	572295	959423
098	ICSA		85811	277038	33481	225242	57577	18561	531669	546905	534717	899151
099	ICSAB		85059	273326	31969	219557	56939	17899	533339	549791	536271	900695
102	CCV		92489	279245	32022	232426	58910	15482	579458	613252	545460	935336
104	CCB		95103	279544	33329	220071	57403	15726	592389	642183	548361	933170
105	ICSA		73507	237425	29495	157606	43654	16363	460903	478843	464079	786901
106	ICSAB		77170	246259	28916	198630	51503	16070	490189	504716	485907	835026

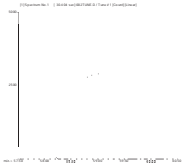
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D17h00.B\002TUNE.D
 Date Acquired: Apr 17 2015 07:28 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

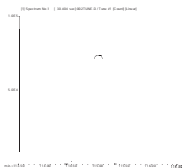
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	10839	10967	10969	11195	10773	0.23	5.00	
59 Co	16781	16626	16799	16605	16526	1.51	5.00	
115 In	366874	366447	372198	370343	374536	1.12	5.00	
205 Tl	21859	21868	21778	21811	21485	1.50	5.00	



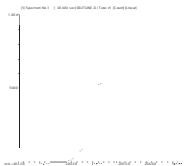
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266019 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015154524001
 Units : ug/L
 Date : 17-APR-2015 07:38
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d17h00005	1015154524005	17-APR-2015 07:43	S27043, S26751	
L2	15d17h00006	1015154524006	17-APR-2015 07:47	S27044, S26751	
L3	15d17h00007	1015154524007	17-APR-2015 07:52	S27045, S26751	
L4	15d17h00008	1015154524008	17-APR-2015 07:57	S27046, S26751	
L5	15d17h00009	1015154524009	17-APR-2015 08:01	S27041, S26751	
L6	15d17h00010	1015154524010	17-APR-2015 08:08	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0054	0.0055	0.0055	0.0046	0.0045	0.0045	BLNK	-0.5249	221.861		0.0050	1.000	0.995	
Antimony	A	0.0030	0.0030	0.0029	0.0028	0.0029	0.0029	BLNK	-0.0191	350.085		0.0029	1.000	0.995	
Barium	A	7.3E-4	6.1E-4	6.9E-4	6.7E-4	6.9E-4	6.8E-4	BLNK	-0.0145	1464.36		6.8E-4	1.000	0.995	
Beryllium	A	0.0038	0.0037	0.0038	0.0038	0.0038	0.0039	BLNK	-0.0153	257.404		0.0038	1.000	0.995	
Cadmium	A	8.4E-4	7.8E-4	7.2E-4	7.4E-4	7.4E-4	7.3E-4	BLNK	-0.0047	1365.09		7.6E-4	1.000	0.995	
Calcium	A	6.3E-4	3.0E-4	2.3E-4	1.9E-4	1.8E-4	1.7E-4	BLNK	-27.198	5938.57		2.8E-4	0.998	0.995	
Lead	A	0.0159	0.0083	0.0076	0.0068	0.0065	0.0063	BLNK	-0.1420	157.027		0.0086	1.000	0.995	
Magnesium	A	0.0068	0.0050	0.0046	0.0038	0.0037	0.0036	BLNK	-6.3703	274.163		0.0046	1.000	0.995	
Molybdenum	A	0.0035	0.0023	0.0023	0.0021	0.0021	0.0021	BLNK	-0.0771	465.697		0.0024	1.000	0.995	
Potassium	A	0.1047	0.0262	0.0159	0.0060	0.0051	0.0050	BLNK	-205.98	201.745		0.0272	1.000	0.995	
Silver	A	0.0041	0.0033	0.0035	0.0034	0.0034	0.0033	BLNK	-0.0056	298.062		0.0035	1.000	0.995	
Thallium	A	0.0083	0.0072	0.0070	0.0069	0.0071	0.0072	BLNK	-0.0091	139.942		0.0073	1.000	0.995	
Arsenic	E	0.0091	0.0060	0.0057	0.0053	0.0052	0.0050	BLNK	-0.1185	198.292		0.0061	1.000	0.995	
Chromium	E	0.0633	0.0311	0.0257	0.0223	0.0216	0.0204	BLNK	-0.1998	48.5186		0.0307	0.999	0.995	
Cobalt	E	0.0440	0.0371	0.0351	0.0332	0.0324	0.0304	BLNK	-0.0338	32.4714		0.0354	0.999	0.995	
Copper	E	0.7928	0.1665	0.0923	0.0302	0.0233	0.0215	BLNK	-4.4859	47.0674		0.1878	0.999	0.995	
Manganese	E	0.0328	0.0175	0.0165	0.0149	0.0146	0.0139	BLNK	-0.1575	71.3080		0.0184	0.999	0.995	
Nickel	E	0.0196	0.0120	0.0108	0.0091	0.0086	0.0080	BLNK	-0.1449	122.765		0.0114	0.999	0.995	
Sodium	E	0.0234	0.0089	0.0067	0.0049	0.0043	0.0040	BLNK	-47.266	247.777		0.0087	0.999	0.995	
Vanadium	E	0.0607	0.0267	0.0232	0.0182	0.0179	0.0171	BLNK	-0.2712	57.9786		0.0273	0.999	0.995	
Zinc	E		0.0158	0.0056	0.0046	0.0043	0.0040	BLNK	-0.2807	246.665		0.0069	0.998	0.995	
Iron	H	0.0130	0.0089	0.0084	0.0066	0.0065	0.0062	BLNK	-8.2896	159.480		0.0083	1.000	0.995	
Selenium	H	0.0011	9.8E-4	0.0011	9.9E-4	9.6E-4	9.4E-4	BLNK	-0.0152	1061.23		0.0010	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	15	50.000	20	100.00	21	1000.0	3	10000	0	20000	0
Antimony	A	0.1000	-15	0.5000	2	1.0000	-2	10.000	-1	100.00	0	200.00	0
Barium	A	0.1000	-8	0.5000	-14	1.0000	0	10.000	-1	100.00	1	200.00	0
Beryllium	A	0.1000	-17	0.5000	-7	1.0000	-4	10.000	-3	100.00	-1	200.00	0
Cadmium	A	0.1000	10	0.5000	6	1.0000	-2	10.000	1	100.00	1	200.00	0
Calcium	A	10.000	5	50.000	23	100.00	10	1000.0	8	10000	8	20000	-2
Lead	A	0.1000	8	0.5000	2	1.0000	6	10.000	5	100.00	2	200.00	-1
Magnesium	A	10.000	23	50.000	24	100.00	20	1000.0	5	10000	0	20000	0
Molybdenum	A	0.1000	-15	0.5000	-7	1.0000	-1	10.000	-3	100.00	0	200.00	0
Potassium	A	10.000	-49	50.000	17	100.00	15	1000.0	1	10000	1	20000	0
Silver	A	0.1000	18	0.5000	-1	1.0000	5	10.000	3	100.00	2	200.00	0
Thallium	A	0.0500	-2	0.2500	-2	0.5000	-4	5.0000	-3	50.000	-1	100.00	0
Arsenic	E	0.1000	-39	0.5000	-4	1.0000	1	10.000	4	100.00	3	200.00	-1
Chromium	E	0.1000	8	0.5000	11	1.0000	5	10.000	6	100.00	5	200.00	-1
Cobalt	E	0.1000	9	0.5000	14	1.0000	11	10.000	7	100.00	5	200.00	-1
Copper	E	0.1000	-854	0.5000	-213	1.0000	-114	10.000	-3	100.00	5	200.00	-1
Manganese	E	0.1000	-23	0.5000	-7	1.0000	2	10.000	5	100.00	4	200.00	-1
Nickel	E	0.1000	-4	0.5000	19	1.0000	18	10.000	10	100.00	6	200.00	-1
Sodium	E	10.000	6	50.000	26	100.00	19	1000.0	18	10000	5	20000	-1
Vanadium	E	0.1000	-19	0.5000	1	1.0000	7	10.000	3	100.00	4	200.00	-1
Zinc	E			0.5000	233	1.0000	11	10.000	10	100.00	6	200.00	-2
Iron	H	10.000	25	50.000	25	100.00	26	1000.0	4	10000	3	20000	-1
Selenium	H	0.1000	6	0.5000	1	1.0000	13	10.000	5	100.00	2	200.00	-1

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015154524001

Cal Date : 17-APR-2015

ICV 1015154524012 (15d17h00012 17-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10120	ug/L	1	10	
Antimony	A	100.0	101.4	ug/L	1	10	
Barium	A	100.0	101.3	ug/L	1	10	
Beryllium	A	100.0	101.0	ug/L	1	10	
Cadmium	A	100.0	101.3	ug/L	1	10	
Calcium	A	10000	10810	ug/L	8	10	
Lead	A	100.0	101.7	ug/L	2	10	
Magnesium	A	10000	10160	ug/L	2	10	
Molybdenum	A	100.0	100.7	ug/L	1	10	
Potassium	A	10000	10120	ug/L	1	10	
Silver	A	100.0	102.0	ug/L	2	10	
Thallium	A	50.00	50.01	ug/L	0	10	
Arsenic	E	100.0	103.8	ug/L	4	10	
Chromium	E	100.0	103.7	ug/L	4	10	
Cobalt	E	100.0	104.4	ug/L	4	10	
Copper	E	100.0	103.7	ug/L	4	10	
Manganese	E	100.0	103.8	ug/L	4	10	
Nickel	E	100.0	105.2	ug/L	5	10	
Sodium	E	10000	10500	ug/L	5	10	
Vanadium	E	100.0	103.5	ug/L	4	10	
Zinc	E	100.0	106.4	ug/L	6	10	
Iron	H	10000	10120	ug/L	1	10	
Selenium	H	100.0	100.2	ug/L	0	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015154524015
Cal : 1015154524001

File : 15d17h00015
Caldate : 17-APR-2015

IDF : 1.0
Time : 17-APR-2015 08:34

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	---	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	112798	0.28
Scandium	A	303675	304346	0.22
Scandium	E	34509	34452	-0.17
Scandium	H	236448	227026	-3.98
Germanium	H	62158	60973	-1.91
Germanium	E	17130	17081	-0.29
Indium	A	651653	652261	0.09
Bismuth	A	701152	702636	0.21
Yttrium	A	596632	594809	-0.31
Terbium	A	1014322	1028178	1.37

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015154524017 File : 15d17h00017
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26727, S26751

IDF : 1.0
 Time : 17-APR-2015 08:43

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.5004	0.1000	ug/L	
Barium	A	1.859	0.1000	ug/L	
Beryllium	A	[0.02360]	0.1000	ug/L	
Cadmium	A	4.261	0.1000	ug/L	
Lead	A	0.2115	0.1000	ug/L	
Silver	A	[0.08620]	0.1000	ug/L	
Thallium	A	[0.02060]	0.05000	ug/L	
Arsenic	E	0.6408	0.1000	ug/L	
Chromium	E	0.9097	0.1000	ug/L	
Cobalt	E	1.267	0.1000	ug/L	
Copper	E	4.285	0.1000	ug/L	
Manganese	E	7.789	0.1000	ug/L	
Nickel	E	1.266	0.1000	ug/L	
Vanadium	E	0.2347	0.1000	ug/L	
Zinc	E	1.025	0.5000	ug/L	
Selenium	H	[0.08070]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	99930	ug/L	100
Calcium	A	300000	284800	ug/L	95
Magnesium	A	100000	97860	ug/L	98
Molybdenum	A	2000	1979	ug/L	99
Potassium	A	100000	100400	ug/L	100
Sodium	E	250000	254600	ug/L	102
Phosphorus	E	100000	104600	ug/L	105
Iron	H	250000	241400	ug/L	97

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	88192	-21.60
Scandium	A	303675	265280	-12.64
Scandium	E	34509	30598	-11.33
Scandium	H	236448	217113	-8.18
Germanium	H	62158	56542	-9.04
Germanium	E	17130	17688	3.26
Indium	A	651653	523441	-19.67
Bismuth	A	701152	540154	-22.96
Yttrium	A	596632	523288	-12.29
Terbium	A	1014322	863868	-14.83

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015154524018
 Cal : 1015154524001
 Standards: S26728, S26751
 File : 15d17h00018
 Caldate : 17-APR-2015
 IDF : 1.0
 Time : 17-APR-2015 08:48

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	101000	ug/L	1		
Cadmium	A	100.0	103.9	ug/L	4	20	
Calcium	A	300000	285300	ug/L	-5		
Magnesium	A	100000	99090	ug/L	-1		
Molybdenum	A	2000	1982	ug/L	-1		
Potassium	A	100000	101700	ug/L	2		
Silver	A	50.00	49.73	ug/L	-1	20	
Arsenic	E	100.0	94.15	ug/L	-6	20	
Chromium	E	200.0	207.6	ug/L	4	20	
Cobalt	E	200.0	202.1	ug/L	1	20	
Copper	E	200.0	202.7	ug/L	1	20	
Manganese	E	200.0	213.2	ug/L	7	20	
Nickel	E	200.0	198.8	ug/L	-1	20	
Sodium	E	250000	257000	ug/L	3		
Vanadium	E	200.0	212.3	ug/L	6	20	
Zinc	E	100.0	99.11	ug/L	-1	20	
Iron	H	250000	246100	ug/L	-2		
Selenium	H	100.0	97.61	ug/L	-2	20	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	236448	203592	-13.90
Scandium	A	303675	246209	-18.92
Scandium	E	34509	28720	-16.78
Germanium	H	62158	54188	-12.82
Germanium	E	17130	16654	-2.78
Indium	A	651653	497556	-23.65
Yttrium	A	596632	493160	-17.34

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524031.1 File : 15d17h00031 Time : 17-APR-2015 09:53
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0050	0.0045	10000	10040	ug/L	0	10	
Antimony	A	0.0029	0.0029	100.0	100.0	ug/L	0	10	
Barium	A	6.8E-4	6.9E-4	100.0	100.7	ug/L	1	10	
Beryllium	A	0.0038	0.0039	100.0	99.53	ug/L	0	10	
Cadmium	A	7.6E-4	7.4E-4	100.0	101.0	ug/L	1	10	
Calcium	A	2.8E-4	1.8E-4	10000	10690	ug/L	7	10	
Lead	A	0.0086	0.0066	100.0	103.5	ug/L	4	10	
Magnesium	A	0.0046	0.0037	10000	10080	ug/L	1	10	
Molybdenum	A	0.0024	0.0021	100.0	98.07	ug/L	-2	10	
Potassium	A	0.0272	0.0051	10000	10070	ug/L	1	10	
Silver	A	0.0035	0.0034	100.0	100.8	ug/L	1	10	
Thallium	A	0.0073	0.0071	50.00	49.72	ug/L	-1	10	
Arsenic	E	0.0061	0.0052	100.0	103.6	ug/L	4	10	
Chromium	E	0.0307	0.0211	100.0	102.3	ug/L	2	10	
Cobalt	E	0.0354	0.0317	100.0	102.8	ug/L	3	10	
Copper	E	0.1878	0.0225	100.0	101.4	ug/L	1	10	
Manganese	E	0.0184	0.0145	100.0	103.0	ug/L	3	10	
Nickel	E	0.0114	0.0084	100.0	103.3	ug/L	3	10	
Sodium	E	0.0087	0.0043	10000	10660	ug/L	7	10	
Vanadium	E	0.0273	0.0177	100.0	102.6	ug/L	3	10	
Zinc	E	0.0069	0.0042	100.0	103.4	ug/L	3	10	
Iron	H	0.0083	0.0065	10000	10300	ug/L	3	10	
Selenium	H	0.0010	9.7E-4	100.0	102.7	ug/L	3	10	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	91728	-18.45
Scandium	A	303675	260876	-14.09
Scandium	E	34509	30735	-10.94
Scandium	H	236448	203168	-14.07
Germanium	H	62158	53232	-14.36
Germanium	E	17130	14885	-13.11
Indium	A	651653	552065	-15.28
Bismuth	A	701152	592639	-15.48
Yttrium	A	596632	516810	-13.38
Terbium	A	1014322	884753	-12.77

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524033.1 File : 15d17h00033 Time : 17-APR-2015 10:03
 Cal : 1015154524001 Caldate : 17-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.08090]	0.1000	---	ug/L	!CCB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	99089	-11.91
Scandium	A	303675	270340	-10.98
Scandium	E	34509	31286	-9.34
Scandium	H	236448	207872	-12.09
Germanium	H	62158	54872	-11.72
Germanium	E	17130	15394	-10.13
Indium	A	651653	587009	-9.92
Bismuth	A	701152	643260	-8.26
Yttrium	A	596632	536906	-10.01
Terbium	A	1014322	921958	-9.11

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524044.1 File : 15d17h00044 Time : 17-APR-2015 10:55
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0050	0.0043	10000	9605	ug/L	-4	10	
Antimony	A	0.0029	0.0028	100.0	96.70	ug/L	-3	10	
Barium	A	6.8E-4	6.8E-4	100.0	98.88	ug/L	-1	10	
Beryllium	A	0.0038	0.0036	100.0	91.94	ug/L	-8	10	
Cadmium	A	7.6E-4	7.0E-4	100.0	95.60	ug/L	-4	10	
Calcium	A	2.8E-4	1.7E-4	10000	10240	ug/L	2	10	
Lead	A	0.0086	0.0063	100.0	98.96	ug/L	-1	10	
Magnesium	A	0.0046	0.0035	10000	9633	ug/L	-4	10	
Molybdenum	A	0.0024	0.0020	100.0	94.34	ug/L	-6	10	
Potassium	A	0.0272	0.0049	10000	9771	ug/L	-2	10	
Silver	A	0.0035	0.0032	100.0	96.16	ug/L	-4	10	
Thallium	A	0.0073	0.0069	50.00	47.98	ug/L	-4	10	
Arsenic	E	0.0061	0.0051	100.0	100.5	ug/L	1	10	
Chromium	E	0.0307	0.0207	100.0	100.3	ug/L	0	10	
Cobalt	E	0.0354	0.0310	100.0	100.7	ug/L	1	10	
Copper	E	0.1878	0.0267	100.0	121.2	ug/L	21	10	c+ ***
Manganese	E	0.0184	0.0140	100.0	99.34	ug/L	-1	10	
Nickel	E	0.0114	0.0082	100.0	100.5	ug/L	1	10	
Sodium	E	0.0087	0.0043	10000	10490	ug/L	5	10	
Vanadium	E	0.0273	0.0173	100.0	100.1	ug/L	0	10	
Zinc	E	0.0069	0.0041	100.0	100.4	ug/L	0	10	
Iron	H	0.0083	0.0063	10000	10070	ug/L	1	10	
Selenium	H	0.0010	9.3E-4	100.0	98.41	ug/L	-2	10	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	93358	-17.00
Scandium	A	303675	266746	-12.16
Scandium	E	34509	29456	-14.64
Scandium	H	236448	193961	-17.97
Germanium	H	62158	50538	-18.69
Germanium	E	17130	14379	-16.06
Indium	A	651653	560890	-13.93
Bismuth	A	701152	594935	-15.15
Yttrium	A	596632	525504	-11.92
Terbium	A	1014322	900811	-11.19

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524046.1 File : 15d17h00046 Time : 17-APR-2015 11:04
 Cal : 1015154524001 Caldate : 17-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	[0.05600]	0.1000	0.05000	ug/L	!CCB
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.07770]	0.1000	---	ug/L	!CCB
Potassium	A	30.28	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	22.28	0.1000	0.5000	ug/L	CCB ***
Manganese	E	0.4005	0.1000	0.05000	ug/L	CCB ***
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	49.62	10.00	15.00	ug/L	CCB ***
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	89545	-20.39
Scandium	A	303675	236910	-21.99
Scandium	E	34509	28736	-16.73
Scandium	H	236448	198498	-16.05
Germanium	H	62158	51559	-17.05
Germanium	E	17130	14048	-17.99
Indium	A	651653	520158	-20.18
Bismuth	A	701152	568444	-18.93
Yttrium	A	596632	473412	-20.65
Terbium	A	1014322	823316	-18.83

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524057 File : 15d17100007 Time : 17-APR-2015 12:09
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4461	0.1000	ug/L	
Barium	A	1.759	0.1000	ug/L	
Beryllium	A	[0.03020]	0.1000	ug/L	
Cadmium	A	4.113	0.1000	ug/L	
Lead	A	0.1947	0.1000	ug/L	
Silver	A	3.971	0.1000	ug/L	
Thallium	A	[0.01430]	0.05000	ug/L	
Arsenic	E	0.6011	0.1000	ug/L	
Chromium	E	0.9012	0.1000	ug/L	
Cobalt	E	1.149	0.1000	ug/L	
Copper	E	19.57	0.1000	ug/L	
Manganese	E	7.253	0.1000	ug/L	
Nickel	E	1.435	0.1000	ug/L	
Vanadium	E	0.2058	0.1000	ug/L	
Zinc	E	3.514	0.5000	ug/L	
Selenium	H	0.1684	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	95320	ug/L	95
Calcium	A	300000	266300	ug/L	89
Magnesium	A	100000	94150	ug/L	94
Molybdenum	A	2000	1860	ug/L	93
Potassium	A	100000	93790	ug/L	94
Sodium	E	250000	246800	ug/L	99
Phosphorus	E	100000	100600	ug/L	101
Iron	H	250000	234100	ug/L	94

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	106798	-5.06
Scandium	A	303675	318293	4.81
Scandium	E	34509	35926	4.11
Scandium	H	236448	246420	4.22
Germanium	H	62158	62906	1.20
Germanium	E	17130	19851	15.88
Indium	A	651653	603096	-7.45
Bismuth	A	701152	672824	-4.04
Yttrium	A	596632	605162	1.43
Terbium	A	1014322	1018321	0.39

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015154524058 File : 15d17100008
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 17-APR-2015 12:14

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	99480	ug/L	-1		
Cadmium	A	100.0	101.7	ug/L	2	20	
Calcium	A	300000	274800	ug/L	-8		
Magnesium	A	100000	97960	ug/L	-2		
Molybdenum	A	2000	1914	ug/L	-4		
Potassium	A	100000	97270	ug/L	-3		
Silver	A	50.00	49.37	ug/L	-1	20	
Arsenic	E	100.0	90.67	ug/L	-9	20	
Chromium	E	200.0	199.9	ug/L	0	20	
Cobalt	E	200.0	194.5	ug/L	-3	20	
Copper	E	200.0	207.8	ug/L	4	20	
Manganese	E	200.0	203.1	ug/L	2	20	
Nickel	E	200.0	190.9	ug/L	-5	20	
Sodium	E	250000	253100	ug/L	1		
Vanadium	E	200.0	203.2	ug/L	2	20	
Zinc	E	100.0	90.18	ug/L	-10	20	
Iron	H	250000	233400	ug/L	-7		
Selenium	H	100.0	94.65	ug/L	-5	20	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	236448	234611	-0.78
Scandium	A	303675	284927	-6.17
Scandium	E	34509	33537	-2.82
Germanium	H	62158	60783	-2.21
Germanium	E	17130	18738	9.39
Indium	A	651653	551622	-15.35
Yttrium	A	596632	548142	-8.13

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895158996

Instrument : MET16
 Method : EPA 6020

Begun : 04/20/15 09:56
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d20j00001	X	RINSE			04/20/15 09:56	1.0	1	
002	15d20j00002	TUN				04/20/15 10:03	1.0	2	
003	15d20j00003	X	RINSE			04/20/15 10:07	1.0	1	
004	15d20j00004	ICALBLK	CALBLANK			04/20/15 10:14	1.0	1	
005	15d20j00005	ICAL				04/20/15 10:20	1.0	3 1	
006	15d20j00006	ICAL				04/20/15 10:27	1.0	4 1	
007	15d20j00007	ICAL				04/20/15 10:33	1.0	5 1	
008	15d20j00008	ICAL				04/20/15 10:39	1.0	6 1	
009	15d20j00009	ICAL				04/20/15 10:46	1.0	7 1	
010	15d20j00010	ICAL				04/20/15 10:52	1.0	8 1	
011	15d20j00011	X	RINSE			04/20/15 10:59	1.0	1	
012	15d20j00012	ICV				04/20/15 11:05	1.0	9 1	
013	15d20j00013	XICV				04/20/15 11:12	1.0	9 1	
014	15d20j00014	XICV				04/20/15 11:18	1.0	9 1	
015	15d20j00015	XCRI				04/20/15 11:25	1.0	10 1	
016	15d20j00016	CRI				04/20/15 11:31	1.0	10 1	
017	15d20j00017	XICB				04/20/15 11:38	1.0	1	
018	15d20j00018	XICB				04/20/15 11:44	1.0	1	
019	15d20j00019	ICB				04/20/15 11:51	1.0	1	
020	15d20j00020	XCRI				04/20/15 11:57	1.0	10 1	
021	15d20j00021	ICSA				04/20/15 12:04	1.0	11 1	8:CA=290000
022	15d20j00022	ICSAB				04/20/15 12:10	1.0	12 1	11:CA=300000
023	15d20j00023	X	RINSE			04/20/15 12:17	1.0	1	
024	15d20j00024	X	RINSE			04/20/15 12:24	1.0	1	
025	15d20j00025	X	RINSE			04/20/15 12:30	1.0	1	
026	15d20j00026	X	RINSE			04/20/15 12:37	1.0	1	
027	15d20j00027	X	RINSE			04/20/15 12:43	1.0	1	
028	15d20j00028	BLANK	QC784823	Soil	222389	04/20/15 12:50	25.0	1	
029	15d20j00029	BS	QC784824	Soil	222389	04/20/15 12:56	25.0	1	
030	15d20j00030	BSD	QC784825	Soil	222389	04/20/15 13:02	25.0	1	
031	15d20j00031	MSS	266160-001	Soil	222389	04/20/15 13:09	25.0	1	1:MN=230
032	15d20j00032	MS	QC784826	Soil	222389	04/20/15 13:15	25.0	1	1:MN=220
033	15d20j00033	MSD	QC784827	Soil	222389	04/20/15 13:21	25.0	1	1:MN=230
034	15d20j00034	MSS	266160-001	Soil	222389	04/20/15 13:28	2500	1	
035	15d20j00035	CCV				04/20/15 13:34	1.0	13 1	
036	15d20j00036	X	XCCB			04/20/15 13:41	1.0	1	
037	15d20j00037	CCB				04/20/15 13:47	1.0	1	
038	15d20j00038	ICSA				04/20/15 13:54	1.0	11 1	8:CA=300000
039	15d20j00039	ICSAB				04/20/15 14:02	1.0	12 1	8:CA=300000
040	15d20j00040	X	RINSE			04/20/15 14:09	1.0	1	
041	15d20j00041	X	RINSE			04/20/15 14:15	1.0	1	
042	15d20j00042	X	RINSE			04/20/15 14:24	1.0	1	
043	15d20j00043	BLANK	QC784300	Filtrate	222258	04/20/15 14:31	5.0	1	
044	15d20j00044	BLANK	QC784301	Filtrate	222258	04/20/15 14:37	5.0	1	
045	15d20j00045	XBS	QC784302	Filtrate	222258	04/20/15 14:43	5.0	1	
046	15d20j00046	X	RINSE			04/20/15 14:50	1.0	1	
047	15d20j00047	BLANK	QC784570	Filtrate	222325	04/20/15 14:56	5.0	1	
048	15d20j00048	BS	QC784571	Filtrate	222325	04/20/15 15:03	5.0	1	
049	15d20j00049	BSD	QC784572	Filtrate	222325	04/20/15 15:09	5.0	1	
050	15d20j00050	CCV				04/20/15 15:15	1.0	13 1	
051	15d20j00051	X	XCCB			04/20/15 15:22	1.0	1	
052	15d20j00052	CCB				04/20/15 15:28	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895158996

Instrument : MET16
 Method : EPA 6020

Begun : 04/20/15 09:56
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d20j00053	SAMPLE	265932-001	Filtrate	222258	04/20/15 15:35	500.0	1	
054	15d20j00054	BS	QC784302	Filtrate	222258	04/20/15 15:45	5.0	1	
055	15d20j00055	BSD	QC784303	Filtrate	222258	04/20/15 15:51	5.0	1	
056	15d20j00056	SAMPLE	265932-003	Filtrate	222258	04/20/15 15:58	500.0	1	
057	15d20j00057	MSS	265932-004	Filtrate	222258	04/20/15 16:04	500.0	1	
058	15d20j00058	SAMPLE	266019-003	Filtrate	222258	04/20/15 16:10	500.0	1	
059	15d20j00059	MSS	266019-005	Filtrate	222258	04/20/15 16:17	500.0	1	
060	15d20j00060	SER	QC784308	Filtrate	222258	04/20/15 16:23	2500	1	
061	15d20j00061	PDS	QC784309	Filtrate	222258	04/20/15 16:29	500.0	14 15 16 1	
062	15d20j00062	X	RINSE			04/20/15 16:36	1.0	1	
063	15d20j00063	MSS	266087-001	Filtrate	222325	04/20/15 16:42	500.0	1	
064	15d20j00064	CCV				04/20/15 16:49	1.0	13 1	
065	15d20j00065	X	XCCB			04/20/15 16:55	1.0	1	
066	15d20j00066	CCB				04/20/15 17:02	1.0	1	
067	15d20j00067	SER	QC784575	Filtrate	222325	04/20/15 17:08	2500	1	
068	15d20j00068	PDS	QC784576	Filtrate	222325	04/20/15 17:14	500.0	14 15 16 1	
069	15d20j00069	SAMPLE	266091-004	Filtrate	222325	04/20/15 17:21	500.0	1	
070	15d20j00070	SAMPLE	266087-009	Filtrate	222325	04/20/15 17:27	500.0	1	
071	15d20j00071	SAMPLE	266091-002	Filtrate	222325	04/20/15 17:34	500.0	1	
072	15d20j00072	SAMPLE	266091-009	Filtrate	222325	04/20/15 17:40	500.0	1	
073	15d20j00073	SAMPLE	266091-010	Filtrate	222325	04/20/15 17:47	500.0	1	
074	15d20j00074	X	RINSE			04/20/15 17:53	1.0	1	
075	15d20j00075	BLANK	QC784945	Filtrate	222114	04/20/15 17:59	5.0	1	
076	15d20j00076	CCV				04/20/15 18:06	1.0	13 1	
077	15d20j00077	X	XCCB			04/20/15 18:12	1.0	1	
078	15d20j00078	CCB				04/20/15 18:19	1.0	1	
079	15d20j00079	MSS	265932-004	Filtrate	222258	04/20/15 18:25	5.0	1	4:NA=780000
080	15d20j00080	X	RINSE			04/20/15 18:32	1.0	1	
081	15d20j00081	MS	QC784304	Filtrate	222258	04/20/15 18:38	5.0	1	4:NA=720000
082	15d20j00082	X	RINSE			04/20/15 18:45	1.0	1	
083	15d20j00083	MSD	QC784305	Filtrate	222258	04/20/15 18:51	5.0	1	4:NA=740000
084	15d20j00084	X	RINSE			04/20/15 18:58	1.0	1	
085	15d20j00085	MSS	266019-005	Filtrate	222258	04/20/15 19:05	5.0	1	4:NA=34000
086	15d20j00086	X	RINSE			04/20/15 19:11	1.0	1	
087	15d20j00087	MS	QC784306	Filtrate	222258	04/20/15 19:18	5.0	1	4:NA=33000
088	15d20j00088	X	RINSE			04/20/15 19:24	1.0	1	
089	15d20j00089	MSD	QC784307	Filtrate	222258	04/20/15 19:30	5.0	1	4:NA=34000
090	15d20j00090	X	RINSE			04/20/15 19:37	1.0	1	
091	15d20j00091	SER	QC784308	Filtrate	222258	04/20/15 19:43	25.0	1	
092	15d20j00092	X	RINSE			04/20/15 19:50	1.0	1	
093	15d20j00093	PDS	QC784309	Filtrate	222258	04/20/15 19:56	5.0	14 15 16 1	1:NA=36000
094	15d20j00094	X	RINSE			04/20/15 20:03	1.0	1	
095	15d20j00095	SAMPLE	265932-001	Filtrate	222258	04/20/15 20:09	5.0	1	4:NA=170000
096	15d20j00096	X	RINSE			04/20/15 20:16	1.0	1	
097	15d20j00097	SAMPLE	265932-003	Filtrate	222258	04/20/15 20:22	5.0	1	7:NA=300000
098	15d20j00098	CCV				04/20/15 20:29	1.0	13 1	
099	15d20j00099	X	XCCB			04/20/15 20:36	1.0	1	
100	15d20j00100	CCB				04/20/15 20:42	1.0	1	
101	15d20j00101	X	RINSE			04/20/15 20:49	1.0	1	
102	15d20j00102	SAMPLE	265994-001	Filtrate	222258	04/20/15 20:55	5.0	1	4:NA=590000
103	15d20j00103	X	RINSE			04/20/15 21:02	1.0	1	
104	15d20j00104	SAMPLE	266019-003	Filtrate	222258	04/20/15 21:08	5.0	1	4:CA=37000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895158996

Instrument : MET16
 Method : EPA 6020

Begun : 04/20/15 09:56
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d20j00105	X	RINSE			04/20/15 21:15	1.0	1	
106	15d20j00106	MSS	266087-001	Filtrate	222325	04/20/15 21:21	5.0	1	4:CA=34000
107	15d20j00107	X	RINSE			04/20/15 21:28	1.0	1	
108	15d20j00108	MS	QC784573	Filtrate	222325	04/20/15 21:34	5.0	1	4:CA=34000
109	15d20j00109	X	RINSE			04/20/15 21:41	1.0	1	
110	15d20j00110	MSD	QC784574	Filtrate	222325	04/20/15 21:47	5.0	1	4:CA=35000
111	15d20j00111	X	RINSE			04/20/15 21:54	1.0	1	
112	15d20j00112	SER	QC784575	Filtrate	222325	04/20/15 22:00	25.0	1	
113	15d20j00113	PDS	QC784576	Filtrate	222325	04/20/15 22:07	5.0	14 15 16 1	
114	15d20j00114	X	RINSE			04/20/15 22:13	1.0	1	
115	15d20j00115	SAMPLE	266068-003	Filtrate	222325	04/20/15 22:19	5.0	1	
116	15d20j00116	SAMPLE	266068-005	Filtrate	222325	04/20/15 22:26	5.0	1	
117	15d20j00117	SAMPLE	266087-002	Filtrate	222325	04/20/15 22:32	5.0	1	
118	15d20j00118	CCV				04/20/15 22:39	1.0	13 1	
119	15d20j00119	X	XCCB			04/20/15 22:45	1.0	1	
120	15d20j00120	CCB				04/20/15 22:52	1.0	1	
121	15d20j00121	SAMPLE	266087-003	Filtrate	222325	04/20/15 22:58	5.0	1	
122	15d20j00122	ICSA				04/20/15 23:04	1.0	11 1	8:CA=300000
123	15d20j00123	ICSAB				04/20/15 23:11	1.0	12 1	11:CA=310000
124	15d20j00124	X	RINSE			04/20/15 23:18	1.0	1	
125	15d20j00125	X	RINSE			04/20/15 23:24	1.0	1	
126	15d20j00126	SAMPLE	266087-004	Filtrate	222325	04/20/15 23:31	5.0	1	
127	15d20j00127	X	RINSE			04/20/15 23:37	1.0	1	
128	15d20j00128	SAMPLE	266087-006	Filtrate	222325	04/20/15 23:44	5.0	1	
129	15d20j00129	SAMPLE	266087-007	Filtrate	222325	04/20/15 23:50	5.0	1	
130	15d20j00130	SAMPLE	266087-009	Filtrate	222325	04/20/15 23:56	5.0	1	4:CA=57000
131	15d20j00131	X	RINSE			04/21/15 00:03	1.0	1	
132	15d20j00132	SAMPLE	266091-002	Filtrate	222325	04/21/15 00:09	5.0	1	4:CA=130000
133	15d20j00133	X	RINSE			04/21/15 00:16	1.0	1	
134	15d20j00134	SAMPLE	266091-004	Filtrate	222325	04/21/15 00:22	5.0	1	1:NA=20000
135	15d20j00135	SAMPLE	266091-005	Filtrate	222325	04/21/15 00:29	5.0	1	1:NA=21000
136	15d20j00136	SAMPLE	266091-006	Filtrate	222325	04/21/15 00:35	5.0	1	4:NA=1500000
137	15d20j00137	SAMPLE	266091-007	Filtrate	222325	04/21/15 00:42	5.0	1	4:NA=1500000
138	15d20j00138	CCV				04/21/15 00:49	1.0	13 1	
139	15d20j00139	X	XCCB			04/21/15 00:55	1.0	1	
140	15d20j00140	CCB				04/21/15 01:02	1.0	1	
141	15d20j00141	SAMPLE	266091-008	Filtrate	222325	04/21/15 01:08	5.0	1	
142	15d20j00142	SAMPLE	266091-009	Filtrate	222325	04/21/15 01:15	5.0	1	1:NA=64000
143	15d20j00143	X	RINSE			04/21/15 01:21	1.0	1	
144	15d20j00144	SAMPLE	266091-010	Filtrate	222325	04/21/15 01:28	5.0	1	4:NA=31000
145	15d20j00145	X	RINSE			04/21/15 01:34	1.0	1	
146	15d20j00146	SAMPLE	266091-012	Filtrate	222325	04/21/15 01:41	5.0	1	
147	15d20j00147	X	RINSE			04/21/15 01:47	1.0	1	
148	15d20j00148	CCV				04/21/15 01:54	1.0	13 1	
149	15d20j00149	X	XCCB			04/21/15 02:00	1.0	1	
150	15d20j00150	CCB				04/21/15 02:07	1.0	1	
151	15d20j00151	ICSA				04/21/15 02:13	1.0	11 1	8:CA=290000
152	15d20j00152	ICSAB				04/21/15 02:20	1.0	12 1	11:CA=300000
153	15d20j00153	X	RINSE			04/21/15 02:26	1.0	1	
154	15d20j00154	X	RINSE			04/21/15 02:33	1.0	1	
155	15d20j00155	X	RINSE			04/21/15 02:39	1.0	1	
156	15d20j00156	X	RINSE			04/21/15 02:46	1.0	1	

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895158996

Date : 04/20/15
 Sequence : MET16 15d20j00

Reference : 15d20j00004
 Analyzed : 04/20/15 10:14

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	1236548	1232744	39135	113610	24397	19858	1791695	2228668	1708777	3181686
		LOWER LIMIT	370964	369823	11741	34083	7319	5957	537509	668600	512633	954506
		UPPER LIMIT	1483858	1479293	46962	136332	29276	23830	2150034	2674402	2050532	3818023
019	ICB		1217173	1333501	40844	86614	19117	21722	1882086	2247870	1810035	3274589
021	ICSA		978094	1177257	41755	114822	18009	18536	1400122	1525446	1520649	2603140
022	ICSAB		1016695	1145136	37010	101027	19446	17734	1391981	1523546	1510625	2601560
028	BLANK	QC784823	1128304	1208324	38782	94994	20524	20669	1797910	2230237	1727566	3223742
029	BS	QC784824	1132820	1170838	39692	88890	20107	20496	1766585	2199918	1698809	3191710
030	BSD	QC784825	1160792	1213788	39783	101766	21691	20753	1807526	2234193	1736437	3231182
031	MSS	266160-001	1095370	1193247	39852	109631	22321	19852	1714763	2156562	1706205	3152006
032	MS	QC784826	1111373	1220211	40175	103795	21818	20300	1713468	2113858	1730238	3125150
033	MSD	QC784827	1108303	1250103	39712	96300	20759	20320	1734268	2129771	1748435	3159891
034	MSS	266160-001	1123479	1154847	38522	95470	21660	20846	1781868	2206248	1697725	3161603
035	CCV		1148028	1219498	41001	107153	21802	20898	1727313	2071191	1700907	3132181
037	CCB		1112574	1181138	36861	99221	21509	20084	1758224	2183152	1677816	3143881
038	ICSA		997450	1119182	38674	109832	20015	17946	1332893	1466993	1444600	2491415
039	ICSAB		1066847	1172969	40105	105797	20460	18039	1361082	1479739	1487682	2548302
043	BLANK	QC784300	1191510	1180895	38328	95254	20805	20268	1745478	2159231	1675549	3111367
044	BLANK	QC784301	1162555	1176306	38690	95462	20796	20158	1726661	2153123	1668251	3107742
047	BLANK	QC784570	1121226	1152329	37917	98509	22016	20294	1711524	2145250	1626343	3070405
048	BS	QC784571	1124861	1165050	38909	112656	23060	19724	1688043	2104475	1622411	3064781
049	BSD	QC784572	1167379	1399982	37430	105381	23183	19898	1787840	2223007	1711925	3243007
050	CCV		1122961	1198997	39712	107542	23587	19899	1646257	2006810	1616798	3023780
052	CCB		1136304	1129225	38028	101010	22224	20108	1698192	2124272	1624053	3024444
053	SAMPLE	265932-001	1123237	1138109	36586	106437	23175	20028	1713846	2150700	1617276	3071308
054	BS	QC784302	1110780	1171370	39642	113803	21553	19863	1677452	2113164	1609671	3047347
055	BSD	QC784303	1084740	1157851	40173	101484	20596	19725	1675958	2103157	1602599	3048171
056	SAMPLE	265932-003	1143453	1155586	38145	86916	20241	20242	1705102	2127904	1628558	3068095
057	MSS	265932-004	1169106	1189314	38370	92430	20865	20543	1733707	2126692	1653637	3098103
058	SAMPLE	266019-003	1243964	1290433	38649	92944	20921	20545	1863811	2331425	1772702	3345338
059	MSS	266019-005	1144510	1136736	38038	90700	20667	20326	1714979	2172869	1624866	3086936
060	SER	QC784308	1155935	1163180	38368	94166	20225	20177	1739038	2202831	1643103	3121248
061	PDS	QC784309	1156647	1193685	40696	102883	20226	19869	1680096	2089656	1622897	3070495
063	MSS	266087-001	1157742	1140969	38423	86493	19372	20672	1731757	2191482	1638853	3094502
064	CCV		1127545	1180810	39676	95652	18862	19961	1652210	2013070	1615367	3022681
066	CCB		1159560	1171688	38203	82056	18125	20581	1751832	2206393	1660085	3126433
067	SER	QC784575	1135751	1162001	39804	80844	16655	20626	1745743	2208051	1654342	3122676
068	PDS	QC784576	1145632	1212851	39359	73854	15650	20302	1705948	2092289	1655978	3092417
069	SAMPLE	266091-004	1144883	1173176	38925	68614	15862	20902	1759373	2206015	1670861	3146588
070	SAMPLE	266087-009	1153377	1199236	38655	66954	14846	20908	1785149	2220172	1690259	3177107
071	SAMPLE	266091-002	1137565	1137167	38635	70033	14820	20747	1754428	2169403	1663890	3132891
072	SAMPLE	266091-009	1143015	1175764	39904	73939	14816	20811	1757540	2198105	1656853	3122980
073	SAMPLE	266091-010	1137458	1152009	39189	69092	14680	20615	1763209	2216786	1665805	3142132
075	BLANK	QC784945	1184090	1205351	39428	69883	14482	20988	1830078	2299116	1734513	3266801
076	CCV		1081795	1153613	43278	79162	14543	20439	1610089	1941645	1569349	2907136
078	CCB		1139120	1172804	39868	66435	14175	21398	1795062	2225649	1698772	3172540
079	MSS	265932-004	1171663	1283570	42459	68087	12356	19697	1532567	1536360	1652471	2668142
081	MS	QC784304	1214232	1360217	47743 *	70480	11304	20484	1515758	1521888	1641568	2661657
083	MSD	QC784305	1185535	1226339	44571	69114	12094	19748	1418396	1417686	1539956	2479406
085	MSS	266019-005	1248977	1222285	41092	66789	13522	21001	1658492	1884082	1657672	2933833
087	MS	QC784306	1213179	1246064	40521	62057	12560	20619	1653135	1886193	1659818	2940022

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895158996

Date : 04/20/15
 Sequence : MET16 15d20j00

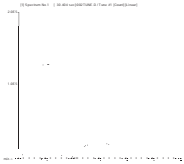
Reference : 15d20j00004
 Analyzed : 04/20/15 10:14

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
089	MSD	QC784307	1185622	1217423	40327	60275	12090	20684	1628623	1861819	1634001	2895809
091	SER	QC784308	1228718	1220661	39937	60967	12690	20999	1730275	2034227	1686706	3020937
093	PDS	QC784309	1134036	1222311	39639	60842	11764	19486	1612319	1842026	1621300	2870038
095	SAMPLE	265932-001	1199693	1272250	39026	55831	11198	19671	1628294	1760427	1678551	2871514
097	SAMPLE	265932-003	1124693	1279446	42253	60669	11187	20235	1542955	1641838	2167972 *	2781638
098	CCV		1259154	1303893	44635	54684	10730	22692	1797484	2057304	1793768	3164796
100	CCB		1247240	1260930	42135	49397	10278	22428	1839106	2161198	1793136	3166295
102	SAMPLE	265994-001	1306497	1422616	47051 *	56977	10271	22077	1687839	1664852	1797030	2868288
104	SAMPLE	266019-003	1339740	1429674	44854	53519	10369	22704	1856967	2028471	1890421	3222243
106	MSS	266087-001	1293982	1407471	44951	50936	9900	22719	1841086	2007632	1861951	3174929
108	MS	QC784573	924275	1006099	33281	40309	7846	17136	1376326	1568120	1374762	2447087
110	MSD	QC784574	945353	1035016	34428	37026	7480	17932	1424489	1636456	1429156	2542537
112	SER	QC784575	1072986	1125502	35613	41539	8877	19520	1616655	1887365	1579828	2815440
113	PDS	QC784576	1046290	1192017	37185	40788	8056	18809	1578769	1760841	1604303	2793660
115	SAMPLE	266068-003	978184	1013837	34041	36667	7721	18532	1534186	1844085	1476166	2694547
116	SAMPLE	266068-005	1045073	1116569	34709	37270	7664	18798	1640797	1956178	1587329	2872556
117	SAMPLE	266087-002	1179487	1243995	40818	43116	8952	21811	1798901	2082439	1764167	3164076
118	CCV		1151875	1296213	43503	47791	8334	20879	1720747	1973517	1714099	3040206
120	CCB		1169425	1196598	39505	35218	7214 *	21098	1761628	2073276	1706766	3043570
121	SAMPLE	266087-003	1069036	1122561	37028	35781	7161 *	19653	1638404	1919119	1593771	2901484
122	ICSA		1028471	1241204	41241	39460	6000 *	18893	1429897	1480817	1587808	2589842
123	ICSAB		1047316	1214437	40101	31363 *	5429 *	19422	1431146	1465940	1586131	2581670
126	SAMPLE	266087-004	1197008	1248092	41328	38319	7977	22172	1762928	1991695	1743363	3057517
128	SAMPLE	266087-006	1131626	1206010	39439	42488	8520	20750	1688178	1926576	1669277	2958296
129	SAMPLE	266087-007	1121849	1186956	39119	40236	7988	20780	1734466	2011299	1692614	2989781
130	SAMPLE	266087-009	1137517	1216102	40165	41651	8665	21082	1681175	1815989	1707836	2885138
132	SAMPLE	266091-002	1092955	1227590	39946	34443	6507 *	19974	1534854	1601620	1624374	2690666
134	SAMPLE	266091-004	1118271	1201253	39265	34933	6977 *	20705	1676583	1886282	1659940	2879945
135	SAMPLE	266091-005	924154	959158	32644	30086 *	6262 *	17784	1382590	1591793	1361296	2401039
136	SAMPLE	266091-006	1237109	1335582	41186	26834 *	4474 *	19030	1391531	1137809	1601288	2172568
137	SAMPLE	266091-007	1345840	1469789	44352	31366 *	5163 *	20046	1475070	1167623	1715626	2256263
138	CCV		1503911 *	1552926 *	50798 *	44840	8315	24797 *	1828239	1826199	1926573	2989398
140	CCB		1376223	1401427	44992	42446	8828	23627	1834256	1923978	1855698	2961684
141	SAMPLE	266091-008	1299510	1340230	43165	40856	8250	22571	1764539	1864515	1782945	2873472
142	SAMPLE	266091-009	1214392	1301014	41168	40337	8331	21531	1657014	1717512	1706444	2738513
144	SAMPLE	266091-010	1242558	1353413	43067	39493	8012	22293	1717912	1766207	1776486	2853392
146	SAMPLE	266091-012	1167154	1207153	38246	35474	7304 *	20520	1633312	1752725	1638753	2673933
148	CCV		1112344	1250553	41614	39626	6845 *	20341	1548376	1633689	1592959	2606753
150	CCB		1139817	1189460	38815	31892 *	6786 *	20928	1642431	1787713	1643995	2705591
151	ICSA		926266	1162057	39870	35238	5527 *	18781	1267898	1226225	1440078	2183733
152	ICSAB		912848	1090331	35464	23814 *	4302 *	17757	1215005	1168370	1378718	2086925

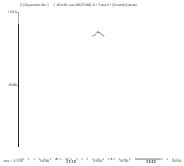
MET16 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D20J00.B\002TUNE.D
 Date Acquired: Apr 20 2015 10:03 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

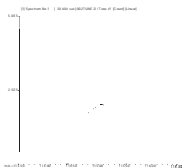
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	112505	113508	114245	114218	113449	1.23	5.00	
59 Co	46391	47097	47462	47566	47442	0.85	5.00	
115 In	1046001	1035800	1053209	1052917	1052613	0.33	5.00	
205 Tl	96134	95628	95941	96401	95513	0.64	5.00	



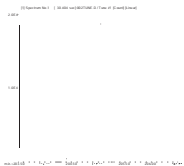
7 Li
Mass Calib.
 Actual: 7.05
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 59.00
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266019 METALS Filtrate: EPA 6020

Inst : MET16
 Calnum : 895158996001
 Units : ug/L
 Date : 20-APR-2015 10:14
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d20j00005	895158996005	20-APR-2015 10:20	S27043, S26751	
L2	15d20j00006	895158996006	20-APR-2015 10:27	S27044, S26751	
L3	15d20j00007	895158996007	20-APR-2015 10:33	S27045, S26751	
L4	15d20j00008	895158996008	20-APR-2015 10:39	S27046, S26751	
L5	15d20j00009	895158996009	20-APR-2015 10:46	S27041, S26751	
L6	15d20j00010	895158996010	20-APR-2015 10:52	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0062	0.0064	0.0065	0.0064	0.0066	0.0062	BLNK	-0.3031	160.167		0.0064	0.999	0.995	
Antimony	A	0.0028	0.0025	0.0025	0.0025	0.0025	0.0025	BLNK	-0.0116	399.368		0.0026	1.000	0.995	
Barium	A	7.5E-4	6.3E-4	6.2E-4	6.2E-4	6.1E-4	6.0E-4	BLNK	-0.0062	1658.77		6.4E-4	1.000	0.995	
Beryllium	A	0.0024	0.0021	0.0021	0.0022	0.0021	0.0021	BLNK	-0.0071	473.250		0.0022	1.000	0.995	
Cadmium	A	6.6E-4	6.9E-4	6.9E-4	6.8E-4	6.7E-4	6.5E-4	BLNK	-0.0062	1524.31		6.7E-4	1.000	0.995	
Calcium	A	4.9E-4	2.1E-4	1.9E-4	1.7E-4	1.8E-4	1.7E-4	BLNK	-7.0137	5731.62		2.4E-4	0.999	0.995	
Lead	A	0.0080	0.0068	0.0069	0.0066	0.0064	0.0061	BLNK	-0.0202	162.012		0.0068	1.000	0.995	
Magnesium	A	0.0079	0.0057	0.0055	0.0055	0.0056	0.0052	BLNK	-3.1666	189.955		0.0059	0.998	0.995	
Molybdenum	A	0.0019	0.0018	0.0019	0.0018	0.0018	0.0018	BLNK	-0.0211	552.741		0.0018	1.000	0.995	
Potassium	A	0.0774	0.0208	0.0134	0.0067	0.0062	0.0058	BLNK	-123.52	171.587		0.0217	0.999	0.995	
Silver	A	0.0032	0.0030	0.0030	0.0030	0.0029	0.0029	BLNK	-0.0076	347.734		0.0030	1.000	0.995	
Thallium	A	0.0069	0.0066	0.0067	0.0068	0.0069	0.0070	BLNK	-0.0060	143.842		0.0068	1.000	0.995	
Arsenic	E	0.0056	0.0043	0.0045	0.0043	0.0042	0.0041	BLNK	-0.0405	241.306		0.0045	1.000	0.995	
Chromium	E	0.0406	0.0289	0.0287	0.0266	0.0250	0.0251	BLNK	-0.0380	39.8944		0.0292	1.000	0.995	
Cobalt	E	0.0495	0.0428	0.0457	0.0420	0.0388	0.0385	BLNK	-0.0066	25.9150		0.0429	1.000	0.995	
Copper	E	0.1829	0.0848	0.0721	0.0611	0.0571	0.0552	BLNK	-0.2415	18.0204		0.0855	1.000	0.995	
Manganese	E	0.0167	0.0140	0.0143	0.0135	0.0127	0.0127	BLNK	-0.0062	78.7610		0.0140	1.000	0.995	
Nickel	E	0.0214	0.0129	0.0130	0.0114	0.0103	0.0102	BLNK	-0.0710	98.2074		0.0132	1.000	0.995	
Sodium	E	0.0602	0.0167	0.0128	0.0078	0.0076	0.0076	BLNK	-62.779	132.034		0.0188	1.000	0.995	
Vanadium	E	0.0552	0.0261	0.0242	0.0204	0.0193	0.0195	BLNK	-0.1707	51.4208		0.0275	1.000	0.995	
Zinc	E		0.0137	0.0109	0.0084	0.0078	0.0075	BLNK	-0.2335	132.072		0.0097	1.000	0.995	
Iron	H	0.0115	0.0089	0.0099	0.0097	0.0086	0.0087	BLNK	-2.5033	115.022		0.0095	1.000	0.995	
Selenium	H	0.0023	0.0019	0.0018	0.0020	0.0018	0.0018	BLNK	-0.0060	548.775		0.0019	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	-3	50.000	2	100.00	4	1000.0	3	10000	6	20000	-1
Antimony	A	0.1000	1	0.5000	-3	1.0000	-2	10.000	1	100.00	1	200.00	0
Barium	A	0.1000	19	0.5000	3	1.0000	3	10.000	3	100.00	1	200.00	0
Beryllium	A	0.1000	4	0.5000	0	1.0000	0	10.000	2	100.00	1	200.00	0
Cadmium	A	0.1000	-6	0.5000	3	1.0000	4	10.000	4	100.00	2	200.00	0
Calcium	A	10.000	109	50.000	6	100.00	2	1000.0	-1	10000	6	20000	-1
Lead	A	0.1000	9	0.5000	6	1.0000	9	10.000	6	100.00	3	200.00	-1
Magnesium	A	10.000	19	50.000	2	100.00	1	1000.0	4	10000	6	20000	-2
Molybdenum	A	0.1000	-13	0.5000	-3	1.0000	0	10.000	1	100.00	1	200.00	0
Potassium	A	10.000	-7	50.000	10	100.00	6	1000.0	2	10000	6	20000	-1
Silver	A	0.1000	3	0.5000	3	1.0000	3	10.000	3	100.00	2	200.00	0
Thallium	A	0.0500	-12	0.2500	-7	0.5000	-5	5.0000	-3	50.000	-1	100.00	0
Arsenic	E	0.1000	-6	0.5000	-4	1.0000	5	10.000	3	100.00	1	200.00	0
Chromium	E	0.1000	24	0.5000	8	1.0000	11	10.000	6	100.00	0	200.00	0
Cobalt	E	0.1000	22	0.5000	10	1.0000	18	10.000	9	100.00	0	200.00	0
Copper	E	0.1000	-12	0.5000	4	1.0000	6	10.000	8	100.00	3	200.00	-1
Manganese	E	0.1000	26	0.5000	9	1.0000	12	10.000	6	100.00	0	200.00	0
Nickel	E	0.1000	39	0.5000	13	1.0000	20	10.000	11	100.00	1	200.00	0
Sodium	E	10.000	67	50.000	-5	100.00	6	1000.0	-4	10000	0	20000	0
Vanadium	E	0.1000	13	0.5000	0	1.0000	7	10.000	3	100.00	-1	200.00	0
Zinc	E			0.5000	34	1.0000	21	10.000	9	100.00	3	200.00	-1
Iron	H	10.000	7	50.000	-2	100.00	11	1000.0	11	10000	-1	20000	0
Selenium	H	0.1000	21	0.5000	2	1.0000	0	10.000	7	100.00	0	200.00	0

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16
Calnum : 895158996001

Cal Date : 20-APR-2015

ICV 895158996012 (15d20j00012 20-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	9953	ug/L	0	10	
Antimony	A	100.0	102.0	ug/L	2	10	
Barium	A	100.0	100.9	ug/L	1	10	
Beryllium	A	100.0	101.2	ug/L	1	10	
Cadmium	A	100.0	101.2	ug/L	1	10	
Calcium	A	10000	10090	ug/L	1	10	
Lead	A	100.0	102.4	ug/L	2	10	
Magnesium	A	10000	10000	ug/L	0	10	
Molybdenum	A	100.0	100.2	ug/L	0	10	
Potassium	A	10000	10030	ug/L	0	10	
Silver	A	100.0	100.7	ug/L	1	10	
Thallium	A	50.00	48.73	ug/L	-3	10	
Arsenic	E	100.0	100.7	ug/L	1	10	
Chromium	E	100.0	101.5	ug/L	2	10	
Cobalt	E	100.0	102.5	ug/L	3	10	
Copper	E	100.0	102.6	ug/L	3	10	
Manganese	E	100.0	102.0	ug/L	2	10	
Nickel	E	100.0	103.1	ug/L	3	10	
Sodium	E	10000	10130	ug/L	1	10	
Vanadium	E	100.0	101.3	ug/L	1	10	
Zinc	E	100.0	102.9	ug/L	3	10	
Iron	H	10000	9834	ug/L	-2	10	
Selenium	H	100.0	104.4	ug/L	4	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996019 File : 15d20j00019 Time : 20-APR-2015 11:51
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1217173	-1.57
Scandium	A	1232744	1333501	8.17
Scandium	E	39135	40844	4.37
Scandium	H	113610	86614	-23.76
Germanium	H	24397	19117	-21.64
Germanium	E	19858	21722	9.39
Indium	A	1791695	1882086	5.04
Bismuth	A	2228668	2247870	0.86
Yttrium	A	1708777	1810035	5.93
Terbium	A	3181686	3274589	2.92

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996035 File : 15d20j00035 Time : 20-APR-2015 13:34
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0065	10000	10350	ug/L	4	10	
Antimony	A	0.0026	0.0026	100.0	102.4	ug/L	2	10	
Barium	A	6.4E-4	6.1E-4	100.0	100.5	ug/L	1	10	
Beryllium	A	0.0022	0.0021	100.0	100.4	ug/L	0	10	
Cadmium	A	6.7E-4	6.6E-4	100.0	101.0	ug/L	1	10	
Calcium	A	2.4E-4	1.8E-4	10000	10410	ug/L	4	10	
Lead	A	0.0068	0.0064	100.0	103.5	ug/L	4	10	
Magnesium	A	0.0059	0.0055	10000	10440	ug/L	4	10	
Molybdenum	A	0.0018	0.0018	100.0	100.7	ug/L	1	10	
Potassium	A	0.0217	0.0061	10000	10340	ug/L	3	10	
Silver	A	0.0030	0.0029	100.0	100.5	ug/L	1	10	
Thallium	A	0.0068	0.0068	50.00	49.24	ug/L	-2	10	
Arsenic	E	0.0045	0.0042	100.0	100.7	ug/L	1	10	
Chromium	E	0.0292	0.0261	100.0	103.9	ug/L	4	10	
Cobalt	E	0.0429	0.0403	100.0	104.5	ug/L	5	10	
Copper	E	0.0855	0.0562	100.0	101.0	ug/L	1	10	
Manganese	E	0.0140	0.0135	100.0	106.2	ug/L	6	10	
Nickel	E	0.0132	0.0107	100.0	105.2	ug/L	5	10	
Sodium	E	0.0188	0.0078	10000	10240	ug/L	2	10	
Vanadium	E	0.0275	0.0202	100.0	103.5	ug/L	4	10	
Zinc	E	0.0097	0.0079	100.0	104.0	ug/L	4	10	
Iron	H	0.0095	0.0086	10000	9842	ug/L	-2	10	
Selenium	H	0.0019	0.0018	100.0	98.98	ug/L	-1	10	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1148028	-7.16
Scandium	A	1232744	1219498	-1.07
Scandium	E	39135	41001	4.77
Scandium	H	113610	107153	-5.68
Germanium	H	24397	21802	-10.64
Germanium	E	19858	20898	5.24
Indium	A	1791695	1727313	-3.59
Bismuth	A	2228668	2071191	-7.07
Yttrium	A	1708777	1700907	-0.46
Terbium	A	3181686	3132181	-1.56

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895158996037
 Cal : 895158996001
 File : 15d20j00037
 Caldate : 20-APR-2015
 IDF : 1.0
 Time : 20-APR-2015 13:47

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1112574	-10.03
Scandium	A	1232744	1181138	-4.19
Scandium	E	39135	36861	-5.81
Scandium	H	113610	99221	-12.67
Germanium	H	24397	21509	-11.84
Germanium	E	19858	20084	1.14
Indium	A	1791695	1758224	-1.87
Bismuth	A	2228668	2183152	-2.04
Yttrium	A	1708777	1677816	-1.81
Terbium	A	3181686	3143881	-1.19

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996038 File : 15d20j00038 Time : 20-APR-2015 13:54
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.5235	0.1000	ug/L	
Barium	A	1.948	0.1000	ug/L	
Beryllium	A	[0.02270]	0.1000	ug/L	
Cadmium	A	2.140	0.1000	ug/L	
Lead	A	0.2241	0.1000	ug/L	
Silver	A	[0.07160]	0.1000	ug/L	
Thallium	A	[0.01740]	0.05000	ug/L	
Arsenic	E	0.7117	0.1000	ug/L	
Chromium	E	0.8594	0.1000	ug/L	
Cobalt	E	1.081	0.1000	ug/L	
Copper	E	1.111	0.1000	ug/L	
Manganese	E	7.076	0.1000	ug/L	
Nickel	E	1.080	0.1000	ug/L	
Vanadium	E	0.1045	0.1000	ug/L	
Zinc	E	1.774	0.5000	ug/L	
Selenium	H	0.1617	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	99580	ug/L	100
Calcium	A	300000	302900	ug/L	101
Magnesium	A	100000	97830	ug/L	98
Molybdenum	A	2000	2079	ug/L	104
Potassium	A	100000	99910	ug/L	100
Sodium	E	250000	241800	ug/L	97
Phosphorus	E	100000	97080	ug/L	97
Iron	H	250000	226800	ug/L	91

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	997450	-19.34
Scandium	A	1232744	1119182	-9.21
Scandium	E	39135	38674	-1.18
Scandium	H	113610	109832	-3.33
Germanium	H	24397	20015	-17.96
Germanium	E	19858	17946	-9.63
Indium	A	1791695	1332893	-25.61
Bismuth	A	2228668	1466993	-34.18
Yttrium	A	1708777	1444600	-15.46
Terbium	A	3181686	2491415	-21.70

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895158996039 File : 15d20j00039
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 20-APR-2015 14:02

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	101100	ug/L	1		
Cadmium	A	100.0	100.9	ug/L	1	20	
Calcium	A	300000	304100	ug/L	1		
Magnesium	A	100000	98640	ug/L	-1		
Molybdenum	A	2000	2074	ug/L	4		
Potassium	A	100000	100200	ug/L	0		
Silver	A	50.00	49.37	ug/L	-1	20	
Arsenic	E	100.0	106.3	ug/L	6	20	
Chromium	E	200.0	190.2	ug/L	-5	20	
Cobalt	E	200.0	181.8	ug/L	-9	20	
Copper	E	200.0	186.3	ug/L	-7	20	
Manganese	E	200.0	198.4	ug/L	-1	20	
Nickel	E	200.0	175.3	ug/L	-12	20	
Sodium	E	250000	240700	ug/L	-4		
Vanadium	E	200.0	195.0	ug/L	-2	20	
Zinc	E	100.0	90.24	ug/L	-10	20	
Iron	H	250000	237700	ug/L	-5		
Selenium	H	100.0	97.39	ug/L	-3	20	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	113610	105797	-6.88
Scandium	A	1232744	1172969	-4.85
Scandium	E	39135	40105	2.48
Germanium	H	24397	20460	-16.14
Germanium	E	19858	18039	-9.16
Indium	A	1791695	1361082	-24.03
Yttrium	A	1708777	1487682	-12.94

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996050.1 File : 15d20j00050 Time : 20-APR-2015 15:15
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0063	10000	10150	ug/L	2	10	
Antimony	A	0.0026	0.0026	100.0	103.3	ug/L	3	10	
Barium	A	6.4E-4	6.1E-4	100.0	100.6	ug/L	1	10	
Beryllium	A	0.0022	0.0021	100.0	98.13	ug/L	-2	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	102.1	ug/L	2	10	
Calcium	A	2.4E-4	1.8E-4	10000	10160	ug/L	2	10	
Lead	A	0.0068	0.0064	100.0	104.4	ug/L	4	10	
Magnesium	A	0.0059	0.0054	10000	10260	ug/L	3	10	
Molybdenum	A	0.0018	0.0018	100.0	101.3	ug/L	1	10	
Potassium	A	0.0217	0.0060	10000	10090	ug/L	1	10	
Silver	A	0.0030	0.0029	100.0	100.8	ug/L	1	10	
Thallium	A	0.0068	0.0069	50.00	49.83	ug/L	0	10	
Arsenic	E	0.0045	0.0042	100.0	100.2	ug/L	0	10	
Chromium	E	0.0292	0.0254	100.0	101.3	ug/L	1	10	
Cobalt	E	0.0429	0.0395	100.0	102.5	ug/L	3	10	
Copper	E	0.0855	0.0554	100.0	99.61	ug/L	0	10	
Manganese	E	0.0140	0.0133	100.0	105.1	ug/L	5	10	
Nickel	E	0.0132	0.0104	100.0	102.3	ug/L	2	10	
Sodium	E	0.0188	0.0077	10000	10140	ug/L	1	10	
Vanadium	E	0.0275	0.0198	100.0	101.6	ug/L	2	10	
Zinc	E	0.0097	0.0078	100.0	103.1	ug/L	3	10	
Iron	H	0.0095	0.0090	10000	10360	ug/L	4	10	
Selenium	H	0.0019	0.0018	100.0	96.47	ug/L	-4	10	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1122961	-9.19
Scandium	A	1232744	1198997	-2.74
Scandium	E	39135	39712	1.47
Scandium	H	113610	107542	-5.34
Germanium	H	24397	23587	-3.32
Germanium	E	19858	19899	0.21
Indium	A	1791695	1646257	-8.12
Bismuth	A	2228668	2006810	-9.95
Yttrium	A	1708777	1616798	-5.38
Terbium	A	3181686	3023780	-4.96

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996052.1 File : 15d20j00052 Time : 20-APR-2015 15:28
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1136304	-8.11
Scandium	A	1232744	1129225	-8.40
Scandium	E	39135	38028	-2.83
Scandium	H	113610	101010	-11.09
Germanium	H	24397	22224	-8.91
Germanium	E	19858	20108	1.26
Indium	A	1791695	1698192	-5.22
Bismuth	A	2228668	2124272	-4.68
Yttrium	A	1708777	1624053	-4.96
Terbium	A	3181686	3024444	-4.94

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996064.1 File : 15d20j00064 Time : 20-APR-2015 16:49
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0064	10000	10310	ug/L	3	10	
Antimony	A	0.0026	0.0026	100.0	103.3	ug/L	3	10	
Barium	A	6.4E-4	6.1E-4	100.0	100.8	ug/L	1	10	
Beryllium	A	0.0022	0.0021	100.0	99.50	ug/L	0	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	102.6	ug/L	3	10	
Calcium	A	2.4E-4	1.8E-4	10000	10260	ug/L	3	10	
Lead	A	0.0068	0.0065	100.0	105.0	ug/L	5	10	
Magnesium	A	0.0059	0.0055	10000	10430	ug/L	4	10	
Molybdenum	A	0.0018	0.0018	100.0	100.9	ug/L	1	10	
Potassium	A	0.0217	0.0060	10000	10180	ug/L	2	10	
Silver	A	0.0030	0.0029	100.0	100.7	ug/L	1	10	
Thallium	A	0.0068	0.0069	50.00	49.75	ug/L	0	10	
Arsenic	E	0.0045	0.0042	100.0	101.1	ug/L	1	10	
Chromium	E	0.0292	0.0256	100.0	102.1	ug/L	2	10	
Cobalt	E	0.0429	0.0395	100.0	102.3	ug/L	2	10	
Copper	E	0.0855	0.0554	100.0	99.53	ug/L	0	10	
Manganese	E	0.0140	0.0135	100.0	106.2	ug/L	6	10	
Nickel	E	0.0132	0.0104	100.0	102.0	ug/L	2	10	
Sodium	E	0.0188	0.0079	10000	10350	ug/L	4	10	
Vanadium	E	0.0275	0.0199	100.0	102.0	ug/L	2	10	
Zinc	E	0.0097	0.0079	100.0	104.2	ug/L	4	10	
Iron	H	0.0095	0.0085	10000	9780	ug/L	-2	10	
Selenium	H	0.0019	0.0019	100.0	104.0	ug/L	4	10	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1127545	-8.82
Scandium	A	1232744	1180810	-4.21
Scandium	E	39135	39676	1.38
Scandium	H	113610	95652	-15.81
Germanium	H	24397	18862	-22.69
Germanium	E	19858	19961	0.52
Indium	A	1791695	1652210	-7.79
Bismuth	A	2228668	2013070	-9.67
Yttrium	A	1708777	1615367	-5.47
Terbium	A	3181686	3022681	-5.00

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996066.1 File : 15d20j00066 Time : 20-APR-2015 17:02
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1159560	-6.23
Scandium	A	1232744	1171688	-4.95
Scandium	E	39135	38203	-2.38
Scandium	H	113610	82056	-27.77
Germanium	H	24397	18125	-25.71
Germanium	E	19858	20581	3.64
Indium	A	1791695	1751832	-2.22
Bismuth	A	2228668	2206393	-1.00
Yttrium	A	1708777	1660085	-2.85
Terbium	A	3181686	3126433	-1.74

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895158996098 File : 15d20j00098
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

IDF : 1.0
 Time : 20-APR-2015 20:29

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0064	0.0065	10000	10410	ug/L	4	10	
Antimony	A	0.0026	0.0026	100.0	104.0	ug/L	4	10	
Barium	A	6.4E-4	6.3E-4	100.0	105.1	ug/L	5	10	
Beryllium	A	0.0022	0.0021	100.0	97.55	ug/L	-2	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	101.8	ug/L	2	10	
Calcium	A	2.4E-4	1.8E-4	10000	10490	ug/L	5	10	
Lead	A	0.0068	0.0063	100.0	102.4	ug/L	2	10	
Magnesium	A	0.0059	0.0055	10000	10450	ug/L	5	10	
Molybdenum	A	0.0018	0.0018	100.0	100.4	ug/L	0	10	
Potassium	A	0.0217	0.0062	10000	10530	ug/L	5	10	
Silver	A	0.0030	0.0029	100.0	101.7	ug/L	2	10	
Thallium	A	0.0068	0.0069	50.00	49.69	ug/L	-1	10	
Arsenic	E	0.0045	0.0043	100.0	102.8	ug/L	3	10	
Chromium	E	0.0292	0.0258	100.0	102.9	ug/L	3	10	
Cobalt	E	0.0429	0.0399	100.0	103.4	ug/L	3	10	
Copper	E	0.0855	0.0554	100.0	99.68	ug/L	0	10	
Manganese	E	0.0140	0.0134	100.0	105.6	ug/L	6	10	
Nickel	E	0.0132	0.0106	100.0	104.2	ug/L	4	10	
Sodium	E	0.0188	0.0077	10000	10150	ug/L	2	10	
Vanadium	E	0.0275	0.0201	100.0	103.3	ug/L	3	10	
Zinc	E	0.0097	0.0078	100.0	103.2	ug/L	3	10	
Iron	H	0.0095	0.0095	10000	10970	ug/L	10	10	
Selenium	H	0.0019	0.0022	100.0	121.5	ug/L	22	10	c+ ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1259154	1.83
Scandium	A	1232744	1303893	5.77
Scandium	E	39135	44635	14.05
Scandium	H	113610	54684	-51.87
Germanium	H	24397	10730	-56.02
Germanium	E	19858	22692	14.27
Indium	A	1791695	1797484	0.32
Bismuth	A	2228668	2057304	-7.69
Yttrium	A	1708777	1793768	4.97
Terbium	A	3181686	3164796	-0.53

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996100 File : 15d20j00100 Time : 20-APR-2015 20:42
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	0.1031	0.1000	0.1000	ug/L	CCB ***
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1247240	0.86
Scandium	A	1232744	1260930	2.29
Scandium	E	39135	42135	7.67
Scandium	H	113610	49397	-56.52
Germanium	H	24397	10278	-57.87
Germanium	E	19858	22428	12.94
Indium	A	1791695	1839106	2.65
Bismuth	A	2228668	2161198	-3.03
Yttrium	A	1708777	1793136	4.94
Terbium	A	3181686	3166295	-0.48

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996118 File : 15d20j00118 Time : 20-APR-2015 22:39
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0064	0.0061	10000	9710	ug/L	-3	10	
Antimony	A	0.0026	0.0026	100.0	104.7	ug/L	5	10	
Barium	A	6.4E-4	6.4E-4	100.0	105.6	ug/L	6	10	
Beryllium	A	0.0022	0.0021	100.0	98.99	ug/L	-1	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	102.0	ug/L	2	10	
Calcium	A	2.4E-4	1.7E-4	10000	9876	ug/L	-1	10	
Lead	A	0.0068	0.0064	100.0	103.2	ug/L	3	10	
Magnesium	A	0.0059	0.0051	10000	9748	ug/L	-3	10	
Molybdenum	A	0.0018	0.0018	100.0	100.7	ug/L	1	10	
Potassium	A	0.0217	0.0058	10000	9867	ug/L	-1	10	
Silver	A	0.0030	0.0029	100.0	101.3	ug/L	1	10	
Thallium	A	0.0068	0.0070	50.00	50.00	ug/L	0	10	
Arsenic	E	0.0045	0.0043	100.0	103.2	ug/L	3	10	
Chromium	E	0.0292	0.0242	100.0	96.67	ug/L	-3	10	
Cobalt	E	0.0429	0.0376	100.0	97.45	ug/L	-3	10	
Copper	E	0.0855	0.0553	100.0	99.46	ug/L	-1	10	
Manganese	E	0.0140	0.0127	100.0	99.72	ug/L	0	10	
Nickel	E	0.0132	0.0099	100.0	97.41	ug/L	-3	10	
Sodium	E	0.0188	0.0072	10000	9441	ug/L	-6	10	
Vanadium	E	0.0275	0.0189	100.0	96.96	ug/L	-3	10	
Zinc	E	0.0097	0.0078	100.0	103.0	ug/L	3	10	
Iron	H	0.0095	0.0086	10000	9924	ug/L	-1	10	
Selenium	H	0.0019	0.0023	100.0	124.7	ug/L	25	10	c+ ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1151875	-6.85
Scandium	A	1232744	1296213	5.15
Scandium	E	39135	43503	11.16
Scandium	H	113610	47791	-57.93
Germanium	H	24397	8334	-65.84
Germanium	E	19858	20879	5.14
Indium	A	1791695	1720747	-3.96
Bismuth	A	2228668	1973517	-11.45
Yttrium	A	1708777	1714099	0.31
Terbium	A	3181686	3040206	-4.45

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 895158996120 File : 15d20j00120 Time : 20-APR-2015 22:52
Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	i- ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1169425	-5.43
Scandium	A	1232744	1196598	-2.93
Scandium	E	39135	39505	0.95
Scandium	H	113610	35218	-69.00
Germanium	H	24397	7214	-70.43 *
Germanium	E	19858	21098	6.24
Indium	A	1791695	1761628	-1.68
Bismuth	A	2228668	2073276	-6.97
Yttrium	A	1708777	1706766	-0.12
Terbium	A	3181686	3043570	-4.34

--low bias i=ISTD failure

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996122 File : 15d20j00122 Time : 20-APR-2015 23:04
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4876	0.1000	ug/L	
Barium	A	2.000	0.1000	ug/L	
Beryllium	A	[0.02270]	0.1000	ug/L	
Cadmium	A	2.182	0.1000	ug/L	
Lead	A	0.2220	0.1000	ug/L	
Silver	A	[0.07980]	0.1000	ug/L	
Thallium	A	[0.01870]	0.05000	ug/L	
Arsenic	E	0.7274	0.1000	ug/L	
Chromium	E	0.8149	0.1000	ug/L	
Cobalt	E	1.088	0.1000	ug/L	
Copper	E	1.121	0.1000	ug/L	
Manganese	E	6.940	0.1000	ug/L	
Nickel	E	1.107	0.1000	ug/L	
Vanadium	E	[0.08030]	0.1000	ug/L	
Zinc	E	1.783	0.5000	ug/L	
Selenium	H	0.4931	0.1000	ug/L	i- ***

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	96080	ug/L	96
Calcium	A	300000	298700	ug/L	100
Magnesium	A	100000	92970	ug/L	93
Molybdenum	A	2000	2051	ug/L	103
Potassium	A	100000	98800	ug/L	99
Sodium	E	250000	232300	ug/L	93
Phosphorus	E	100000	97160	ug/L	97
Iron	H	250000	232400	ug/L	93

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1028471	-16.83
Scandium	A	1232744	1241204	0.69
Scandium	E	39135	41241	5.38
Scandium	H	113610	39460	-65.27
Germanium	H	24397	6000	-75.41 *
Germanium	E	19858	18893	-4.86
Indium	A	1791695	1429897	-20.19
Bismuth	A	2228668	1480817	-33.56
Yttrium	A	1708777	1587808	-7.08
Terbium	A	3181686	2589842	-18.60

--low bias i=ISTD failure

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266019 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996123 File : 15d20j00123 Time : 20-APR-2015 23:11
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26728, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	98820	ug/L	-1		
Cadmium	A	100.0	100.3	ug/L	0	20	
Calcium	A	300000	305500	ug/L	2		
Magnesium	A	100000	95830	ug/L	-4		
Molybdenum	A	2000	2037	ug/L	2		
Potassium	A	100000	101700	ug/L	2		
Silver	A	50.00	49.39	ug/L	-1	20	
Arsenic	E	100.0	109.3	ug/L	9	20	
Chromium	E	200.0	202.1	ug/L	1	20	
Cobalt	E	200.0	194.3	ug/L	-3	20	
Copper	E	200.0	186.1	ug/L	-7	20	
Manganese	E	200.0	210.8	ug/L	5	20	
Nickel	E	200.0	188.6	ug/L	-6	20	
Sodium	E	250000	245400	ug/L	-2		
Vanadium	E	200.0	208.7	ug/L	4	20	
Zinc	E	100.0	90.27	ug/L	-10	20	
Iron	H	250000	277600	ug/L	11		i- ***
Selenium	H	100.0	143.2	ug/L	43	20	ab+ i- ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	113610	31363	-72.39 *
Scandium	A	1232744	1214437	-1.49
Scandium	E	39135	40101	2.47
Germanium	H	24397	5429	-77.75 *
Germanium	E	19858	19422	-2.20
Indium	A	1791695	1431146	-20.12
Yttrium	A	1708777	1586131	-7.18

+ = high bias -- = low bias ab = ICSAB i = ISTD failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d21f00001	X	RINSE			04/21/15 05:46	1.0	1	
002	15d21f00002	TUN				04/21/15 05:50	1.0	2	
003	15d21f00003	X	RINSE			04/21/15 05:55	1.0	1	
004	15d21f00004	ICALBLK	CALBLANK			04/21/15 06:00	1.0	1	
005	15d21f00005	ICAL				04/21/15 06:05	1.0	3 1	
006	15d21f00006	ICAL				04/21/15 06:09	1.0	4 1	
007	15d21f00007	ICAL				04/21/15 06:14	1.0	5 1	
008	15d21f00008	ICAL				04/21/15 06:19	1.0	6 1	
009	15d21f00009	ICAL				04/21/15 06:24	1.0	7 1	
010	15d21f00010	ICAL				04/21/15 06:28	1.0	8 1	
011	15d21f00011	X	RINSE			04/21/15 06:33	1.0	1	
012	15d21f00012	XICV				04/21/15 06:48	1.0	9 1	
013	15d21f00013	ICV				04/21/15 06:53	1.0	9 1	
014	15d21f00014	XCRI				04/21/15 06:57	1.0	10 1	
015	15d21f00015	XICB				04/21/15 07:03	1.0	1	
016	15d21f00016	ICB				04/21/15 07:08	1.0	1	
017	15d21f00017	CRI				04/21/15 07:12	1.0	10 1	
018	15d21f00018	ICSA				04/21/15 07:17	1.0	11 1	8:CA=290000
019	15d21f00019	ICSAB				04/21/15 07:22	1.0	12 1	8:CA=280000
020	15d21f00020	X	RINSE			04/21/15 07:27	1.0	1	
021	15d21f00021	X	RINSE			04/21/15 07:40	1.0	1	
022	15d21f00022	X	RINSE			04/21/15 07:45	1.0	1	
023	15d21f00023	X	RINSE			04/21/15 07:50	1.0	1	
024	15d21f00024	X	RINSE			04/21/15 07:54	1.0	1	
025	15d21f00025	BLANK	QC784864	Water	222400	04/21/15 07:59	5.0	1	
026	15d21f00026	BS	QC784865	Water	222400	04/21/15 08:04	5.0	1	
027	15d21f00027	BSD	QC784866	Water	222400	04/21/15 08:09	5.0	1	
028	15d21f00028	MSS	266138-002	Water	222400	04/21/15 08:13	5.0	1	1:NA=73000
029	15d21f00029	MS	QC784867	Water	222400	04/21/15 08:18	5.0	1	
030	15d21f00030	MSD	QC784868	Water	222400	04/21/15 08:23	5.0	1	
031	15d21f00031	MSS	266138-002	Water	222400	04/21/15 08:28	5.0	1	1:NA=72000
032	15d21f00032	SAMPLE	266173-001	Water	222400	04/21/15 08:32	5.0	1	
033	15d21f00033	SAMPLE	266173-002	Water	222400	04/21/15 08:37	5.0	1	6:CA=44000
034	15d21f00034	CCV				04/21/15 08:42	1.0	13 1	
035	15d21f00035	X	XCCB			04/21/15 09:01	1.0	1	
036	15d21f00036	CCB				04/21/15 09:05	1.0	1	
037	15d21f00037	BLANK	QC784864	Water	222400	04/21/15 09:10	5.0	1	
038	15d21f00038	SAMPLE	266173-002	Water	222400	04/21/15 09:15	500.0	1	
039	15d21f00039	CCV				04/21/15 09:20	1.0	13 1	
040	15d21f00040	X	XCCB			04/21/15 09:25	1.0	1	
041	15d21f00041	CCB				04/21/15 09:30	1.0	1	
042	15d21f00042	ICSA				04/21/15 09:35	1.0	11 1	8:CA=290000
043	15d21f00043	ICSAB				04/21/15 09:39	1.0	12 1	11:CA=280000
044	15d21f00044	X	RINSE			04/21/15 09:44	1.0	1	
045	15d21f00045	X	RINSE			04/21/15 09:49	1.0	1	
046	15d21f00046	MS	QC784304	Filtrate	222258	04/21/15 09:54	5.0	1	4:NA=720000
047	15d21f00047	X	RINSE			04/21/15 09:59	1.0	1	
048	15d21f00048	MSD	QC784305	Filtrate	222258	04/21/15 10:03	5.0	1	4:NA=720000
049	15d21f00049	X	RINSE			04/21/15 10:08	1.0	1	
050	15d21f00050	MS	QC784304	Filtrate	222258	04/21/15 10:13	50.0	1	2:NA=77000
051	15d21f00051	X	RINSE			04/21/15 10:18	1.0	1	
052	15d21f00052	MSD	QC784305	Filtrate	222258	04/21/15 10:23	50.0	1	3:NA=67000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d21f00053	X	RINSE			04/21/15 10:28	1.0	1	
054	15d21f00054	CCV				04/21/15 10:32	1.0	13 1	
055	15d21f00055	X	XCCB			04/21/15 10:37	1.0	1	
056	15d21f00056	CCB				04/21/15 10:42	1.0	1	
057	15d21f00057	MSS	266019-005	Filtrate	222258	04/21/15 10:47	5.0	1	3:NA=30000
058	15d21f00058	X	RINSE			04/21/15 10:52	1.0	1	
059	15d21f00059	MS	QC784306	Filtrate	222258	04/21/15 10:57	5.0	1	4:NA=31000
060	15d21f00060	X	RINSE			04/21/15 11:02	1.0	1	
061	15d21f00061	MSD	QC784307	Filtrate	222258	04/21/15 11:06	5.0	1	4:NA=30000
062	15d21f00062	X	RINSE			04/21/15 11:11	1.0	1	
063	15d21f00063	SER	QC784308	Filtrate	222258	04/21/15 11:16	25.0	1	
064	15d21f00064	X	RINSE			04/21/15 11:21	1.0	1	
065	15d21f00065	PDS	QC784309	Filtrate	222258	04/21/15 11:26	5.0	14 15 16 1	1:NA=34000
066	15d21f00066	X	RINSE			04/21/15 11:31	1.0	1	
067	15d21f00067	SAMPLE	266019-003	Filtrate	222258	04/21/15 11:35	5.0	1	4:CA=35000
068	15d21f00068	X	RINSE			04/21/15 11:40	1.0	1	
069	15d21f00069	CCV				04/21/15 11:45	1.0	13 1	
070	15d21f00070	X	XCCB			04/21/15 11:50	1.0	1	
071	15d21f00071	CCB				04/21/15 11:55	1.0	1	
072	15d21f00072	MSS	266019-005	Filtrate	222258	04/21/15 12:00	5.0	1	4:NA=31000
073	15d21f00073	X	RINSE			04/21/15 12:05	1.0	1	
074	15d21f00074	MS	QC784306	Filtrate	222258	04/21/15 12:10	5.0	1	3:NA=32000
075	15d21f00075	X	RINSE			04/21/15 12:15	1.0	1	
076	15d21f00076	MSD	QC784307	Filtrate	222258	04/21/15 12:20	5.0	1	4:NA=32000
077	15d21f00077	X	RINSE			04/21/15 12:24	1.0	1	
078	15d21f00078	MSS	266019-005	Filtrate	222258	04/21/15 12:29	5.0	1	3:NA=31000
079	15d21f00079	X	RINSE			04/21/15 12:34	1.0	1	
080	15d21f00080	SER	QC784308	Filtrate	222258	04/21/15 12:39	25.0	1	
081	15d21f00081	X	RINSE			04/21/15 12:44	1.0	1	
082	15d21f00082	PDS	QC784309	Filtrate	222258	04/21/15 12:49	5.0	14 15 16 1	1:NA=34000
083	15d21f00083	X	RINSE			04/21/15 12:53	1.0	1	
084	15d21f00084	SAMPLE	266019-003	Filtrate	222258	04/21/15 12:58	5.0	1	4:CA=33000
085	15d21f00085	X	RINSE			04/21/15 13:03	1.0	1	
086	15d21f00086	CCV				04/21/15 13:08	1.0	13 1	
087	15d21f00087	X	XCCB			04/21/15 13:13	1.0	1	
088	15d21f00088	CCB				04/21/15 13:18	1.0	1	
089	15d21f00089	MSS	266087-001	Filtrate	222325	04/21/15 13:23	5.0	1	4:CA=35000
090	15d21f00090	X	RINSE			04/21/15 13:28	1.0	1	
091	15d21f00091	MS	QC784573	Filtrate	222325	04/21/15 13:32	5.0	1	4:CA=34000
092	15d21f00092	X	RINSE			04/21/15 13:37	1.0	1	
093	15d21f00093	MSD	QC784574	Filtrate	222325	04/21/15 13:42	5.0	1	4:CA=35000
094	15d21f00094	X	RINSE			04/21/15 13:47	1.0	1	
095	15d21f00095	SER	QC784575	Filtrate	222325	04/21/15 13:52	25.0	1	
096	15d21f00096	X	RINSE			04/21/15 13:57	1.0	1	
097	15d21f00097	PDS	QC784576	Filtrate	222325	04/21/15 14:01	5.0	14 15 16 1	
098	15d21f00098	X	RINSE			04/21/15 14:06	1.0	1	
099	15d21f00099	X	RINSE			04/21/15 14:11	1.0	1	
100	15d21f00100	X	RINSE			04/21/15 14:16	1.0	1	
101	15d21f00101	BLANK	QC784945	Filtrate	222114	04/21/15 14:21	5.0	1	
102	15d21f00102	X	RINSE			04/21/15 14:26	1.0	1	
103	15d21f00103	CCV				04/21/15 14:31	1.0	13 1	
104	15d21f00104	X	XCCB			04/21/15 14:36	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d21f00105	CCB				04/21/15 14:41	1.0	1	
106	15d21f00106	SAMPLE	266087-002	Filtrate	222325	04/21/15 14:46	5.0	1	
107	15d21f00107	X	RINSE			04/21/15 14:50	1.0	1	
108	15d21f00108	SAMPLE	266087-003	Filtrate	222325	04/21/15 14:55	5.0	1	
109	15d21f00109	X	RINSE			04/21/15 15:00	1.0	1	
110	15d21f00110	SAMPLE	265899-005	Filtrate	222114	04/21/15 15:08	50.0	1	2:NA=120000
111	15d21f00111	X	RINSE			04/21/15 15:13	1.0	1	
112	15d21f00112	SAMPLE	265899-006	Filtrate	222114	04/21/15 15:18	50.0	1	1:NA=28000
113	15d21f00113	X	RINSE			04/21/15 15:23	1.0	1	
114	15d21f00114	CCV				04/21/15 15:28	1.0	13 1	
115	15d21f00115	X	XCCB			04/21/15 15:33	1.0	1	
116	15d21f00116	CCB				04/21/15 15:38	1.0	1	
117	15d21f00117	ICSA				04/21/15 15:42	1.0	11 1	8:CA=300000
118	15d21f00118	ICSAB				04/21/15 15:47	1.0	12 1	10:CA=290000
119	15d21f00119	X	RINSE			04/21/15 15:52	1.0	1	
120	15d21f00120	X	RINSE			04/21/15 15:57	1.0	1	
121	15d21f00121	SAMPLE	266087-004	Filtrate	222325	04/21/15 16:02	5.0	1	
122	15d21f00122	X	RINSE			04/21/15 16:07	1.0	1	
123	15d21f00123	SAMPLE	266087-006	Filtrate	222325	04/21/15 16:12	5.0	1	
124	15d21f00124	X	RINSE			04/21/15 16:16	1.0	1	
125	15d21f00125	SAMPLE	266087-007	Filtrate	222325	04/21/15 16:21	5.0	1	
126	15d21f00126	X	RINSE			04/21/15 16:26	1.0	1	
127	15d21f00127	SAMPLE	266087-009	Filtrate	222325	04/21/15 16:31	5.0	1	4:CA=55000
128	15d21f00128	X	RINSE			04/21/15 16:36	1.0	1	
129	15d21f00129	CCV				04/21/15 16:41	1.0	13 1	
130	15d21f00130	X	XCCB			04/21/15 16:46	1.0	1	
131	15d21f00131	CCB				04/21/15 16:56	1.0	1	
132	15d21f00132	SAMPLE	266091-004	Filtrate	222325	04/21/15 17:01	500.0	1	
133	15d21f00133	SAMPLE	266091-005	Filtrate	222325	04/21/15 17:06	500.0	1	
134	15d21f00134	SAMPLE	266091-006	Filtrate	222325	04/21/15 17:10	500.0	1	
135	15d21f00135	SAMPLE	266091-007	Filtrate	222325	04/21/15 17:15	500.0	1	
136	15d21f00136	CCV				04/21/15 17:20	1.0	13 1	
137	15d21f00137	X	XCCB			04/21/15 17:25	1.0	1	
138	15d21f00138	CCB				04/21/15 17:30	1.0	1	
139	15d21f00139	SAMPLE	266091-002	Filtrate	222325	04/21/15 17:35	5.0	1	4:CA=130000
140	15d21f00140	X	RINSE			04/21/15 17:39	1.0	1	
141	15d21f00141	SAMPLE	266091-004	Filtrate	222325	04/21/15 17:44	5.0	1	1:NA=21000
142	15d21f00142	X	RINSE			04/21/15 17:49	1.0	1	
143	15d21f00143	SAMPLE	266091-005	Filtrate	222325	04/21/15 17:54	5.0	1	1:NA=20000
144	15d21f00144	X	RINSE			04/21/15 17:59	1.0	1	
145	15d21f00145	SAMPLE	266091-008	Filtrate	222325	04/21/15 18:04	5.0	1	
146	15d21f00146	X	RINSE			04/21/15 18:09	1.0	1	
147	15d21f00147	SAMPLE	266091-009	Filtrate	222325	04/21/15 18:14	5.0	1	1:NA=63000
148	15d21f00148	X	RINSE			04/21/15 18:19	1.0	1	
149	15d21f00149	SAMPLE	266091-010	Filtrate	222325	04/21/15 18:23	5.0	1	4:NA=32000
150	15d21f00150	X	RINSE			04/21/15 18:28	1.0	1	
151	15d21f00151	SAMPLE	266091-012	Filtrate	222325	04/21/15 18:33	5.0	1	
152	15d21f00152	X	RINSE			04/21/15 18:38	1.0	1	
153	15d21f00153	CCV				04/21/15 18:57	1.0	13 1	
154	15d21f00154	X	XCCB			04/21/15 19:01	1.0	1	
155	15d21f00155	CCB				04/21/15 19:06	1.0	1	
156	15d21f00156	ICSA				04/21/15 19:11	1.0	11 1	8:CA=280000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
157	15d21f00157	ICSAB				04/21/15 19:16	1.0	12 1	9:CA=340000
158	15d21f00158	X	RINSE			04/21/15 19:21	1.0	1	
159	15d21f00159	X	RINSE			04/21/15 19:26	1.0	1	
160	15d21f00160	X	RINSE			04/21/15 19:31	1.0	1	
161	15d21f00161	X	RINSE			04/21/15 19:36	1.0	1	
162	15d21f00162	CCV				04/21/15 19:41	1.0	13 1	
163	15d21f00163	X	XCCB			04/21/15 19:45	1.0	1	
164	15d21f00164	CCB				04/21/15 19:50	1.0	1	
165	15d21f00165	ICSA				04/21/15 19:55	1.0	11 1	8:CA=280000
166	15d21f00166	XICSAB				04/21/15 20:00	1.0	12 1	8:CA=380000
167	15d21f00167	ICSAB				04/21/15 20:05	1.0	12 1	9:CA=290000
168	15d21f00168	X	RINSE			04/21/15 20:09	1.0	1	
169	15d21f00169	X	RINSE			04/21/15 20:14	1.0	1	
170	15d21f00170	X	RINSE			04/21/15 20:19	1.0	1	
171	15d21f00171	X	RINSE			04/21/15 20:24	1.0	1	
172	15d21f00172	X	RINSE			04/21/15 20:29	1.0	1	
173	15d21f00173	X	RINSE			04/21/15 20:34	1.0	1	
174	15d21f00174	X	RINSE			04/21/15 20:39	1.0	1	
175	15d21f00175	X	RINSE			04/21/15 20:44	1.0	1	

NT 04/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 175.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015160186

Date : 04/21/15
 Sequence : MET26 15d21f00

Reference : 15d21f00004
 Analyzed : 04/21/15 06:00

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	80929	217916	24038	160718	43273	12195	456321	520569	416861	734609
		LOWER LIMIT	24279	65375	7211	48215	12982	3659	136896	156171	125058	220383
		UPPER LIMIT	97115	261499	28846	192862	51928	14634	547585	624683	500233	881531
016	ICB		85069	238009	25472	138702	38877	12697	493500	554531	455053	794803
018	ICSA		73897	213721	23830	162411	42925	13372	417614	447225	416362	726297
019	ICSAB		68588	203728	22588	158088	42181	12872	403757	431525	402509	699845
025	BLANK	QC784864	78424	220688	23617	164290	43695	11878	461498	519496	426099	742090
026	BS	QC784865	78129	218443	23779	157165	41734	12013	452412	506773	422953	734280
027	BSD	QC784866	80878	225273	23996	157531	42250	12180	466955	521859	433632	758349
029	MS	QC784867	75716	221522	23366	161297	42455	12051	447049	491398	425439	738017
030	MSD	QC784868	71242	197706	23924	146702	40971	12027	410698	452739	388341	673091
034	CCV		73687	214785	23171	168950	43995	11793	441353	480865	415778	720795
036	CCB		90693	244559	24269	153379	43117	12736	511725	572672	467181	826662
037	BLANK	QC784864	98001 *	267741 *	25249	171887	46915	13074	547563	609635	500718 *	872754
039	CCV		90675	248286	24730	171623	46279	12978	505543	556204	472764	837922
041	CCB		97252 *	257289	25494	176959	48005	13088	530520	590701	484467	858047
042	ICSA		82755	236674	23884	169847	45148	13690	459325	485138	453186	798636
043	ICSAB		81156	237071	22582	168223	44914	12940	459646	485335	456351	800315
046	MS	QC784304	69684	213541	21585	151539	39564	10874	421150	435955	408847	710102
048	MSD	QC784305	69078	217665	21107	146977	38258	10507	420688	433989	409113	711495
050	MS	QC784304	78291	228302	20645	149037	40544	11198	463325	493901	432865	757200
052	MSD	QC784305	72952	204507	23621	151449	41105	11950	424023	454142	394657	687310
054	CCV		64423	182944	23655	147745	39447	11606	375827	403911	355288	598866
056	CCB		76067	218678	22190	149111	40309	11393	458218	492295	423317	722513
057	MSS	266019-005	71520	206825	22258	151039	40793	11510	423820	450340	398139	680552
059	MS	QC784306	69373	199785	22183	145852	39386	11370	402877	428516	383866	650329
061	MSD	QC784307	69899	203186	23018	145600	38781	11519	406159	430378	389092	657939
063	SER	QC784308	74397	207712	21695	144739	39464	11148	428038	457827	395851	678503
065	PDS	QC784309	76190	208110	22756	150018	39811	11449	417146	447276	398362	682629
067	SAMPLE	266019-003	78150	216312	21782	151015	40488	11271	434348	463774	408763	702815
069	CCV		80469	222694	22094	152091	40507	11481	446787	476411	421568	721564
071	CCB		84146	220509	23102	159971	42695	11796	450548	490069	417130	710977
072	MSS	266019-005	79257	212848	22060	144539	39430	11322	432891	457339	408662	696962
074	MS	QC784306	80854	232651	22324	150545	40095	11525	458207	477903	435926	739975
076	MSD	QC784307	77244	218091	22399	150382	40148	11346	430977	454076	411103	696045
078	MSS	266019-005	74285	212579	21792	148077	39793	11397	426189	444984	403251	677977
080	SER	QC784308	79022	212474	22431	151265	40998	11527	430410	458998	401297	677366
082	PDS	QC784309	77667	215325	22867	150992	39881	11452	418761	442108	402330	679452
084	SAMPLE	266019-003	78530	224459	22344	157127	41298	11371	442298	458881	421311	707396
086	CCV		81936	230406	23124	151936	40238	11691	455108	473678	433602	726530
088	CCB		84934	225632	23142	156006	41662	11764	458846	489813	426566	716494
089	MSS	266087-001	75412	203976	22988	153123	40803	11567	407071	430881	384972	648063
091	MS	QC784573	84924	219202	21660	148341	38819	10920	424889	448706	402596	693802
093	MSD	QC784574	78435	209494	21732	158053	40684	10961	411855	433359	392489	663747
095	SER	QC784575	83133	225759	21017	148683	40093	11165	448734	474665	420136	711929
097	PDS	QC784576	84199	215930	21175	146362	38473	10915	414384	438269	397495	678622
101	BLANK	QC784945	85523	220369	21488	142720	38493	11070	439738	469083	407911	695038
103	CCV		88751	230277	20657	159587	40707	10925	439134	462580	415767	710889
105	CCB		92245	227823	22012	153291	40664	11311	453602	483257	418088	711869
106	SAMPLE	266087-002	93113	229362	21565	152732	40390	11058	441153	467805	411774	704511
108	SAMPLE	266087-003	91181	217988	21785	131203	37172	10995	417776	445375	389831	669822

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015160186

Date : 04/21/15
 Sequence : MET26 15d21f00

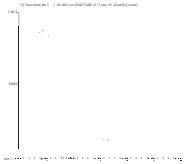
Reference : 15d21f00004
 Analyzed : 04/21/15 06:00

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
110	SAMPLE	265899-005	79400	199832	19193	137116	35571	9682	388789	401334	366827	631616
112	SAMPLE	265899-006	87754	213158	18872	137945	36606	9893	413833	438022	384173	666188
114	CCV		94624	218295	19640	138939	36187	10071	412698	441158	388494	675116
116	CCB		100112 *	212482	19873	140932	37298	10250	412582	450376	379924	649727
117	ICSA		85655	205695	18741	134782	35021	10415	374631	386824	371206	650146
118	ICSAB		80986	206284	18708	138719	36248	10437	381691	393083	379415	658974
121	SAMPLE	266087-004	95236	220519	19723	140826	37479	10357	424067	445542	392190	677747
123	SAMPLE	266087-006	100815 *	221739	20311	135547	36717	10425	414958	442568	385313	671004
125	SAMPLE	266087-007	98495 *	216608	19696	138492	36711	10145	419060	448813	387018	665585
127	SAMPLE	266087-009	88930	212253	19559	140283	36763	10029	406720	428131	380758	657082
129	CCV		107618 *	220386	18480	134903	35431	9730	408375	434818	382569	664574
131	CCB		110509 *	225862	19363	139326	36372	9970	424296	455668	390481	679137
132	SAMPLE	266091-004	116043 *	239175	19120	138393	36988	10078	449159	480016	415447	711702
133	SAMPLE	266091-005	111601 *	230360	19502	138807	36835	10022	426733	458071	394048	684150
134	SAMPLE	266091-006	105546 *	224184	19127	137921	35738	9800	426021	455029	394968	683532
135	SAMPLE	266091-007	107599 *	218199	19760	138823	36113	9923	413028	441988	381538	664485
136	CCV		108888 *	222872	18882	135189	34907	9729	410186	436307	385473	673934
138	CCB		118365 *	223565	18945	137620	36031	9826	416017	451224	383737	670421
139	SAMPLE	266091-002	91091	203032	17846	126373	32498	9035	371517	385640	359417	626592
141	SAMPLE	266091-004	100189 *	214522	17568	129431	34403	9320	400892	431417	370897	644620
143	SAMPLE	266091-005	99435 *	221738	19510	140345	37383	10155	419105	446911	389172	672051
145	SAMPLE	266091-008	102454 *	228761	20351	143812	37851	10381	432836	457829	400951	686039
147	SAMPLE	266091-009	96237	217487	19373	152623	38491	10094	408016	429225	381622	656835
149	SAMPLE	266091-010	101455 *	219336	19934	143524	38083	10363	409561	427746	383958	665363
151	SAMPLE	266091-012	95193	219086	19838	142115	37542	10137	417478	439137	388600	663006
153	CCV		97417 *	222539	20475	150147	37400	10455	418925	438270	395463	679124
155	CCB		107049 *	232406	21382	146858	38674	10827	443567	472742	411500	707219
156	ICSA		91105	220525	19172	144890	37088	10389	393062	401433	392702	681494
157	ICSAB		81973	183197	19217	137105	35792	10368	338039	356667	334137	582054
162	CCV		98086 *	220709	19576	143768	37110	10157	416691	441560	393445	680308
164	CCB		106950 *	230045	20461	146488	38563	10573	441663	468655	406130	700205
165	ICSA		90533	211329	17882	134925	34727	9886	374228	384091	372495	651751
167	ICSAB		83534	185818	15970	121260	31154	8561	332076	342500	327263	576269

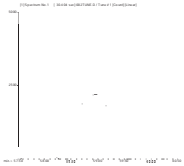
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D21f00.B\002TUNE.D
 Date Acquired: Apr 21 2015 05:50 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

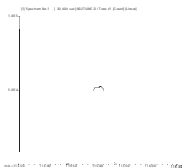
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	7707	7886	7872	7952	7839	1.26	5.00	
59 Co	12790	12634	12800	12726	12582	1.83	5.00	
115 In	267232	263180	264002	265932	265910	0.73	5.00	
205 Tl	17646	17593	17635	17505	17406	2.69	5.00	



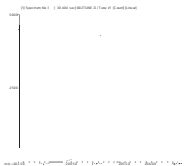
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266019 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015160186001
 Units : ug/L
 Date : 21-APR-2015 06:00
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d21f00005	1015160186005	21-APR-2015 06:05	S27043, S26751	
L2	15d21f00006	1015160186006	21-APR-2015 06:09	S27044, S26751	
L3	15d21f00007	1015160186007	21-APR-2015 06:14	S27045, S26751	
L4	15d21f00008	1015160186008	21-APR-2015 06:19	S27046, S26751	
L5	15d21f00009	1015160186009	21-APR-2015 06:24	S27041, S26751	
L6	15d21f00010	1015160186010	21-APR-2015 06:28	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0055	0.0055	0.0051	0.0047	0.0042	0.0044	BLNK	-0.6950	229.819		0.0049	0.999	0.995	
Antimony	A	0.0033	0.0027	0.0027	0.0029	0.0027	0.0028	BLNK	-0.0141	361.996		0.0028	0.999	0.995	
Barium	A	7.1E-4	6.8E-4	6.0E-4	6.6E-4	6.2E-4	6.5E-4	BLNK	-0.0095	1560.35		6.5E-4	1.000	0.995	
Beryllium	A	0.0039	0.0035	0.0040	0.0038	0.0037	0.0038	BLNK	-0.0219	265.241		0.0038	1.000	0.995	
Cadmium	A	9.4E-4	7.4E-4	7.7E-4	7.3E-4	6.8E-4	7.0E-4	BLNK	-0.0174	1431.18		7.6E-4	1.000	0.995	
Calcium	A	6.2E-4	3.0E-4	2.1E-4	1.9E-4	1.7E-4	1.6E-4	BLNK	-25.444	6145.01		2.7E-4	0.999	0.995	
Lead	A	0.0142	0.0085	0.0071	0.0069	0.0062	0.0063	BLNK	-0.1237	159.839		0.0082	1.000	0.995	
Magnesium	A	0.0089	0.0054	0.0045	0.0039	0.0034	0.0036	BLNK	-12.754	284.472		0.0049	0.999	0.995	
Molybdenum	A	0.0032	0.0023	0.0023	0.0020	0.0020	0.0021	BLNK	-0.0693	490.532		0.0023	0.999	0.995	
Potassium	A	0.1076	0.0269	0.0153	0.0062	0.0048	0.0050	BLNK	-214.50	205.029		0.0276	0.999	0.995	
Silver	A	0.0037	0.0033	0.0031	0.0034	0.0032	0.0033	BLNK	-0.0053	307.716		0.0033	1.000	0.995	
Thallium	A	0.0068	0.0069	0.0066	0.0070	0.0067	0.0070	BLNK	-0.0062	144.503		0.0068	1.000	0.995	
Arsenic	E	0.0095	0.0061	0.0057	0.0053	0.0052	0.0052	BLNK	-0.0994	193.571		0.0062	1.000	0.995	
Chromium	E	0.0617	0.0287	0.0261	0.0220	0.0204	0.0210	BLNK	-0.1714	47.9372		0.0300	1.000	0.995	
Cobalt	E	0.0405	0.0336	0.0364	0.0332	0.0306	0.0313	BLNK	-0.0302	32.1256		0.0343	1.000	0.995	
Copper	E	0.4142	0.0918	0.0543	0.0262	0.0217	0.0219	BLNK	-1.8889	46.1658		0.1050	1.000	0.995	
Manganese	E	0.0311	0.0189	0.0173	0.0150	0.0141	0.0144	BLNK	-0.1217	69.7947		0.0185	1.000	0.995	
Nickel	E	0.0527	0.0187	0.0141	0.0092	0.0081	0.0083	BLNK	-0.4908	121.615		0.0185	1.000	0.995	
Sodium	E	0.0261	0.0091	0.0075	0.0050	0.0041	0.0041	BLNK	-52.418	243.331		0.0093	1.000	0.995	
Vanadium	E	0.0562	0.0262	0.0232	0.0182	0.0171	0.0177	BLNK	-0.2047	56.9917		0.0264	1.000	0.995	
Zinc	E		0.0154	0.0061	0.0046	0.0042	0.0041	BLNK	-0.3438	242.633		0.0069	1.000	0.995	
Iron	H	0.0153	0.0102	0.0093	0.0069	0.0058	0.0062	BLNK	-13.401	164.211		0.0089	0.999	0.995	
Selenium	H	0.0013	0.0011	0.0010	0.0010	8.9E-4	9.1E-4	BLNK	-0.0113	1102.55		0.0010	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	19	50.000	24	100.00	17	1000.0	8	10000	-4	20000	1
Antimony	A	0.1000	5	0.5000	-4	1.0000	-4	10.000	4	100.00	-4	200.00	1
Barium	A	0.1000	1	0.5000	5	1.0000	-7	10.000	2	100.00	-3	200.00	1
Beryllium	A	0.1000	-19	0.5000	-10	1.0000	3	10.000	1	100.00	-3	200.00	1
Cadmium	A	0.1000	16	0.5000	2	1.0000	8	10.000	4	100.00	-3	200.00	1
Calcium	A	10.000	26	50.000	32	100.00	3	1000.0	11	10000	4	20000	-1
Lead	A	0.1000	2	0.5000	11	1.0000	0	10.000	8	100.00	-2	200.00	0
Magnesium	A	10.000	25	50.000	29	100.00	16	1000.0	10	10000	-4	20000	1
Molybdenum	A	0.1000	-11	0.5000	0	1.0000	6	10.000	-1	100.00	-4	200.00	1
Potassium	A	10.000	-38	50.000	23	100.00	-1	1000.0	5	10000	-4	20000	1
Silver	A	0.1000	10	0.5000	2	1.0000	-6	10.000	5	100.00	-2	200.00	1
Thallium	A	0.0500	-14	0.2500	-3	0.5000	-6	5.0000	1	50.000	-3	100.00	1
Arsenic	E	0.1000	-15	0.5000	-1	1.0000	1	10.000	1	100.00	0	200.00	0
Chromium	E	0.1000	24	0.5000	3	1.0000	8	10.000	4	100.00	-2	200.00	1
Cobalt	E	0.1000	0	0.5000	2	1.0000	14	10.000	6	100.00	-2	200.00	0
Copper	E	0.1000	-77	0.5000	-54	1.0000	-38	10.000	2	100.00	-2	200.00	0
Manganese	E	0.1000	-5	0.5000	8	1.0000	9	10.000	4	100.00	-2	200.00	0
Nickel	E	0.1000	51	0.5000	29	1.0000	22	10.000	7	100.00	-2	200.00	0
Sodium	E	10.000	12	50.000	17	100.00	31	1000.0	17	10000	-1	20000	0
Vanadium	E	0.1000	16	0.5000	8	1.0000	12	10.000	2	100.00	-3	200.00	1
Zinc	E			0.5000	205	1.0000	13	10.000	9	100.00	1	200.00	0
Iron	H	10.000	17	50.000	40	100.00	39	1000.0	12	10000	-5	20000	1
Selenium	H	0.1000	33	0.5000	17	1.0000	15	10.000	10	100.00	-2	200.00	1

NT 04/21/15 : Low Cu bias in Calibration.

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015160186001

Cal Date : 21-APR-2015

ICV 1015160186013 (15d21f00013 21-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10330	ug/L	3	10	
Antimony	A	100.0	104.3	ug/L	4	10	
Barium	A	100.0	104.7	ug/L	5	10	
Beryllium	A	100.0	101.8	ug/L	2	10	
Cadmium	A	100.0	104.5	ug/L	5	10	
Calcium	A	10000	11030	ug/L	10	10	
Lead	A	100.0	105.1	ug/L	5	10	
Magnesium	A	10000	10370	ug/L	4	10	
Molybdenum	A	100.0	102.3	ug/L	2	10	
Potassium	A	10000	10340	ug/L	3	10	
Silver	A	100.0	102.8	ug/L	3	10	
Thallium	A	50.00	50.93	ug/L	2	10	
Arsenic	E	100.0	100.9	ug/L	1	10	
Chromium	E	100.0	99.73	ug/L	0	10	
Cobalt	E	100.0	100.2	ug/L	0	10	
Copper	E	100.0	99.79	ug/L	0	10	
Manganese	E	100.0	99.92	ug/L	0	10	
Nickel	E	100.0	100.2	ug/L	0	10	
Sodium	E	10000	10090	ug/L	1	10	
Vanadium	E	100.0	99.72	ug/L	0	10	
Zinc	E	100.0	101.5	ug/L	2	10	
Iron	H	10000	10390	ug/L	4	10	
Selenium	H	100.0	103.1	ug/L	3	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186016 File : 15d21f00016 Time : 21-APR-2015 07:08
 Cal : 1015160186001 Caldate : 21-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.06170]	0.1000	---	ug/L	!ICB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	85069	5.12
Scandium	A	217916	238009	9.22
Scandium	E	24038	25472	5.97
Scandium	H	160718	138702	-13.70
Germanium	H	43273	38877	-10.16
Germanium	E	12195	12697	4.12
Indium	A	456321	493500	8.15
Bismuth	A	520569	554531	6.52
Yttrium	A	416861	455053	9.16
Terbium	A	734609	794803	8.19

!=warning ICB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015160186042
 Cal : 1015160186001
 Standards: S26727, S26751
 File : 15d21f00042
 Caldate : 21-APR-2015
 IDF : 1.0
 Time : 21-APR-2015 09:35

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4911	0.1000	ug/L	
Barium	A	1.886	0.1000	ug/L	
Beryllium	A	[-0.004100]	0.1000	ug/L	
Cadmium	A	3.157	0.1000	ug/L	
Lead	A	0.2121	0.1000	ug/L	
Silver	A	[0.08560]	0.1000	ug/L	
Thallium	A	[0.02000]	0.05000	ug/L	
Arsenic	E	0.6705	0.1000	ug/L	
Chromium	E	0.8611	0.1000	ug/L	
Cobalt	E	1.177	0.1000	ug/L	
Copper	E	1.076	0.1000	ug/L	
Manganese	E	7.287	0.1000	ug/L	
Nickel	E	0.8577	0.1000	ug/L	
Vanadium	E	0.1719	0.1000	ug/L	
Zinc	E	1.959	0.5000	ug/L	
Selenium	H	0.1245	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	102700	ug/L	103
Calcium	A	300000	290500	ug/L	97
Magnesium	A	100000	100400	ug/L	100
Molybdenum	A	2000	1993	ug/L	100
Potassium	A	100000	102600	ug/L	103
Sodium	E	250000	228200	ug/L	91
Phosphorus	E	100000	94510	ug/L	95
Iron	H	250000	240500	ug/L	96

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	82755	2.26
Scandium	A	217916	236674	8.61
Scandium	E	24038	23884	-0.64
Scandium	H	160718	169847	5.68
Germanium	H	43273	45148	4.33
Germanium	E	12195	13690	12.26
Indium	A	456321	459325	0.66
Bismuth	A	520569	485138	-6.81
Yttrium	A	416861	453186	8.71
Terbium	A	734609	798636	8.72

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015160186043
 Cal : 1015160186001
 Standards: S26728, S26751

File : 15d21f00043
 Caldate : 21-APR-2015

IDF : 1.0
 Time : 21-APR-2015 09:39

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	97550	ug/L	-2		
Cadmium	A	100.0	99.73	ug/L	0	20	
Calcium	A	300000	275800	ug/L	-8		
Magnesium	A	100000	95090	ug/L	-5		
Molybdenum	A	2000	1937	ug/L	-3		
Potassium	A	100000	97680	ug/L	-2		
Silver	A	50.00	48.23	ug/L	-4	20	
Arsenic	E	100.0	96.82	ug/L	-3	20	
Chromium	E	200.0	203.0	ug/L	2	20	
Cobalt	E	200.0	199.2	ug/L	0	20	
Copper	E	200.0	193.9	ug/L	-3	20	
Manganese	E	200.0	204.2	ug/L	2	20	
Nickel	E	200.0	196.0	ug/L	-2	20	
Sodium	E	250000	234200	ug/L	-6		
Vanadium	E	200.0	205.8	ug/L	3	20	
Zinc	E	100.0	94.28	ug/L	-6	20	
Iron	H	250000	239600	ug/L	-4		
Selenium	H	100.0	99.17	ug/L	-1	20	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	160718	168223	4.67
Scandium	A	217916	237071	8.79
Scandium	E	24038	22582	-6.06
Germanium	H	43273	44914	3.79
Germanium	E	12195	12940	6.11
Indium	A	456321	459646	0.73
Yttrium	A	416861	456351	9.47

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186054 File : 15d21f00054 Time : 21-APR-2015 10:32
 Cal : 1015160186001 Caldate : 21-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0049	0.0051	10000	11610	ug/L	16	10	c+ ***
Antimony	A	0.0028	0.0032	100.0	117.0	ug/L	17	10	c+ ***
Barium	A	6.5E-4	7.7E-4	100.0	120.1	ug/L	20	10	c+ ***
Beryllium	A	0.0038	0.0042	100.0	111.5	ug/L	12	10	c+ ***
Cadmium	A	7.6E-4	8.2E-4	100.0	116.8	ug/L	17	10	c+ ***
Calcium	A	2.7E-4	2.0E-4	10000	12430	ug/L	24	10	c+ ***
Lead	A	0.0082	0.0073	100.0	116.3	ug/L	16	10	c+ ***
Magnesium	A	0.0049	0.0041	10000	11580	ug/L	16	10	c+ ***
Molybdenum	A	0.0023	0.0023	100.0	113.7	ug/L	14	10	c+ ***
Potassium	A	0.0276	0.0059	10000	11870	ug/L	19	10	c+ ***
Silver	A	0.0033	0.0038	100.0	116.0	ug/L	16	10	c+ ***
Thallium	A	0.0068	0.0079	50.00	57.05	ug/L	14	10	c+ ***
Arsenic	E	0.0062	0.0050	100.0	95.83	ug/L	-4	10	
Chromium	E	0.0300	0.0191	100.0	91.34	ug/L	-9	10	
Cobalt	E	0.0343	0.0284	100.0	91.28	ug/L	-9	10	
Copper	E	0.1050	0.0214	100.0	97.00	ug/L	-3	10	
Manganese	E	0.0185	0.0133	100.0	92.88	ug/L	-7	10	
Nickel	E	0.0185	0.0076	100.0	91.55	ug/L	-8	10	
Sodium	E	0.0093	0.0038	10000	9239	ug/L	-8	10	
Vanadium	E	0.0264	0.0161	100.0	91.38	ug/L	-9	10	
Zinc	E	0.0069	0.0038	100.0	92.58	ug/L	-7	10	
Iron	H	0.0089	0.0062	10000	10150	ug/L	2	10	
Selenium	H	0.0010	9.2E-4	100.0	101.7	ug/L	2	10	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	64423	-20.40
Scandium	A	217916	182944	-16.05
Scandium	E	24038	23655	-1.59
Scandium	H	160718	147745	-8.07
Germanium	H	43273	39447	-8.84
Germanium	E	12195	11606	-4.83
Indium	A	456321	375827	-17.64
Bismuth	A	520569	403911	-22.41
Yttrium	A	416861	355288	-14.77
Terbium	A	734609	598866	-18.48

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186056 File : 15d21f00056 Time : 21-APR-2015 10:42
 Cal : 1015160186001 Caldate : 21-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	0.1044	0.1000	---	ug/L	CCB ***
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	5.816	0.1000	0.5000	ug/L	CCB ***
Manganese	E	0.2793	0.1000	0.05000	ug/L	CCB ***
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	25.71	10.00	15.00	ug/L	CCB ***
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	76067	-6.01
Scandium	A	217916	218678	0.35
Scandium	E	24038	22190	-7.69
Scandium	H	160718	149111	-7.22
Germanium	H	43273	40309	-6.85
Germanium	E	12195	11393	-6.58
Indium	A	456321	458218	0.42
Bismuth	A	520569	492295	-5.43
Yttrium	A	416861	423317	1.55
Terbium	A	734609	722513	-1.65

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186069 File : 15d21f00069 Time : 21-APR-2015 11:45
 Cal : 1015160186001 Caldate : 21-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0049	0.0045	10000	10390	ug/L	4	10	
Antimony	A	0.0028	0.0029	100.0	104.7	ug/L	5	10	
Barium	A	6.5E-4	6.8E-4	100.0	106.4	ug/L	6	10	
Beryllium	A	0.0038	0.0037	100.0	97.20	ug/L	-3	10	
Cadmium	A	7.6E-4	7.3E-4	100.0	104.6	ug/L	5	10	
Calcium	A	2.7E-4	1.8E-4	10000	11090	ug/L	11	10	c+ ***
Lead	A	0.0082	0.0064	100.0	102.4	ug/L	2	10	
Magnesium	A	0.0049	0.0037	10000	10450	ug/L	5	10	
Molybdenum	A	0.0023	0.0021	100.0	101.5	ug/L	2	10	
Potassium	A	0.0276	0.0053	10000	10640	ug/L	6	10	
Silver	A	0.0033	0.0033	100.0	102.6	ug/L	3	10	
Thallium	A	0.0068	0.0071	50.00	51.02	ug/L	2	10	
Arsenic	E	0.0062	0.0053	100.0	101.8	ug/L	2	10	
Chromium	E	0.0300	0.0214	100.0	102.3	ug/L	2	10	
Cobalt	E	0.0343	0.0322	100.0	103.3	ug/L	3	10	
Copper	E	0.1050	0.0236	100.0	107.0	ug/L	7	10	
Manganese	E	0.0185	0.0146	100.0	101.9	ug/L	2	10	
Nickel	E	0.0185	0.0086	100.0	103.6	ug/L	4	10	
Sodium	E	0.0093	0.0042	10000	10260	ug/L	3	10	
Vanadium	E	0.0264	0.0180	100.0	102.5	ug/L	3	10	
Zinc	E	0.0069	0.0043	100.0	103.2	ug/L	3	10	
Iron	H	0.0089	0.0064	10000	10450	ug/L	5	10	
Selenium	H	0.0010	9.5E-4	100.0	104.7	ug/L	5	10	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	80469	-0.57
Scandium	A	217916	222694	2.19
Scandium	E	24038	22094	-8.09
Scandium	H	160718	152091	-5.37
Germanium	H	43273	40507	-6.39
Germanium	E	12195	11481	-5.85
Indium	A	456321	446787	-2.09
Bismuth	A	520569	476411	-8.48
Yttrium	A	416861	421568	1.13
Terbium	A	734609	721564	-1.78

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186071 File : 15d21f00071 Time : 21-APR-2015 11:55
 Cal : 1015160186001 Caldate : 21-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.06030]	0.1000	---	ug/L	!CCB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	1.797	0.1000	0.5000	ug/L	CCB ***
Manganese	E	0.1432	0.1000	0.05000	ug/L	CCB ***
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	84146	3.98
Scandium	A	217916	220509	1.19
Scandium	E	24038	23102	-3.89
Scandium	H	160718	159971	-0.46
Germanium	H	43273	42695	-1.34
Germanium	E	12195	11796	-3.27
Indium	A	456321	450548	-1.27
Bismuth	A	520569	490069	-5.86
Yttrium	A	416861	417130	0.06
Terbium	A	734609	710977	-3.22

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186086 File : 15d21f00086 Time : 21-APR-2015 13:08
 Cal : 1015160186001 Caldate : 21-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0049	0.0043	10000	9986	ug/L	0	10	
Antimony	A	0.0028	0.0028	100.0	101.0	ug/L	1	10	
Barium	A	6.5E-4	6.7E-4	100.0	104.8	ug/L	5	10	
Beryllium	A	0.0038	0.0036	100.0	96.19	ug/L	-4	10	
Cadmium	A	7.6E-4	7.0E-4	100.0	100.4	ug/L	0	10	
Calcium	A	2.7E-4	1.7E-4	10000	10680	ug/L	7	10	
Lead	A	0.0082	0.0062	100.0	98.64	ug/L	-1	10	
Magnesium	A	0.0049	0.0035	10000	9957	ug/L	0	10	
Molybdenum	A	0.0023	0.0020	100.0	97.38	ug/L	-3	10	
Potassium	A	0.0276	0.0051	10000	10180	ug/L	2	10	
Silver	A	0.0033	0.0032	100.0	99.77	ug/L	0	10	
Thallium	A	0.0068	0.0069	50.00	49.54	ug/L	-1	10	
Arsenic	E	0.0062	0.0052	100.0	101.0	ug/L	1	10	
Chromium	E	0.0300	0.0207	100.0	99.13	ug/L	-1	10	
Cobalt	E	0.0343	0.0310	100.0	99.43	ug/L	-1	10	
Copper	E	0.1050	0.0220	100.0	99.69	ug/L	0	10	
Manganese	E	0.0185	0.0142	100.0	99.18	ug/L	-1	10	
Nickel	E	0.0185	0.0082	100.0	99.07	ug/L	-1	10	
Sodium	E	0.0093	0.0042	10000	10070	ug/L	1	10	
Vanadium	E	0.0264	0.0176	100.0	100.0	ug/L	0	10	
Zinc	E	0.0069	0.0042	100.0	101.2	ug/L	1	10	
Iron	H	0.0089	0.0064	10000	10520	ug/L	5	10	
Selenium	H	0.0010	9.6E-4	100.0	105.8	ug/L	6	10	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	81936	1.24
Scandium	A	217916	230406	5.73
Scandium	E	24038	23124	-3.80
Scandium	H	160718	151936	-5.46
Germanium	H	43273	40238	-7.01
Germanium	E	12195	11691	-4.13
Indium	A	456321	455108	-0.27
Bismuth	A	520569	473678	-9.01
Yttrium	A	416861	433602	4.02
Terbium	A	734609	726530	-1.10

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186088 File : 15d21f00088 Time : 21-APR-2015 13:18
 Cal : 1015160186001 Caldate : 21-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	[0.05520]	0.1000	0.05000	ug/L	!CCB
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.08400]	0.1000	---	ug/L	!CCB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	[0.08380]	0.1000	0.05000	ug/L	!CCB
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	84934	4.95
Scandium	A	217916	225632	3.54
Scandium	E	24038	23142	-3.73
Scandium	H	160718	156006	-2.93
Germanium	H	43273	41662	-3.72
Germanium	E	12195	11764	-3.53
Indium	A	456321	458846	0.55
Bismuth	A	520569	489813	-5.91
Yttrium	A	416861	426566	2.33
Terbium	A	734609	716494	-2.47

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015160186117
 Cal : 1015160186001
 Standards: S26727, S26751
 File : 15d21f00117
 Caldate : 21-APR-2015
 IDF : 1.0
 Time : 21-APR-2015 15:42

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.5202	0.1000	ug/L	
Barium	A	1.754	0.1000	ug/L	
Beryllium	A	[0.01970]	0.1000	ug/L	
Cadmium	A	2.499	0.1000	ug/L	
Lead	A	0.2135	0.1000	ug/L	
Silver	A	[0.07810]	0.1000	ug/L	
Thallium	A	[0.02260]	0.05000	ug/L	
Arsenic	E	0.5237	0.1000	ug/L	
Chromium	E	0.8630	0.1000	ug/L	
Cobalt	E	1.129	0.1000	ug/L	
Copper	E	0.3929	0.1000	ug/L	
Manganese	E	7.051	0.1000	ug/L	
Nickel	E	0.8627	0.1000	ug/L	
Vanadium	E	[0.07590]	0.1000	ug/L	
Zinc	E	1.722	0.5000	ug/L	
Selenium	H	[0.08680]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	107300	ug/L	107
Calcium	A	300000	296100	ug/L	99
Magnesium	A	100000	106700	ug/L	107
Molybdenum	A	2000	2005	ug/L	100
Potassium	A	100000	106900	ug/L	107
Sodium	E	250000	234400	ug/L	94
Phosphorus	E	100000	92030	ug/L	92
Iron	H	250000	241800	ug/L	97

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	85655	5.84
Scandium	A	217916	205695	-5.61
Scandium	E	24038	18741	-22.04
Scandium	H	160718	134782	-16.14
Germanium	H	43273	35021	-19.07
Germanium	E	12195	10415	-14.60
Indium	A	456321	374631	-17.90
Bismuth	A	520569	386824	-25.69
Yttrium	A	416861	371206	-10.95
Terbium	A	734609	650146	-11.50

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015160186118
 Cal : 1015160186001
 Standards: S26728, S26751
 File : 15d21f00118
 Caldate : 21-APR-2015
 IDF : 1.0
 Time : 21-APR-2015 15:47

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	103300	ug/L	3		
Cadmium	A	100.0	99.68	ug/L	0	20	
Calcium	A	300000	286200	ug/L	-5		
Magnesium	A	100000	102300	ug/L	2		
Molybdenum	A	2000	1920	ug/L	-4		
Potassium	A	100000	103900	ug/L	4		
Silver	A	50.00	47.94	ug/L	-4	20	
Arsenic	E	100.0	94.66	ug/L	-5	20	
Chromium	E	200.0	200.9	ug/L	0	20	
Cobalt	E	200.0	195.8	ug/L	-2	20	
Copper	E	200.0	190.6	ug/L	-5	20	
Manganese	E	200.0	199.6	ug/L	0	20	
Nickel	E	200.0	192.7	ug/L	-4	20	
Sodium	E	250000	238200	ug/L	-5		
Vanadium	E	200.0	203.9	ug/L	2	20	
Zinc	E	100.0	92.04	ug/L	-8	20	
Iron	H	250000	237700	ug/L	-5		
Selenium	H	100.0	95.19	ug/L	-5	20	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	160718	138719	-13.69
Scandium	A	217916	206284	-5.34
Scandium	E	24038	18708	-22.17
Germanium	H	43273	36248	-16.23
Germanium	E	12195	10437	-14.42
Indium	A	456321	381691	-16.35
Yttrium	A	416861	379415	-8.98

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015161893

Instrument : MET26
 Method : EPA 6020

Begun : 04/22/15 10:13
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d22k00001	X	RINSE			04/22/15 10:13	1.0	1	
002	15d22k00002	TUN				04/22/15 10:18	1.0	2	
003	15d22k00003	X	RINSE			04/22/15 10:22	1.0	1	
004	15d22k00004	ICALBLK	CALBLANK			04/22/15 10:27	1.0	1	
005	15d22k00005	ICAL				04/22/15 10:32	1.0	3 1	
006	15d22k00006	ICAL				04/22/15 10:40	1.0	4 1	
007	15d22k00007	ICAL				04/22/15 10:45	1.0	5 1	
008	15d22k00008	ICAL				04/22/15 10:49	1.0	6 1	
009	15d22k00009	ICAL				04/22/15 10:54	1.0	7 1	
010	15d22k00010	ICAL				04/22/15 10:58	1.0	8 1	
011	15d22k00011	X	RINSE			04/22/15 11:02	1.0	1	
012	15d22k00012	ICV				04/22/15 11:07	1.0	9 1	
013	15d22k00013	XCRI				04/22/15 11:12	1.0	10 1	
014	15d22k00014	ICB				04/22/15 11:16	1.0	1	
015	15d22k00015	CRI				04/22/15 11:21	1.0	10 1	
016	15d22k00016	ICSA				04/22/15 11:26	1.0	11 1	8:CA=290000
017	15d22k00017	ICSAB				04/22/15 11:30	1.0	12 1	12:CA=290000
018	15d22k00018	X	RINSE			04/22/15 11:35	1.0	1	
019	15d22k00019	X	RINSE			04/22/15 11:40	1.0	1	
020	15d22k00020	X	RINSE			04/22/15 11:45	1.0	1	
021	15d22k00021	X	RINSE			04/22/15 11:50	1.0	1	
022	15d22k00022	X	RINSE			04/22/15 11:54	1.0	1	
023	15d22k00023	MS	QC784304	Filtrate	222258	04/22/15 11:59	50.0	1	2:NA=71000
024	15d22k00024	MSD	QC784305	Filtrate	222258	04/22/15 12:04	50.0	1	2:NA=77000
025	15d22k00025	X	RINSE			04/22/15 12:08	1.0	1	
026	15d22k00026	MS	QC784304	Filtrate	222258	04/22/15 12:13	500.0	1	
027	15d22k00027	MSD	QC784305	Filtrate	222258	04/22/15 12:17	500.0	1	
028	15d22k00028	CCV				04/22/15 12:22	1.0	13 1	
029	15d22k00029	X	XCCB			04/22/15 12:27	1.0	1	
030	15d22k00030	CCB				04/22/15 12:31	1.0	1	
031	15d22k00031	SAMPLE	266091-004	Filtrate	222325	04/22/15 12:36	5000	1	
032	15d22k00032	SAMPLE	266091-005	Filtrate	222325	04/22/15 12:41	5000	1	
033	15d22k00033	SAMPLE	266091-006	Filtrate	222325	04/22/15 12:45	5000	1	
034	15d22k00034	SAMPLE	266091-007	Filtrate	222325	04/22/15 12:50	5000	1	
035	15d22k00035	CCV				04/22/15 12:55	1.0	13 1	
036	15d22k00036	X	XCCB			04/22/15 12:59	1.0	1	
037	15d22k00037	CCB				04/22/15 13:04	1.0	1	
038	15d22k00038	MSS	266087-001	Filtrate	222325	04/22/15 13:09	5.0	1	4:CA=33000
039	15d22k00039	MS	QC784573	Filtrate	222325	04/22/15 13:13	5.0	1	4:CA=34000
040	15d22k00040	MSD	QC784574	Filtrate	222325	04/22/15 13:18	5.0	1	4:CA=38000
041	15d22k00041	SER	QC784575	Filtrate	222325	04/22/15 13:22	25.0	1	
042	15d22k00042	PDS	QC784576	Filtrate	222325	04/22/15 13:27	5.0	14 15 16 1	
043	15d22k00043	SAMPLE	266087-002	Filtrate	222325	04/22/15 13:31	5.0	1	
044	15d22k00044	SAMPLE	266087-003	Filtrate	222325	04/22/15 13:36	5.0	1	
045	15d22k00045	SAMPLE	266087-004	Filtrate	222325	04/22/15 13:41	5.0	1	
046	15d22k00046	SAMPLE	266087-006	Filtrate	222325	04/22/15 13:45	5.0	1	
047	15d22k00047	SAMPLE	266087-007	Filtrate	222325	04/22/15 13:50	5.0	1	
048	15d22k00048	CCV				04/22/15 13:55	1.0	13 1	
049	15d22k00049	X	XCCB			04/22/15 13:59	1.0	1	
050	15d22k00050	CCB				04/22/15 14:04	1.0	1	
051	15d22k00051	SAMPLE	266087-009	Filtrate	222325	04/22/15 14:09	5.0	1	4:CA=53000
052	15d22k00052	CCV				04/22/15 14:13	1.0	13 1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015161893

Instrument : MET26
 Method : EPA 6020

Begun : 04/22/15 10:13
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d22k00053	X	XCCB			04/22/15 14:18	1.0	1	
054	15d22k00054	CCB				04/22/15 14:23	1.0	1	
055	15d22k00055	SAMPLE	266091-002	Filtrate	222325	04/22/15 14:27	5.0	1	4:CA=130000
056	15d22k00056	SAMPLE	266091-004	Filtrate	222325	04/22/15 14:32	5.0	1	
057	15d22k00057	SAMPLE	266091-005	Filtrate	222325	04/22/15 14:36	5.0	1	
058	15d22k00058	SAMPLE	266091-008	Filtrate	222325	04/22/15 14:41	5.0	1	
059	15d22k00059	SAMPLE	266091-009	Filtrate	222325	04/22/15 14:46	5.0	1	1:NA=65000
060	15d22k00060	SAMPLE	266091-010	Filtrate	222325	04/22/15 14:50	5.0	1	4:NA=32000
061	15d22k00061	SAMPLE	266091-012	Filtrate	222325	04/22/15 14:55	5.0	1	
062	15d22k00062	CCV				04/22/15 15:00	1.0	13 1	
063	15d22k00063	X	XCCB			04/22/15 15:04	1.0	1	
064	15d22k00064	CCB				04/22/15 15:09	1.0	1	
065	15d22k00065	ICSA				04/22/15 15:14	1.0	11 1	8:CA=290000
066	15d22k00066	ICSAB				04/22/15 15:18	1.0	12 1	10:CA=280000
067	15d22k00067	X	RINSE			04/22/15 15:23	1.0	1	
068	15d22k00068	X	RINSE			04/22/15 15:28	1.0	1	
069	15d22k00069	BLANK	QC784945	Filtrate	222114	04/22/15 15:33	5.0	1	
070	15d22k00070	X	RINSE			04/22/15 15:37	1.0	1	
071	15d22k00071	SAMPLE	265899-001	Filtrate	222114	04/22/15 15:42	5.0	1	4:NA=120000
072	15d22k00072	X	RINSE			04/22/15 15:47	1.0	1	
073	15d22k00073	SAMPLE	265899-003	Filtrate	222114	04/22/15 15:51	5.0	1	4:NA=970000
074	15d22k00074	X	RINSE			04/22/15 15:56	1.0	1	
075	15d22k00075	SAMPLE	265899-004	Filtrate	222114	04/22/15 16:01	5.0	1	4:NA=890000
076	15d22k00076	X	RINSE			04/22/15 16:06	1.0	1	
077	15d22k00077	SAMPLE	265899-005	Filtrate	222114	04/22/15 16:10	5.0	1	5:NA=1000000
078	15d22k00078	X	RINSE			04/22/15 16:15	1.0	1	
079	15d22k00079	SAMPLE	265899-006	Filtrate	222114	04/22/15 16:20	5.0	1	3:NA=240000
080	15d22k00080	X	RINSE			04/22/15 16:25	1.0	1	
081	15d22k00081	CCV				04/22/15 16:29	1.0	13 1	
082	15d22k00082	X	XCCB			04/22/15 16:34	1.0	1	
083	15d22k00083	CCB				04/22/15 16:39	1.0	1	
084	15d22k00084	ICSA				04/22/15 16:44	1.0	11 1	8:CA=290000
085	15d22k00085	ICSAB				04/22/15 16:48	1.0	12 1	10:CA=290000
086	15d22k00086	X	RINSE			04/22/15 16:53	1.0	1	
087	15d22k00087	X	RINSE			04/22/15 16:58	1.0	1	
088	15d22k00088	X	RINSE			04/22/15 17:03	1.0	1	
089	15d22k00089	X	RINSE			04/22/15 17:08	1.0	1	
090	15d22k00090	X	RINSE			04/22/15 17:12	1.0	1	
091	15d22k00091	X	RINSE			04/22/15 17:17	1.0	1	
092	15d22k00092	X	RINSE			04/22/15 17:22	1.0	1	
093	15d22k00093	CCV				04/22/15 17:27	1.0	13 1	
094	15d22k00094	X	XCCB			04/22/15 17:31	1.0	1	
095	15d22k00095	CCB				04/22/15 17:36	1.0	1	
096	15d22k00096	X	RINSE			04/22/15 17:41	1.0	1	
097	15d22k00097	X	RINSE			04/22/15 21:31	1.0	1	
098	15d22k00098	BLANK	QC785199	Miscell.	222494	04/22/15 21:36	25.0	1	
099	15d22k00099	BS	QC785200	Miscell.	222494	04/22/15 21:40	25.0	1	
100	15d22k00100	BSD	QC785201	Miscell.	222494	04/22/15 21:45	25.0	1	
101	15d22k00101	MSS	266255-003	Miscell.	222494	04/22/15 21:49	25.0	1	2:CA=55000
102	15d22k00102	MS	QC785202	Miscell.	222494	04/22/15 21:54	25.0	1	
103	15d22k00103	MSD	QC785203	Miscell.	222494	04/22/15 21:59	25.0	1	
104	15d22k00104	SAMPLE	266181-001	Miscell.	222494	04/22/15 22:03	25.0	1	1:ZN=370

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015161893

Instrument : MET26
 Method : EPA 6020

Begun : 04/22/15 10:13
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d22k00105	SAMPLE	266255-001	Miscell.	222494	04/22/15 22:08	25.0	1	3:CA=69000
106	15d22k00106	SAMPLE	266255-002	Miscell.	222494	04/22/15 22:12	25.0	1	2:CA=45000
107	15d22k00107	SAMPLE	266255-004	Miscell.	222494	04/22/15 22:17	25.0	1	2:CA=61000
108	15d22k00108	CCV				04/22/15 22:22	1.0	13 1	
109	15d22k00109	X	XCCB			04/22/15 22:26	1.0	1	
110	15d22k00110	CCB				04/22/15 22:31	1.0	1	
111	15d22k00111	SAMPLE	266255-005	Miscell.	222494	04/22/15 22:36	25.0	1	3:CA=41000
112	15d22k00112	SAMPLE	266255-006	Miscell.	222494	04/22/15 22:40	25.0	1	2:CA=59000
113	15d22k00113	CCV				04/22/15 22:45	1.0	13 1	
114	15d22k00114	X	XCCB			04/22/15 22:50	1.0	1	
115	15d22k00115	CCB				04/22/15 22:54	1.0	1	
116	15d22k00116	ICSA				04/22/15 22:59	1.0	11 1	8:CA=290000
117	15d22k00117	ICSAB				04/22/15 23:04	1.0	12 1	9:CA=270000
118	15d22k00118	X	RINSE			04/22/15 23:09	1.0	1	
119	15d22k00119	X	RINSE			04/22/15 23:14	1.0	1	
120	15d22k00120	X	RINSE			04/22/15 23:18	1.0	1	
121	15d22k00121	X	RINSE			04/22/15 23:23	1.0	1	
122	15d22k00122	X	RINSE			04/22/15 23:28	1.0	1	
123	15d22k00123	X	RINSE			04/22/15 23:33	1.0	1	
124	15d22k00124	X	RINSE			04/22/15 23:38	1.0	1	
125	15d22k00125	X	RINSE			04/22/15 23:42	1.0	1	

CRT 04/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 85.

NT 04/23/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 86 through 125.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015161893

Date : 04/22/15
 Sequence : MET26 15d22k00

Reference : 15d22k00004
 Analyzed : 04/22/15 10:27

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	1999945	2853629	188614	1640199	390445	94073	3651265	2445386	3998464	4475593
		LOWER LIMIT	599984	856089	56584	492060	117134	28222	1095380	733616	1199539	1342678
		UPPER LIMIT	2399934	3424355	226337	1968239	468534	112888	4381518	2934463	4798157	5370712
014	ICB		2031970	2937841	201397	1660577	394618	99062	3769570	2495790	4151721	4613334
016	ICSA		1519983	2365928	166190	1488119	347502	89077	2953629	1975424	3439882	4006558
017	ICSAB		1446519	2268997	148791	1333300	321475	81642	2851823	1909734	3301304	3851888
023	MS	QC784304	1794492	2671825	189047	1526990	360338	91246	3390779	2213527	3765803	4277313
024	MSD	QC784305	1772638	2577763	172546	1482245	353661	86097	3268861	2146730	3645296	4107125
026	MS	QC784304	1767850	2491145	176649	1444125	351300	88205	3310082	2233529	3599262	4081653
027	MSD	QC784305	1722089	2439295	172613	1461993	351828	86796	3203062	2184173	3481487	3950860
028	CCV		1745733	2518003	180918	1441870	343831	88208	3281744	2212528	3600858	4161547
030	CCB		1898066	2749326	182229	1455064	345602	89576	3584467	2418128	3910851	4451043
031	SAMPLE	266091-004	1794745	2507018	190279	1485550	357871	91898	3297412	2242169	3586495	4083755
032	SAMPLE	266091-005	1768544	2433549	182452	1309234	325179	89460	3224153	2202431	3510881	3992775
033	SAMPLE	266091-006	1836347	2582727	179521	1470907	351679	88173	3411439	2311965	3696050	4220043
034	SAMPLE	266091-007	1842441	2560442	180882	1486814	355003	88331	3387174	2292392	3653438	4179398
035	CCV		1781891	2538012	178668	1468501	351389	87704	3274934	2209338	3618693	4169208
037	CCB		1903246	2644607	194644	1547849	368056	93326	3421520	2295660	3734724	4192270
038	MSS	266087-001	1721537	2456385	177011	1439051	341164	87500	3224783	2228728	3522563	4158140
039	MS	QC784573	1608475	2349678	170681	1407673	340320	84627	3110685	2191922	3432060	4076735
040	MSD	QC784574	1459869	2109088	164059	1419401	340053	82189	2810728	2013007	3069488	3688535
041	SER	QC784575	1597559	2320219	173426	1197335	312024	86926	3213496	2271761	3432138	4114925
042	PDS	QC784576	1506056	2283588	168423	1104581	276800	84190	3016554	2158425	3319616	4015280
043	SAMPLE	266087-002	1489206	2225588	170979	1340029	331121	85875	3048963	2174482	3271795	3954429
044	SAMPLE	266087-003	1411737	2091267	168877	1300045	325520	84950	2882952	2074054	3071703	3748190
045	SAMPLE	266087-004	1444700	2155942	173150	1292621	321458	85327	2945982	2140687	3170081	3859141
046	SAMPLE	266087-006	1446226	2146010	138636	1305145	319433	73647	2992256	2160059	3181814	3910369
047	SAMPLE	266087-007	1376102	2007500	166823	1195050	297609	81234	2851338	2086712	3012120	3683419
048	CCV		1454959	2211714	161135	1342783	317231	80542	3066584	2191051	3319610	4027289
050	CCB		1344503	1724765	173447	1339109	328366	85626	2495240	1851096	2613139	3128035
051	SAMPLE	266087-009	1458113	2203862	165179	1267542	308820	82652	2995324	2119566	3253677	3889733
052	CCV		1521136	2312736	176937	1353903	329367	87072	3104420	2131617	3396519	3996563
054	CCB		1563428	2229394	174852	1361277	332718	85477	3089660	2178301	3301044	3894766
055	SAMPLE	266091-002	1510053	2220096	171082	1317085	306903	82606	2800660	1895155	3143458	3693338
056	SAMPLE	266091-004	1466442	2154027	178130	1342240	330295	87381	2914837	2066865	3146419	3720267
057	SAMPLE	266091-005	1535685	2229635	170478	1282025	317883	84112	3070986	2157332	3269628	3926240
058	SAMPLE	266091-008	1562232	2215847	164476	1357466	323856	81326	3042093	2133397	3262129	3839220
059	SAMPLE	266091-009	1546157	2193716	161787	1268056	309318	80621	2961478	2096329	3197570	3832528
060	SAMPLE	266091-010	1562804	2254051	166163	1288488	314015	82716	3005882	2061621	3266342	3839642
061	SAMPLE	266091-012	1573338	2252044	176515	1346815	326932	85651	3054504	2137166	3297362	3837418
062	CCV		1602186	2286858	158293	1200088	298314	78997	3040294	2087065	3337818	3906825
064	CCB		1595135	2257143	170060	1355112	326601	83912	3080189	2149229	3335113	3845782
065	ICSA		1318766	2073481	146560	1239509	296504	78686	2683668	1810326	3054892	3658422
066	ICSAB		1228710	1992671	133514	1159300	277451	72415	2634455	1800001	3005018	3620930
069	BLANK	QC784945	1197547	1699391	150177	1125059	285142	75156	2479551	1789052	2616506	3141813
071	SAMPLE	265899-001	1329297	2050529	148321	1178530	281548	73066	2694226	1788855	2984484	3506647
073	SAMPLE	265899-003	1401778	2205574	163435	1283148	294295	78480	2638072	1615091	3011614	3348872
075	SAMPLE	265899-004	1441548	2314217	170711	1268060	292212	80165	2689370	1683273	3149716	3432824
077	SAMPLE	265899-005	1599475	2471538	181484	1370167	308349	83648	2728807	1628501	3254113	3411577
079	SAMPLE	265899-006	1228809	1936766	144489	1161505	279068	71197	2554796	1700783	2826187	3302197
081	CCV		1285098	1998852	143864	1125594	275846	72876	2768744	1911242	3004358	3564455

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015161893

Date : 04/22/15
 Sequence : MET26 15d22k00

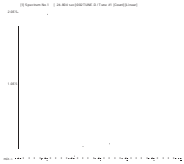
Reference : 15d22k00004
 Analyzed : 04/22/15 10:27

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
083	CCB		1427104	2088251	155160	1223171	300237	76775	2886146	1983410	3100895	3594896
084	ICSA		1163462	1917139	134223	1114782	269852	72138	2537634	1685998	2868993	3450177
085	ICSAB		1047362	1756903	125061	1064298	260677	67826	2346163	1619432	2685325	3210781
093	CCV		1242693	1922754	139783	1101721	272561	70643	2709016	1875965	2936347	3524084
095	CCB		1296058	1971785	144334	1130353	281890	72599	2845569	1971335	3004014	3569601
098	BLANK	QC785199	1308684	2065596	149165	1217653	299857	75785	2904161	1970799	3129928	3594745
099	BS	QC785200	1221913	1858356	155045	1225393	299887	76989	2668067	1836400	2851242	3325420
100	BSD	QC785201	1251654	1996197	149325	1159975	287351	74873	2831083	1925328	3050925	3522497
101	MSS	266255-003	1249035	2025713	152803	1151446	279020	74847	2829445	1899123	3143326	3575071
102	MS	QC785202	1230916	2031861	149349	1173706	280896	73208	2768945	1863578	3112996	3514241
103	MSD	QC785203	1210212	1977015	139332	1153549	274518	69319	2734453	1848043	3047695	3480145
104	SAMPLE	266181-001	1246579	1948422	147126	1140861	284010	73764	2772366	1894750	2969155	3451519
105	SAMPLE	266255-001	1157190	1869067	142159	1104720	267389	70194	2603652	1794056	2902723	3303196
106	SAMPLE	266255-002	1180118	1960476	141533	1101609	268718	69767	2695531	1855251	3019402	3437952
107	SAMPLE	266255-004	1163933	1899948	143469	1128951	269304	69989	2640166	1806869	2931927	3371990
108	CCV		1221477	1990496	142274	1120972	277266	72461	2790352	1845436	3048454	3548524
110	CCB		1262160	1994927	143798	1085627	277573	71797	2813212	1898157	3006137	3479207
111	SAMPLE	266255-005	1152923	1908293	139694	1131479	270008	69302	2628379	1796232	2953292	3357386
112	SAMPLE	266255-006	1158825	1905139	143581	1127070	269393	70881	2645016	1809924	2953996	3378878
113	CCV		1205814	1979341	141010	1123018	276041	71333	2776677	1844566	3026497	3521085
115	CCB		1192556	1932646	139767	1100245	274447	70311	2792889	1879644	2945734	3460995
116	ICSA		959899	1704456	121133	1030467	252429	66450	2355190	1557711	2647058	3161206
117	ICSAB		820627	1621621	116872	948081	236924	63458	2208962	1502590	2546600	3012032

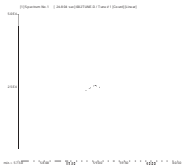
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D22k00.B\002TUNE.D
 Date Acquired: Apr 22 2015 10:18 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

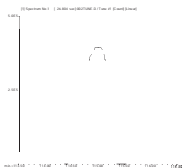
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	135694	136270	135407	133904	133186	1.12	5.00	
59 Co	150396	149176	148536	148235	147846	1.50	5.00	
115 In	2017262	2093478	2065005	2001019	1979828	2.78	5.00	
205 Tl	82105	80892	80531	80298	79428	1.36	5.00	



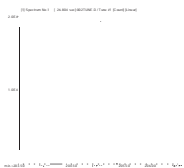
7 Li
Mass Calib.
 Actual: 6.95
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266019 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015161893001
 Units : ug/L
 Date : 22-APR-2015 10:27
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d22k00005	1015161893005	22-APR-2015 10:32	S27043, S26751	
L2	15d22k00006	1015161893006	22-APR-2015 10:40	S27044, S26751	
L3	15d22k00007	1015161893007	22-APR-2015 10:45	S27045, S26751	
L4	15d22k00008	1015161893008	22-APR-2015 10:49	S27046, S26751	
L5	15d22k00009	1015161893009	22-APR-2015 10:54	S27041, S26751	
L6	15d22k00010	1015161893010	22-APR-2015 10:58	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0057	0.0058	0.0055	0.0051	0.0052	0.0052	BLNK	-0.4015	192.144		0.0054	1.000	0.995	
Antimony	A	0.0030	0.0029	0.0027	0.0026	0.0029	0.0029	BLNK	-0.0118	341.195		0.0029	1.000	0.995	
Barium	A	9.1E-4	8.0E-4	7.8E-4	7.4E-4	7.5E-4	7.6E-4	BLNK	-0.0151	1312.114		7.9E-4	1.000	0.995	
Beryllium	A	0.0027	0.0027	0.0025	0.0025	0.0025	0.0026	BLNK	-0.0065	389.624		0.0026	1.000	0.995	
Cadmium	A	8.4E-4	8.3E-4	7.9E-4	7.4E-4	7.5E-4	7.7E-4	BLNK	-0.0124	1309.30		7.9E-4	1.000	0.995	
Calcium	A	0.0024	6.3E-4	3.9E-4	1.9E-4	1.8E-4	1.8E-4	BLNK	-120.87	5542.30		6.6E-4	1.000	0.995	
Lead	A	0.0093	0.0064	0.0057	0.0051	0.0052	0.0053	BLNK	-0.0708	188.804		0.0062	1.000	0.995	
Magnesium	A	0.0056	0.0050	0.0047	0.0043	0.0044	0.0043	BLNK	-1.0297	230.116		0.0047	1.000	0.995	
Molybdenum	A	0.0038	0.0027	0.0021	0.0020	0.0020	0.0021	BLNK	-0.1073	478.129		0.0024	0.999	0.995	
Potassium	A	0.0744	0.0199	0.0125	0.0062	0.0057	0.0057	BLNK	-120.67	176.928		0.0207	1.000	0.995	
Silver	A	0.0037	0.0038	0.0037	0.0036	0.0038	0.0038	BLNK	-0.0072	264.205		0.0037	1.000	0.995	
Thallium	A	0.0081	0.0073	0.0069	0.0067	0.0070	0.0079	BLNK	-0.0137	129.914		0.0073	0.997	0.995	
Arsenic	E	0.0094	0.0061	0.0063	0.0055	0.0055	0.0055	BLNK	-0.0906	182.656		0.0064	1.000	0.995	
Chromium	E	0.0585	0.0311	0.0290	0.0246	0.0239	0.0250	BLNK	-0.1290	40.3372		0.0320	1.000	0.995	
Cobalt	E	0.0383	0.0375	0.0393	0.0371	0.0363	0.0371	BLNK	-0.0053	27.0519		0.0376	1.000	0.995	
Copper	E	0.1078	0.0451	0.0360	0.0277	0.0260	0.0254	BLNK	-0.3870	39.2429		0.0447	1.000	0.995	
Manganese	E	0.0164	0.0151	0.0157	0.0148	0.0147	0.0145	BLNK	-0.0078	68.8417		0.0152	1.000	0.995	
Nickel	E	0.0130	0.0110	0.0112	0.0101	0.0098	0.0095	BLNK	-0.0179	104.541		0.0108	1.000	0.995	
Sodium	E	0.0243	0.0091	0.0071	0.0053	0.0048	0.0047	BLNK	-42.519	212.714		0.0092	1.000	0.995	
Vanadium	E	0.0797	0.0312	0.0268	0.0201	0.0197	0.0195	BLNK	-0.3206	51.2584		0.0328	1.000	0.995	
Zinc	E		0.0176	0.0070	0.0049	0.0046	0.0045	BLNK	-0.3874	222.219		0.0077	1.000	0.995	
Iron	H	0.0079	0.0082	0.0081	0.0077	0.0073	0.0071	BLNK	-1.0924	140.372		0.0077	1.000	0.995	
Selenium	H	0.0010	10.0E-4	0.0010	0.0010	9.7E-4	9.4E-4	BLNK	-0.0186	1054.59		0.0010	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	5	50.000	10	100.00	5	1000.0	-2	10000	0	20000	0
Antimony	A	0.1000	-8	0.5000	-3	1.0000	-8	10.000	-10	100.00	-1	200.00	0
Barium	A	0.1000	4	0.5000	2	1.0000	0	10.000	-3	100.00	-1	200.00	0
Beryllium	A	0.1000	-1	0.5000	3	1.0000	-5	10.000	-4	100.00	-2	200.00	1
Cadmium	A	0.1000	-2	0.5000	6	1.0000	2	10.000	-3	100.00	-2	200.00	0
Calcium	A	10.000	24	50.000	9	100.00	-4	1000.0	-7	10000	0	20000	0
Lead	A	0.1000	5	0.5000	7	1.0000	1	10.000	-5	100.00	-2	200.00	0
Magnesium	A	10.000	19	50.000	13	100.00	7	1000.0	-1	10000	1	20000	0
Molybdenum	A	0.1000	-24	0.5000	7	1.0000	-10	10.000	-8	100.00	-6	200.00	1
Potassium	A	10.000	10	50.000	11	100.00	0	1000.0	-2	10000	0	20000	0
Silver	A	0.1000	-9	0.5000	-2	1.0000	-2	10.000	-6	100.00	0	200.00	0
Thallium	A	0.0500	-22	0.2500	-10	0.5000	-13	5.0000	-13	50.000	-10	100.00	2
Arsenic	E	0.1000	-19	0.5000	-6	1.0000	6	10.000	0	100.00	0	200.00	0
Chromium	E	0.1000	7	0.5000	0	1.0000	4	10.000	-2	100.00	-4	200.00	1
Cobalt	E	0.1000	-2	0.5000	0	1.0000	6	10.000	0	100.00	-2	200.00	0
Copper	E	0.1000	-64	0.5000	0	1.0000	3	10.000	5	100.00	2	200.00	0
Manganese	E	0.1000	5	0.5000	3	1.0000	7	10.000	2	100.00	1	200.00	0
Nickel	E	0.1000	18	0.5000	11	1.0000	15	10.000	6	100.00	2	200.00	0
Sodium	E	10.000	-9	50.000	8	100.00	8	1000.0	8	10000	2	20000	0
Vanadium	E	0.1000	-12	0.5000	-4	1.0000	5	10.000	0	100.00	0	200.00	0
Zinc	E			0.5000	214	1.0000	16	10.000	4	100.00	2	200.00	-1
Iron	H	10.000	0	50.000	13	100.00	12	1000.0	7	10000	2	20000	-1
Selenium	H	0.1000	-9	0.5000	1	1.0000	9	10.000	6	100.00	2	200.00	-1

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015161893001

Cal Date : 22-APR-2015

ICV 1015161893012 (15d22k00012 22-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10110	ug/L	1	10	
Antimony	A	100.0	101.6	ug/L	2	10	
Barium	A	100.0	100.6	ug/L	1	10	
Beryllium	A	100.0	98.38	ug/L	-2	10	
Cadmium	A	100.0	100.7	ug/L	1	10	
Calcium	A	10000	9989	ug/L	0	10	
Lead	A	100.0	100.0	ug/L	0	10	
Magnesium	A	10000	10170	ug/L	2	10	
Molybdenum	A	100.0	96.69	ug/L	-3	10	
Potassium	A	10000	10170	ug/L	2	10	
Silver	A	100.0	101.9	ug/L	2	10	
Thallium	A	50.00	46.07	ug/L	-8	10	
Arsenic	E	100.0	102.1	ug/L	2	10	
Chromium	E	100.0	98.00	ug/L	-2	10	
Cobalt	E	100.0	100.0	ug/L	0	10	
Copper	E	100.0	103.5	ug/L	4	10	
Manganese	E	100.0	102.9	ug/L	3	10	
Nickel	E	100.0	104.2	ug/L	4	10	
Sodium	E	10000	10280	ug/L	3	10	
Vanadium	E	100.0	102.4	ug/L	2	10	
Zinc	E	100.0	103.4	ug/L	3	10	
Iron	H	10000	10450	ug/L	5	10	
Selenium	H	100.0	104.0	ug/L	4	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015161893014 File : 15d22k00014 Time : 22-APR-2015 11:16
 Cal : 1015161893001 Caldate : 22-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	[0.05140]	0.1000	0.05000	ug/L	!ICB
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.07520]	0.1000	---	ug/L	!ICB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	2031970	1.60
Scandium	A	2853629	2937841	2.95
Scandium	E	188614	201397	6.78
Scandium	H	1640199	1660577	1.24
Germanium	H	390445	394618	1.07
Germanium	E	94073	99062	5.30
Indium	A	3651265	3769570	3.24
Bismuth	A	2445386	2495790	2.06
Yttrium	A	3998464	4151721	3.83
Terbium	A	4475593	4613334	3.08

!=warning ICB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015161893016
 Cal : 1015161893001
 Standards: S26727, S26751
 File : 15d22k00016
 Caldate : 22-APR-2015
 IDF : 1.0
 Time : 22-APR-2015 11:26

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4677	0.1000	ug/L	
Barium	A	1.805	0.1000	ug/L	
Beryllium	A	[0.005800]	0.1000	ug/L	
Cadmium	A	2.432	0.1000	ug/L	
Lead	A	0.1983	0.1000	ug/L	
Silver	A	[0.06540]	0.1000	ug/L	
Thallium	A	[0.01620]	0.05000	ug/L	
Arsenic	E	0.6910	0.1000	ug/L	
Chromium	E	0.8507	0.1000	ug/L	
Cobalt	E	1.127	0.1000	ug/L	
Copper	E	1.119	0.1000	ug/L	
Manganese	E	7.696	0.1000	ug/L	
Nickel	E	1.216	0.1000	ug/L	
Vanadium	E	[-0.06020]	0.1000	ug/L	
Zinc	E	2.801	0.5000	ug/L	
Selenium	H	[0.07710]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94480	ug/L	94
Calcium	A	300000	289000	ug/L	96
Magnesium	A	100000	91560	ug/L	92
Molybdenum	A	2000	1935	ug/L	97
Potassium	A	100000	95210	ug/L	95
Sodium	E	250000	237800	ug/L	95
Phosphorus	E	100000	105300	ug/L	105
Iron	H	250000	238000	ug/L	95

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1519983	-24.00
Scandium	A	2853629	2365928	-17.09
Scandium	E	188614	166190	-11.89
Scandium	H	1640199	1488119	-9.27
Germanium	H	390445	347502	-11.00
Germanium	E	94073	89077	-5.31
Indium	A	3651265	2953629	-19.11
Bismuth	A	2445386	1975424	-19.22
Yttrium	A	3998464	3439882	-13.97
Terbium	A	4475593	4006558	-10.48

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015161893017
 Cal : 1015161893001
 Standards: S26728, S26751
 File : 15d22k00017
 Caldate : 22-APR-2015
 IDF : 1.0
 Time : 22-APR-2015 11:30

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	94670	ug/L	-5		
Cadmium	A	100.0	99.48	ug/L	-1	20	
Calcium	A	300000	289100	ug/L	-4		
Magnesium	A	100000	91880	ug/L	-8		
Molybdenum	A	2000	1959	ug/L	-2		
Potassium	A	100000	95330	ug/L	-5		
Silver	A	50.00	46.56	ug/L	-7	20	
Arsenic	E	100.0	100.9	ug/L	1	20	
Chromium	E	200.0	199.4	ug/L	0	20	
Cobalt	E	200.0	206.8	ug/L	3	20	
Copper	E	200.0	198.1	ug/L	-1	20	
Manganese	E	200.0	217.5	ug/L	9	20	
Nickel	E	200.0	200.4	ug/L	0	20	
Sodium	E	250000	247200	ug/L	-1		
Vanadium	E	200.0	212.4	ug/L	6	20	
Zinc	E	100.0	97.98	ug/L	-2	20	
Iron	H	250000	247600	ug/L	-1		
Selenium	H	100.0	98.24	ug/L	-2	20	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	1640199	1333300	-18.71
Scandium	A	2853629	2268997	-20.49
Scandium	E	188614	148791	-21.11
Germanium	H	390445	321475	-17.66
Germanium	E	94073	81642	-13.21
Indium	A	3651265	2851823	-21.89
Yttrium	A	3998464	3301304	-17.44

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015161893028 File : 15d22k00028 Time : 22-APR-2015 12:22
 Cal : 1015161893001 Caldate : 22-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0054	0.0054	10000	10290	ug/L	3	10	
Antimony	A	0.0029	0.0030	100.0	103.3	ug/L	3	10	
Barium	A	7.9E-4	7.9E-4	100.0	103.4	ug/L	3	10	
Beryllium	A	0.0026	0.0025	100.0	96.64	ug/L	-3	10	
Cadmium	A	7.9E-4	7.8E-4	100.0	102.5	ug/L	3	10	
Calcium	A	6.6E-4	1.9E-4	10000	10260	ug/L	3	10	
Lead	A	0.0062	0.0055	100.0	103.4	ug/L	3	10	
Magnesium	A	0.0047	0.0045	10000	10320	ug/L	3	10	
Molybdenum	A	0.0024	0.0021	100.0	98.79	ug/L	-1	10	
Potassium	A	0.0207	0.0060	10000	10410	ug/L	4	10	
Silver	A	0.0037	0.0039	100.0	104.3	ug/L	4	10	
Thallium	A	0.0073	0.0073	50.00	47.24	ug/L	-6	10	
Arsenic	E	0.0064	0.0055	100.0	100.6	ug/L	1	10	
Chromium	E	0.0320	0.0234	100.0	94.22	ug/L	-6	10	
Cobalt	E	0.0376	0.0355	100.0	96.03	ug/L	-4	10	
Copper	E	0.0447	0.0254	100.0	99.38	ug/L	-1	10	
Manganese	E	0.0152	0.0146	100.0	100.5	ug/L	1	10	
Nickel	E	0.0108	0.0095	100.0	99.80	ug/L	0	10	
Sodium	E	0.0092	0.0047	10000	10040	ug/L	0	10	
Vanadium	E	0.0328	0.0193	100.0	98.75	ug/L	-1	10	
Zinc	E	0.0077	0.0045	100.0	99.86	ug/L	0	10	
Iron	H	0.0077	0.0074	10000	10440	ug/L	4	10	
Selenium	H	0.0010	9.9E-4	100.0	104.1	ug/L	4	10	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1745733	-12.71
Scandium	A	2853629	2518003	-11.76
Scandium	E	188614	180918	-4.08
Scandium	H	1640199	1441870	-12.09
Germanium	H	390445	343831	-11.94
Germanium	E	94073	88208	-6.23
Indium	A	3651265	3281744	-10.12
Bismuth	A	2445386	2212528	-9.52
Yttrium	A	3998464	3600858	-9.94
Terbium	A	4475593	4161547	-7.02

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015161893030
Cal : 1015161893001

File : 15d22k00030
Caldate : 22-APR-2015

IDF : 1.0
Time : 22-APR-2015 12:31

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	---	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1898066	-5.09
Scandium	A	2853629	2749326	-3.66
Scandium	E	188614	182229	-3.39
Scandium	H	1640199	1455064	-11.29
Germanium	H	390445	345602	-11.49
Germanium	E	94073	89576	-4.78
Indium	A	3651265	3584467	-1.83
Bismuth	A	2445386	2418128	-1.11
Yttrium	A	3998464	3910851	-2.19
Terbium	A	4475593	4451043	-0.55

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015161893065
 Cal : 1015161893001
 Standards: S26727, S26751

File : 15d22k00065
 Caldate : 22-APR-2015

IDF : 1.0
 Time : 22-APR-2015 15:14

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4679	0.1000	ug/L	
Barium	A	1.821	0.1000	ug/L	
Beryllium	A	[0.01020]	0.1000	ug/L	
Cadmium	A	2.587	0.1000	ug/L	
Lead	A	0.2012	0.1000	ug/L	
Silver	A	[0.06960]	0.1000	ug/L	
Thallium	A	[0.01580]	0.05000	ug/L	
Arsenic	E	0.7091	0.1000	ug/L	
Chromium	E	0.8480	0.1000	ug/L	
Cobalt	E	1.107	0.1000	ug/L	
Copper	E	1.114	0.1000	ug/L	
Manganese	E	7.761	0.1000	ug/L	
Nickel	E	1.206	0.1000	ug/L	
Vanadium	E	[-0.04970]	0.1000	ug/L	
Zinc	E	2.775	0.5000	ug/L	
Selenium	H	0.1150	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94440	ug/L	94
Calcium	A	300000	287800	ug/L	96
Magnesium	A	100000	91890	ug/L	92
Molybdenum	A	2000	1950	ug/L	98
Potassium	A	100000	95560	ug/L	96
Sodium	E	250000	238400	ug/L	95
Phosphorus	E	100000	107700	ug/L	108
Iron	H	250000	244400	ug/L	98

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1318766	-34.06
Scandium	A	2853629	2073481	-27.34
Scandium	E	188614	146560	-22.30
Scandium	H	1640199	1239509	-24.43
Germanium	H	390445	296504	-24.06
Germanium	E	94073	78686	-16.36
Indium	A	3651265	2683668	-26.50
Bismuth	A	2445386	1810326	-25.97
Yttrium	A	3998464	3054892	-23.60
Terbium	A	4475593	3658422	-18.26

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266019 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015161893066 File : 15d22k00066
 Cal : 1015161893001 Caldate : 22-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 22-APR-2015 15:18

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	89550	ug/L	-10		
Cadmium	A	100.0	95.68	ug/L	-4	20	
Calcium	A	300000	278400	ug/L	-7		
Magnesium	A	100000	86920	ug/L	-13		
Molybdenum	A	2000	1873	ug/L	-6		
Potassium	A	100000	91470	ug/L	-9		
Silver	A	50.00	44.32	ug/L	-11	20	
Arsenic	E	100.0	100.8	ug/L	1	20	
Chromium	E	200.0	189.5	ug/L	-5	20	
Cobalt	E	200.0	196.3	ug/L	-2	20	
Copper	E	200.0	187.4	ug/L	-6	20	
Manganese	E	200.0	211.1	ug/L	6	20	
Nickel	E	200.0	190.7	ug/L	-5	20	
Sodium	E	250000	242000	ug/L	-3		
Vanadium	E	200.0	202.8	ug/L	1	20	
Zinc	E	100.0	94.97	ug/L	-5	20	
Iron	H	250000	243300	ug/L	-3		
Selenium	H	100.0	99.42	ug/L	-1	20	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	1640199	1159300	-29.32
Scandium	A	2853629	1992671	-30.17
Scandium	E	188614	133514	-29.21
Germanium	H	390445	277451	-28.94
Germanium	E	94073	72415	-23.02
Indium	A	3651265	2634455	-27.85
Yttrium	A	3998464	3005018	-24.85

SAMPLE PREPARATION SUMMARY

Batch # : 222258		Analysis : ICPMS-200
Started By : RFC	Prep Date : 14-APR-2015 15:35	Finished By : RFC
Method : METHOD		Units : mL
Spike #1 ID : S26229	Spike #2 ID : S26230	Spike #3 ID : S26912

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
265932-001		Filtrate	50	50	1	1.0						6020	
265932-003		Filtrate	50	50	1	1.0						6020	
265932-004		Filtrate	50	50	1	1.0						6020	
265939-001		Filtrate	50	50	1	1.0						200.8	
265994-001		Filtrate	50	50	1	1.0						6020	
266019-003		Filtrate	50	50	1	1.0						6020	
266019-005		Filtrate	50	50	1	1.0						6020	
QC784300	BLANK	Filtrate	50	50	1	1.0							4/8/15 QC783520
QC784301	BLANK	Filtrate	50	50	1	1.0							4/10/15 QC783906
QC784302	BS	Filtrate	50	50	1	1.0		.5	.5	.5			
QC784303	BSD	Filtrate	50	50	1	1.0		.5	.5	.5			
QC784304	MS	Filtrate	50	50	1	1.0		.5	.5	.5			
QC784305	MSD	Filtrate	50	50	1	1.0		.5	.5	.5			
QC784306	MS	Filtrate	50	50	1	1.0		.5	.5	.5			
QC784307	MSD	Filtrate	50	50	1	1.0		.5	.5	.5			
QC784308	SER	Filtrate	50	50	1	1.0							
QC784309	PDS	Filtrate	50	50	1	1.0							

Analyst: JDB Date: 04/21/15 Reviewer: NT Date: 04/21/15

Water Digestion for ICP-MS

Curtis & Tompkins, Ltd.

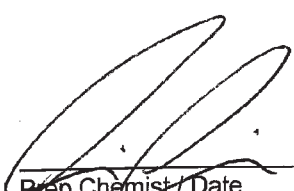
LIMS Batch #: 222258
 Digested by: RFC
 Date Digested: 4/14/15

Digestion Method **BK3678**
 EPA 200.8 for ICP-M Page 6
 EPA 3005A for ICP-MS
 FILTRATE

Lvl.	Sample #	Container ID	Volume Sample (mL)	Final Volume (mL)	Filtered? (y/n)	ID ✓	Comments
	BLANK 4/8/15		50 <input type="checkbox"/>	50 <input type="checkbox"/>	N	✓	QC783520 QC784300
	BLANK 4/10/15		50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	QC783906 -301
	BS		50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	-302
	BSD		50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	-303
5	MS: 265932-004	U	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	265932-004 -304
	MS: 266019-005	J	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	266019-005 -306
	MSD: 265932-004	V	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	265932-004 -305
	MSD: 266019-005	J	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	266019-005 ↓ -307
III	265932-001	G	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
↓ 10	265932-003	G	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
↓	↓ -004	U	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	MSS
II	265939-001	B	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
III	265994-001	H	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
IV	266019-003	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
↓ 15	↓ -005	J	50 <input type="checkbox"/>	50 <input type="checkbox"/>	↓	✓	MSS
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			
20			50 <input type="checkbox"/>	50 <input type="checkbox"/>			
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			

Digestion tubes, lot #
0.50 mL of spike solution (Std1) was added to all spikes
0.50 mL of spike solution (Std2) was added to all spikes
0.50 mL of spike solution (Std3) was added to all spikes
 Digestion Temperature (°C), Block and Probe Location
digestion begun at (time)
 concentrated HCl
 concentrated HNO3
 digestion ended at (time)
 filtered thru' Whatman # 541
 Relinquished to ICP group

Reagent ID or LIMS #	Initials / Date
ACCUFLOW	RC 4/14/15
S26229	
S26230	
S26912	
15:35	
JTB 97264	
JTB 972 102053	
4/15 15:50	
ICRMS	↓


 Prep Chemist / Date 4/14/15

Continued from page 0
 Continued on page _____

Reviewed Online / See LIMS

SAMPLE	CONT. ID	TIME/DATE	FILTER	LOT#	BATCH#	pH/2	VOL (ml)	INT.
BLANK QC 78343		START 13:20/4.7.15	PALL-T30548		222016	Yes	300	RC
265863-001	H						200	
	-003						250	
	-004						250	
	-005						250	
265871-001	C						200	
	-002						250	
	-003						250	
	-004						200	
	-005						200	
	-006						200	
	-007						200	
265873-001	E						250	
	-002	END 18:40/4.7.15					250	
BLANK QC 83520		START 15:45/4.8.15	PALL-T30548		222066		300	
265896-001	C						150	
	-002						125	
265899-001	A						250	
265899-003							175	
	-004						150	
	-005						150	
	-006	END 16:05/4.8.15					150	
265932-001	G	START 14:15/4.9.15					250	
	-003							
	-004							
	-004							
265937-001	K	END 11:40/4.9.15						
265898-001	F	18:15/4.7.15			222016		250	
	-002	END 18:40						

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

SAMPLE	CONT. ID	TIME/DATE	FILTER LOT#	BATCH#	pH/Z	VOL (ml)	INT.
BLANK	Q183906	START 15:40/4/10/15	PALL-T30548	222165	YES	300	RC
266007	-002 D	↓	↓	↓	↓	125	RC
265994	-001 H	↓	↓	↓	↓	250	RC
266012	-001 A	↓	↓	↓	↓	250	RC
↓	-002 A	END 16:10/4/10/15	↓	↓	↓	250	↓

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1075155077

Instrument : MET54 Begun : 04/17/15 16:37
 Method : EPA 7470A SOP Version : hg_water_rv16

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	met54	ICALBLK				04/17/15 16:37	1.0	
002	met54	ICAL	ICAL1			04/17/15 16:38	1.0	1
003	met54	ICAL	ICAL2			04/17/15 16:39	1.0	1
004	met54	ICAL	ICAL3			04/17/15 16:40	1.0	1
005	met54	ICAL	ICAL4			04/17/15 16:42	1.0	1
006	met54	ICAL	ICAL5			04/17/15 16:43	1.0	1
007	met54	ICV				04/17/15 16:44	1.0	2
008	met54	ICB				04/17/15 16:45	1.0	
009	met54	BLANK	QC784691	Water	222359	04/17/15 16:46	1.0	
010	met54	BLANK	QC784692	WET Leachate	222359	04/17/15 16:47	1.0	
011	met54	BLANK	QC784693	Filtrate	222359	04/17/15 16:48	1.0	
012	met54	BS	QC784694	Water	222359	04/17/15 16:49	1.0	
013	met54	BSD	QC784695	Water	222359	04/17/15 16:51	1.0	
014	met54	MSS	266019-005	Filtrate	222359	04/17/15 16:52	1.0	
015	met54	MS	QC784696	Filtrate	222359	04/17/15 16:53	1.0	
016	met54	MSD	QC784697	Filtrate	222359	04/17/15 16:54	1.0	
017	met54	SER	QC784698	Filtrate	222359	04/17/15 16:55	5.0	
018	met54	SAMPLE	266019-003	Filtrate	222359	04/17/15 16:56	1.0	
019	met54	CCV				04/17/15 16:57	1.0	3
020	met54	CCB				04/17/15 16:58	1.0	
021	met54	SAMPLE	266072-002	WET Leachate	222359	04/17/15 17:00	1.0	
022	met54	SAMPLE	266080-001	Water	222359	04/17/15 17:01	1.0	
023	met54	SAMPLE	266080-002	Water	222359	04/17/15 17:02	1.0	
024	met54	SAMPLE	266082-001	Water	222359	04/17/15 17:03	1.0	
025	met54	SAMPLE	266082-002	Water	222359	04/17/15 17:04	1.0	
026	met54	SAMPLE	266082-003	Water	222359	04/17/15 17:05	1.0	
027	met54	SAMPLE	266084-002	Water	222359	04/17/15 17:06	1.0	
028	met54	SAMPLE	266084-002	Filtrate	222359	04/17/15 17:07	1.0	
029	met54	SAMPLE	266090-001	Water	222359	04/17/15 17:09	1.0	
030	met54	SAMPLE	266090-002	Water	222359	04/17/15 17:10	1.0	
031	met54	CCV				04/17/15 17:11	1.0	3
032	met54	CCB				04/17/15 17:12	1.0	
033	met54	SAMPLE	266090-003	Water	222359	04/17/15 17:13	1.0	
034	met54	SAMPLE	266090-004	Water	222359	04/17/15 17:14	1.0	
035	met54	SAMPLE	266090-005	Water	222359	04/17/15 17:15	1.0	
036	met54	CCV				04/17/15 17:17	1.0	3
037	met54	CCB				04/17/15 17:18	1.0	

ARD 04/17/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 37.

Standards used: 1=S27071 2=S27073 3=S27074

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266019 METALS Filtrate: EPA 7470A

Inst : MET54
 Calnum : 1075155077001
 Units : ug/L
 Date : 17-APR-2015 16:37
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	met54	1075155077002	ICAL1 17-APR-2015 16:38	S27071 (500X)
L2	met54	1075155077003	ICAL2 17-APR-2015 16:39	S27071 (200X)
L3	met54	1075155077004	ICAL3 17-APR-2015 16:40	S27071 (50X)
L4	met54	1075155077005	ICAL4 17-APR-2015 16:42	S27071 (20X)
L5	met54	1075155077006	ICAL5 17-APR-2015 16:43	S27071 (10X)

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	%RSD	Mnr^2	Flg
Mercury	0.0085	0.0088	0.0085	0.0087	0.0084	LIN0	-0.0215	118.308		0.0086	1.000		.99	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D
Mercury	0.2000	0.5000	-1.0	2.0000	-1	5.0000	2	10.000	0

Instrument amount = a0 + response * a1 + response^2 * a2; LIN0=Linear regression including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266019 METALS Filtrate
EPA 7470A

Inst : MET54
Calnum : 1075155077001

Cal Date : 17-APR-2015

ICV 1075155077007 (17-APR-2015) stds: S27073

Analyte	Spiked	Quant	Units	%D	Max	Flags
Mercury	5.000	5.007	ug/L	0	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075155077008
Cal : 1075155077001
File : met54
Caldate : 17-APR-2015
IDF : 1.0
Time : 17-APR-2015 16:45

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266019 METALS Filtrate
 EPA 7470A

Inst : MET54
 Seqnum : 1075155077019
 Cal : 1075155077001
 Standards: S27074

File : met54
 Caldate : 17-APR-2015

IDF : 1.0
 Time : 17-APR-2015 16:57

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	0.0086	0.0086	5.000	5.054	ug/L	1	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266019 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075155077020
Cal : 1075155077001
File : met54
Caldate : 17-APR-2015
IDF : 1.0
Time : 17-APR-2015 16:58

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

SAMPLE PREPARATION SUMMARY

Batch # : 222359
 Started By : ARD
 Method : METHOD
 Spike #1 ID : S27071

Prep Date : 17-APR-2015 11:10

Analysis : HG
 Finished By : ARD
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266019-003		Filtrate	50	50	1	1.0						TAL/HG	
266019-005		Filtrate	50	50	1	1.0						TAL/HG	
266072-001		WET Leachate	10	50	1	5.0						(rebatched)	
266072-002		WET Leachate	10	50	1	5.0						T22/HG	
266080-001		Water	50	50	1	1.0						7470-HG	
266080-002		Water	50	50	1	1.0						7470-HG	
266082-001		Water	50	50	1	1.0						T22/HG	
266082-002		Water	50	50	1	1.0						T22/HG	
266082-003		Water	50	50	1	1.0						T22/HG	
266084-002		Filtrate	50	50	1	1.0						T22/HG	
266084-002		Water	50	50	1	1.0						T22/HG	
266090-001		Water	50	50	1	1.0						T22/HG	
266090-002		Water	50	50	1	1.0						T22/HG	
266090-003		Water	50	50	1	1.0						T22/HG	
266090-004		Water	50	50	1	1.0						T22/HG	
266090-005		Water	50	50	1	1.0						T22/HG	
QC784691	BLANK	Water	50	50	1	1.0							
QC784692	BLANK	WET Leachate	10	50	1	5.0							wet 4.16.15
QC784693	BLANK	Filtrate	50	50	1	1.0							lab blank 4.14.15
QC784694	BS	Water	50	50	1	1.0		1.25					
QC784695	BSD	Water	50	50	1	1.0		1.25					
QC784696	MS	Filtrate	50	50	1	1.0		1.25					
QC784697	MSD	Filtrate	50	50	1	1.0		1.25					
QC784698	SER	Filtrate	50	50	1	1.0							

Analyst: ARD

Date: 04/17/15

Reviewer: PRW

Date: 04/21/15

W.E.T (STLC) EXTRACTION LOG

Curtis & Tompkins, Ltd.

LIMS Batch #: 222269 Date/ Time ON: 4-14-15 1900
 Extraction Method: WET Temp (C) ON: 21
 Rotator #'s: 2 Date/ Time OFF: 4-16-15 1825
 Temp (C) OFF: 21-24

Page: 48
 Benchbook#: BK 3658

Scale Used
 Leachates
 Extractions

Sample # / Letter	Sample Mass (g)	Sieved? (y/n)*	Extract Vol (mL)	N2 purge	*Comments
BK 784341	<input type="checkbox"/> 50 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>	YES	
266071-001 C	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	N	<input checked="" type="checkbox"/> 500 <input type="checkbox"/>		
266072-001 A	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		<input checked="" type="checkbox"/> 500 <input type="checkbox"/>		
↓ -002 ↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		<input checked="" type="checkbox"/> 500 <input type="checkbox"/>		
5 266079-001 C	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		<input checked="" type="checkbox"/> 500 <input type="checkbox"/>		
266089-001 B	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		<input checked="" type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
10	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
15	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
20	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		
	<input type="checkbox"/> 50 <input type="checkbox"/>		<input type="checkbox"/> 500 <input type="checkbox"/>		

MS 4-16-15

Temperature Limits: 20 - 40 C

Extraction Fluid pH Limits: 4.9 - 5.1 su

	Mfg & Lot #	Date/ Initials
Used Citric Acid	K93509242 EMD	4-14-15 MN
Used Sodium Hydroxide (NaOH)	410617 BDH	
Extraction Fluid pH, Prep Date	4.92 4-13-15	
Extract filtered through 0.45um cellulose fiber filter paper	MILLIPORE P4NA25845	4-16-15 MN
Metals extracts acidified with 5% HNO ₃	102053 JTB	

M. S. Key 4-14-15
 Extraction Chemist Date

Reviewed Online / See LIMS

SAMPLE	CONT.ID	TIME/DATE	FILTER LOT#	BATCH#	pH L ₂	VOL(mL)	INT.
BLANK QCT83906		START 15:40/4/10/15	PALL-T30548	222165	YES	300	RC
266007-002	D	↓	↓	↓	↓	125 250	RC
265994-001	H	↓	↓	↓	↓	175	RC
266012-001	A	↓	↓	↓	↓	250	↓
↓ -002	A	END 16:10/4/10/15	↓	↓	↓	250	↓
BLANK QCT84320		START 17:18/4/14/15	PALL-T30548	222262	YES	250	↓
266084-002	E	END 17:15/4/14/15	↓	↓	↓	↓	↓

Continued on Page

Read and Understood By

Signed

Date

Signed

Date

Water Digestion for Mercury

Curtis & Tompkins, Ltd.

LIMS Batch #: 222359
 Date Digested: 4/17/15

Digestion Method BK3651
 EPA 7470A/ EPA 245.1 Page 79

Sample #	container ID	Volume Sample (mL)	Final Volume (mL)	Filtered? (y/n)	Comments
Blank		50	50	N	QC 784691
BS	*	50	50		↓ 694
BSD	*	50	50		↓ 695
MS 266019-005	L	50	50		
MS ↓	*	50	50		
MSD ↓	*	50	50		
266019-003	D	50	50		
266072-001 ARD 4/17/15 NOT IN FREEZER	A	50	50		WET 4.16.15; not in freezer
266072-002	↓	50	50		↓ ↓
266080-001	DE	50	50		
↓ -002	E	50	50		
266082-001	D	50	50		
↓ -002	G	50	50		
↓ -003	↓	50	50		
266084-002	D	50	50		
266084-002	E	50	50		lab filter 4.14.15
266090-001	G	50	50		
↓ -002	↓	50	50		
↓ -003	↓	50	50		
20 ↓ -004	↓	50	50		
↓ -005	↓	50	50		
Blank		50	50		Wet Blank 4/16/15 QC 784692
Blank		50	50		Lab Blank 4/14/15 ↓ 693
		50	50		
		50	50		

Reagent ID/ LIMS# / Time Initials / Date
 Digestion Tube Lot # EK-14178 ARD ~~4/17/15~~ 4/17/15

1.25 mL of spike solution was added to all spikes
 CAL digested with this batch

ICAL Source LIMS S# _____
 ICV / CCV LIMS S# _____
 Digestion Temperature (°C), Block and Probe Location 96° | A29

Digestion Started at (time) 11:10
 concentrated H₂SO₄ BDH-2014096938
 concentrated HNO₃ TIB-102653
 5% KMnO₄ 040915
 5% K₂S₂O₈ 040915 030215

NaCl.hydroxylamine hydrochloride 040915
 Stannous Chloride 040915

Digestion Completed at (time) _____
 filtered thru' 0.45 um syringe filter (lot #) 14:10


 Prep Chemist / Date 4/17/15

Continued from page 0
 Continued on page _____

Reviewed Online / See LIMS



ct Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266087

ANALYTICAL REPORT


Volatile Organics by GC/MS

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

<u>Sample ID</u>	<u>Lab ID</u>
20150414B197R	266087-001
20150414B195	266087-004
20150414450	266087-006
20150414ER	266087-007
20150414RWF	266087-008
20150414B163	266087-009

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/28/2015

CA ELAP# 2896, NELAP# 4044-001

**CASE NARRATIVE
VOLATILE ORGANICS BY GC/MS (EPA 8260B)**

Laboratory number: 266087
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/14/15
Samples Received: 04/14/15

This data package contains sample and QC results for six water samples, requested for the above referenced project on 04/14/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Volatile Organics by GC/MS (EPA 8260B):

High response was observed for bromomethane in the CCV analyzed 04/16/15 07:39; this analyte was not detected at or above the RL in the associated samples, and affected data was qualified with "b".

No other analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266087

Chain of Custody Record No. 6088

Page 1 of 1

6088

No./Container Types

MS/MSD	Analysis Required
VOA	
SVOA	
Pes/PCBs	
Metals	
TPH Purgeables	
TPH Extractables	
PAH (SIM)	

HCl	Preservative Added
None	
None	

40 ml VOA	3
1 liter Amber	3
500 ml Poly	1
Sieve	1
Glass Jar	1

Field samplers' signatures	Mark Duffy Matt Hanson
Field samplers	Mark Duffy Matt Hanson

Lab:	Curtis and Tompkins
Lab PO#:	150AK32

TIEMI technical contact:	Sara Woolley
TIEMI project manager:	Jason Broderick

Project name:	2015 Groundwater
Project (CTO) number:	103225323.05

Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix
13 20150414B197R		4-14-15	920	water
24 20150414P28		1015		
153 20150414P28D		1020		
104 20150414B195		1050		
15 20150414B180		1135		
4 20150414B450		1255		
7 20150414ER		1540		
8 20150414RWF		1340		
9 20150414B163		1425		

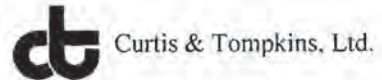
Company Name	Tetra Tech C&T
Name (print)	Mark Duffy Mikelle Chang
Date	4-14-15 4/14
Time	15:57 16:17

Relinquished by:	[Signature]
Received by:	[Signature]
Relinquished by:	
Received by:	
Relinquished by:	
Received by:	

Turnaround time/remarks:
* Metals were Field Filtered

Fed Ex #: NA

COOLER RECEIPT CHECKLIST



Login # 266087 Date Received 4/14/15 Number of coolers 3
Client Tetra Tech EM Inc. Project 2015 Ground Water

Date Opened 4/14 By (print) BL (sign) [Signature]
Date Logged in [Signature] By (print) [Signature] (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Cloth material, Foam blocks, Cardboard, Bags, Styrofoam, None, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 53, 20, 60°

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO

If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 266087

Sample	pH: <2	>9	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-002a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-003a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-004a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-006a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-007a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-009a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: SL
 Date: 4/14/15

Results & QC Summary

Purgeable Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 B197R	Batch#:	222281
Lab ID:	266087-001	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	2.000		

Analyte	Result	RL	MDL
Freon 12	ND	2.0	0.2
Chloromethane	ND	2.0	0.2
Vinyl Chloride	ND	1.0	0.2
Bromomethane	ND	2.0	0.3
Chloroethane	ND	2.0	0.2
Trichlorofluoromethane	ND	2.0	0.2
Acetone	ND	20	6.6
Freon 113	ND	4.0	0.2
1,1-Dichloroethene	0.9 J	1.0	0.3
Methylene Chloride	ND	20	0.3
Carbon Disulfide	ND	1.0	0.2
MTBE	ND	1.0	0.2
trans-1,2-Dichloroethene	0.4 J	1.0	0.2
Vinyl Acetate	ND	20	0.4
1,1-Dichloroethane	ND	1.0	0.2
2-Butanone	ND	20	0.4
cis-1,2-Dichloroethene	4.4	1.0	0.2
2,2-Dichloropropane	ND	1.0	0.2
Chloroform	ND	1.0	0.2
Bromochloromethane	ND	1.0	0.3
1,1,1-Trichloroethane	ND	1.0	0.3
1,1-Dichloropropene	ND	1.0	0.2
Carbon Tetrachloride	ND	1.0	0.2
1,2-Dichloroethane	0.5 J	1.0	0.2
Benzene	ND	1.0	0.2
Trichloroethene	140	1.0	0.2
1,2-Dichloropropane	ND	1.0	0.2
Bromodichloromethane	ND	1.0	0.2
Dibromomethane	ND	1.0	0.3
4-Methyl-2-Pentanone	ND	20	0.3
cis-1,3-Dichloropropene	ND	1.0	0.2
Toluene	ND	1.0	0.2
trans-1,3-Dichloropropene	ND	1.0	0.2
1,1,2-Trichloroethane	ND	1.0	0.2
2-Hexanone	ND	20	0.3
1,3-Dichloropropane	ND	1.0	0.2
Tetrachloroethene	1.2	1.0	0.2
Dibromochloromethane	ND	1.0	0.2
1,2-Dibromoethane	ND	1.0	0.3
Chlorobenzene	ND	1.0	0.2
1,1,1,2-Tetrachloroethane	ND	1.0	0.2
Ethylbenzene	ND	1.0	0.2
m,p-Xylenes	ND	1.0	0.3
o-Xylene	ND	1.0	0.2
Styrene	ND	1.0	0.3
Bromoform	ND	2.0	0.2
Isopropylbenzene	ND	1.0	0.2
1,1,2,2-Tetrachloroethane	ND	1.0	0.2
1,2,3-Trichloropropane	ND	1.0	0.2
Propylbenzene	ND	1.0	0.2
Bromobenzene	ND	1.0	0.2
1,3,5-Trimethylbenzene	ND	1.0	0.2

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 B197R	Batch#:	222281
Lab ID:	266087-001	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	2.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	1.0	0.2
4-Chlorotoluene	ND	1.0	0.2
tert-Butylbenzene	ND	1.0	0.2
1,2,4-Trimethylbenzene	ND	1.0	0.2
sec-Butylbenzene	ND	1.0	0.2
para-Isopropyl Toluene	ND	1.0	0.2
1,3-Dichlorobenzene	ND	1.0	0.2
1,4-Dichlorobenzene	ND	1.0	0.2
n-Butylbenzene	ND	1.0	0.2
1,2-Dichlorobenzene	ND	1.0	0.2
1,2-Dibromo-3-Chloropropane	ND	4.0	0.4
1,2,4-Trichlorobenzene	ND	1.0	0.2
Hexachlorobutadiene	ND	4.0	0.5
Naphthalene	ND	4.0	0.4
1,2,3-Trichlorobenzene	ND	1.0	0.2
tert-Butyl Alcohol (TBA)	ND	20	3.4
Isopropyl Ether (DIPE)	ND	1.0	0.2
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	0.2
Methyl tert-Amyl Ether (TAME)	ND	1.0	0.2

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	109	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 B195	Batch#:	222308
Lab ID:	266087-004	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	0.3 J	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	2.2	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	0.1 J	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	0.3 J	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	79	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	2.2	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 B195	Batch#:	222308
Lab ID:	266087-004	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	101	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	103	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 450	Batch#:	222281
Lab ID:	266087-006	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	0.4 J	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	21	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	0.6	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 450	Batch#:	222281
Lab ID:	266087-006	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	108	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 ER	Batch#:	222281
Lab ID:	266087-007	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 ER	Batch#:	222281
Lab ID:	266087-007	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	108	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 RWF	Batch#:	222281
Lab ID:	266087-008	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	4.8	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 RWF	Batch#:	222281
Lab ID:	266087-008	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	108	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 B163	Batch#:	222281
Lab ID:	266087-009	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	1.0	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	0.8	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	0.6	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	4.0	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	1.6	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	7.6	0.5	0.1
Benzene	0.3 J	0.5	0.1
Trichloroethene	93	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	9.0	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	6.4	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0414 B163	Batch#:	222281
Lab ID:	266087-009	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222281
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Type: BS Lab ID: QC784375

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	8.276	83	45-131
Chloromethane	10.00	8.865	89	48-133
Vinyl Chloride	10.00	9.523	95	63-132
Bromomethane	10.00	11.75	118	38-161
Chloroethane	10.00	9.645	96	62-131
Trichlorofluoromethane	10.00	9.242	92	64-137
Acetone	12.50	9.269	74	46-151
Freon 113	12.50	12.50	100	61-138
1,1-Dichloroethene	12.50	12.26	98	66-135
Methylene Chloride	12.50	12.58	101	74-131
Carbon Disulfide	12.50	13.08	105	63-150
MTBE	12.50	11.03	88	65-120
trans-1,2-Dichloroethene	12.50	12.15	97	72-134
Vinyl Acetate	12.50	14.52	116	60-194
1,1-Dichloroethane	12.50	12.18	97	68-127
2-Butanone	12.50	10.17	81	50-141
cis-1,2-Dichloroethene	12.50	12.22	98	73-129
2,2-Dichloropropane	12.50	13.37	107	72-146
Chloroform	12.50	12.87	103	73-126
Bromochloromethane	12.50	12.56	100	78-127
1,1,1-Trichloroethane	12.50	13.08	105	72-134
1,1-Dichloropropene	12.50	12.80	102	79-135
Carbon Tetrachloride	12.50	13.30	106	72-142
1,2-Dichloroethane	12.50	12.62	101	74-133
Benzene	12.50	12.96	104	80-123
Trichloroethene	12.50	13.02	104	80-123
1,2-Dichloropropane	12.50	11.78	94	74-120
Bromodichloromethane	12.50	12.28	98	79-121
Dibromomethane	12.50	12.05	96	80-120
4-Methyl-2-Pentanone	12.50	10.39	83	57-129
cis-1,3-Dichloropropene	12.50	11.94	95	80-130
Toluene	12.50	12.69	102	80-121
trans-1,3-Dichloropropene	12.50	11.06	88	76-122
1,1,2-Trichloroethane	12.50	11.89	95	80-120
2-Hexanone	12.50	10.14	81	49-136
1,3-Dichloropropane	12.50	12.26	98	80-120
Tetrachloroethene	12.50	13.20	106	78-130
Dibromochloromethane	12.50	11.78	94	80-123
1,2-Dibromoethane	12.50	11.72	94	80-120
Chlorobenzene	12.50	12.65	101	80-123
1,1,1,2-Tetrachloroethane	12.50	11.96	96	80-124
Ethylbenzene	12.50	12.83	103	80-123
m,p-Xylenes	25.00	25.25	101	80-126
o-Xylene	12.50	12.15	97	80-126
Styrene	12.50	12.01	96	80-122
Bromoform	12.50	10.80	86	72-132
Isopropylbenzene	12.50	13.29	106	79-130
1,1,2,2-Tetrachloroethane	12.50	12.32	99	72-129
1,2,3-Trichloropropane	12.50	12.27	98	72-124
Propylbenzene	12.50	13.22	106	79-128
Bromobenzene	12.50	12.65	101	80-122
1,3,5-Trimethylbenzene	12.50	13.13	105	80-129

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222281
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
2-Chlorotoluene	12.50	13.07	105	80-130
4-Chlorotoluene	12.50	12.80	102	79-125
tert-Butylbenzene	12.50	12.85	103	79-130
1,2,4-Trimethylbenzene	12.50	12.33	99	78-124
sec-Butylbenzene	12.50	13.33	107	79-134
para-Isopropyl Toluene	12.50	12.48	100	74-125
1,3-Dichlorobenzene	12.50	12.33	99	80-124
1,4-Dichlorobenzene	12.50	12.45	100	80-121
n-Butylbenzene	12.50	12.40	99	69-135
1,2-Dichlorobenzene	12.50	12.04	96	80-123
1,2-Dibromo-3-Chloropropane	12.50	10.50	84	59-125
1,2,4-Trichlorobenzene	12.50	11.72	94	66-133
Hexachlorobutadiene	12.50	13.31	106	70-152
Naphthalene	12.50	9.246	74	53-139
1,2,3-Trichlorobenzene	12.50	10.84	87	64-134
tert-Butyl Alcohol (TBA)	62.50	48.50	78	32-155
Isopropyl Ether (DIPE)	12.50	11.09	89	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	11.28	90	62-120
Methyl tert-Amyl Ether (TAME)	12.50	10.89	87	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	107	80-120

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222281
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC784376

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	8.046	80	45-131	3	29
Chloromethane	10.00	9.141	91	48-133	3	25
Vinyl Chloride	10.00	9.360	94	63-132	2	23
Bromomethane	10.00	11.34	113	38-161	4	32
Chloroethane	10.00	9.369	94	62-131	3	24
Trichlorofluoromethane	10.00	9.034	90	64-137	2	23
Acetone	12.50	10.01	80	46-151	8	29
Freon 113	12.50	12.13	97	61-138	3	25
1,1-Dichloroethene	12.50	12.07	97	66-135	2	24
Methylene Chloride	12.50	12.52	100	74-131	1	21
Carbon Disulfide	12.50	12.96	104	63-150	1	25
MTBE	12.50	11.37	91	65-120	3	22
trans-1,2-Dichloroethene	12.50	12.02	96	72-134	1	22
Vinyl Acetate	12.50	14.55	116	60-194	0	25
1,1-Dichloroethane	12.50	12.18	97	68-127	0	21
2-Butanone	12.50	10.78	86	50-141	6	24
cis-1,2-Dichloroethene	12.50	12.10	97	73-129	1	20
2,2-Dichloropropane	12.50	13.25	106	72-146	1	24
Chloroform	12.50	12.68	101	73-126	2	20
Bromochloromethane	12.50	12.59	101	78-127	0	20
1,1,1-Trichloroethane	12.50	12.79	102	72-134	2	22
1,1-Dichloropropene	12.50	12.56	100	79-135	2	23
Carbon Tetrachloride	12.50	12.98	104	72-142	2	22
1,2-Dichloroethane	12.50	12.54	100	74-133	1	20
Benzene	12.50	12.58	101	80-123	3	20
Trichloroethene	12.50	12.61	101	80-123	3	20
1,2-Dichloropropane	12.50	11.77	94	74-120	0	20
Bromodichloromethane	12.50	12.36	99	79-121	1	20
Dibromomethane	12.50	12.18	97	80-120	1	20
4-Methyl-2-Pentanone	12.50	10.72	86	57-129	3	23
cis-1,3-Dichloropropene	12.50	11.98	96	80-130	0	20
Toluene	12.50	12.63	101	80-121	1	20
trans-1,3-Dichloropropene	12.50	11.20	90	76-122	1	20
1,1,2-Trichloroethane	12.50	12.38	99	80-120	4	20
2-Hexanone	12.50	10.42	83	49-136	3	24
1,3-Dichloropropane	12.50	12.50	100	80-120	2	20
Tetrachloroethene	12.50	13.20	106	78-130	0	21
Dibromochloromethane	12.50	11.82	95	80-123	0	20
1,2-Dibromoethane	12.50	11.82	95	80-120	1	20
Chlorobenzene	12.50	12.69	102	80-123	0	20
1,1,1,2-Tetrachloroethane	12.50	11.99	96	80-124	0	20
Ethylbenzene	12.50	12.79	102	80-123	0	21
m,p-Xylenes	25.00	24.97	100	80-126	1	21
o-Xylene	12.50	12.20	98	80-126	0	20
Styrene	12.50	12.13	97	80-122	1	20
Bromoform	12.50	11.11	89	72-132	3	20
Isopropylbenzene	12.50	13.11	105	79-130	1	21
1,1,2,2-Tetrachloroethane	12.50	12.46	100	72-129	1	20
1,2,3-Trichloropropane	12.50	12.30	98	72-124	0	22
Propylbenzene	12.50	13.16	105	79-128	0	21
Bromobenzene	12.50	12.55	100	80-122	1	20
1,3,5-Trimethylbenzene	12.50	13.06	105	80-129	1	20

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222281
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
2-Chlorotoluene	12.50	13.03	104	80-130	0	20
4-Chlorotoluene	12.50	12.83	103	79-125	0	20
tert-Butylbenzene	12.50	12.65	101	79-130	2	23
1,2,4-Trimethylbenzene	12.50	12.22	98	78-124	1	22
sec-Butylbenzene	12.50	13.17	105	79-134	1	23
para-Isopropyl Toluene	12.50	12.40	99	74-125	1	24
1,3-Dichlorobenzene	12.50	12.37	99	80-124	0	20
1,4-Dichlorobenzene	12.50	12.43	99	80-121	0	20
n-Butylbenzene	12.50	12.53	100	69-135	1	28
1,2-Dichlorobenzene	12.50	12.11	97	80-123	1	20
1,2-Dibromo-3-Chloropropane	12.50	11.26	90	59-125	7	23
1,2,4-Trichlorobenzene	12.50	11.94	95	66-133	2	24
Hexachlorobutadiene	12.50	13.28	106	70-152	0	26
Naphthalene	12.50	10.04	80	53-139	8	25
1,2,3-Trichlorobenzene	12.50	11.73	94	64-134	8	25
tert-Butyl Alcohol (TBA)	62.50	50.97	82	32-155	5	33
Isopropyl Ether (DIPE)	12.50	11.19	90	57-128	1	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.49	92	62-120	2	20
Methyl tert-Amyl Ether (TAME)	12.50	11.00	88	69-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	99	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	106	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784377	Batch#:	222281
Matrix:	Water	Analyzed:	04/15/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784377	Batch#:	222281
Matrix:	Water	Analyzed:	04/15/15
Units:	ug/L		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222308
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Type: BS Lab ID: QC784501

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	9.392	94	45-131
Chloromethane	10.00	11.67	117	48-133
Vinyl Chloride	10.00	11.92	119	63-132
Bromomethane	10.00	14.42 b	144	38-161
Chloroethane	10.00	11.45	114	62-131
Trichlorofluoromethane	10.00	10.41	104	64-137
Acetone	12.50	10.85	87	46-151
Freon 113	12.50	12.70	102	61-138
1,1-Dichloroethene	12.50	12.90	103	66-135
Methylene Chloride	12.50	13.22	106	74-131
Carbon Disulfide	12.50	14.22	114	63-150
MTBE	12.50	13.49	108	65-120
trans-1,2-Dichloroethene	12.50	13.70	110	72-134
Vinyl Acetate	12.50	20.72	166	60-194
1,1-Dichloroethane	12.50	12.80	102	68-127
2-Butanone	12.50	11.77	94	50-141
cis-1,2-Dichloroethene	12.50	13.38	107	73-129
2,2-Dichloropropane	12.50	15.19	122	72-146
Chloroform	12.50	13.30	106	73-126
Bromochloromethane	12.50	14.17	113	78-127
1,1,1-Trichloroethane	12.50	13.35	107	72-134
1,1-Dichloropropene	12.50	11.56	92	79-135
Carbon Tetrachloride	12.50	12.72	102	72-142
1,2-Dichloroethane	12.50	11.76	94	74-133
Benzene	12.50	12.44	100	80-123
Trichloroethene	12.50	11.69	94	80-123
1,2-Dichloropropane	12.50	11.13	89	74-120
Bromodichloromethane	12.50	11.91	95	79-121
Dibromomethane	12.50	12.29	98	80-120
4-Methyl-2-Pentanone	12.50	10.72	86	57-129
cis-1,3-Dichloropropene	12.50	12.10	97	80-130
Toluene	12.50	12.25	98	80-121
trans-1,3-Dichloropropene	12.50	11.05	88	76-122
1,1,2-Trichloroethane	12.50	11.78	94	80-120
2-Hexanone	12.50	10.39	83	49-136
1,3-Dichloropropane	12.50	11.98	96	80-120
Tetrachloroethene	12.50	12.86	103	78-130
Dibromochloromethane	12.50	12.38	99	80-123
1,2-Dibromoethane	12.50	12.03	96	80-120
Chlorobenzene	12.50	12.48	100	80-123
1,1,1,2-Tetrachloroethane	12.50	12.16	97	80-124
Ethylbenzene	12.50	12.27	98	80-123
m,p-Xylenes	25.00	25.31	101	80-126
o-Xylene	12.50	12.32	99	80-126
Styrene	12.50	12.01	96	80-122
Bromoform	12.50	13.05	104	72-132
Isopropylbenzene	12.50	12.82	103	79-130
1,1,2,2-Tetrachloroethane	12.50	12.45	100	72-129
1,2,3-Trichloropropane	12.50	12.21	98	72-124
Propylbenzene	12.50	12.51	100	79-128
Bromobenzene	12.50	13.39	107	80-122

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222308
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
1,3,5-Trimethylbenzene	12.50	12.67	101	80-129
2-Chlorotoluene	12.50	12.62	101	80-130
4-Chlorotoluene	12.50	12.35	99	79-125
tert-Butylbenzene	12.50	12.70	102	79-130
1,2,4-Trimethylbenzene	12.50	11.86	95	78-124
sec-Butylbenzene	12.50	12.36	99	79-134
para-Isopropyl Toluene	12.50	11.93	95	74-125
1,3-Dichlorobenzene	12.50	13.11	105	80-124
1,4-Dichlorobenzene	12.50	12.95	104	80-121
n-Butylbenzene	12.50	10.83	87	69-135
1,2-Dichlorobenzene	12.50	12.77	102	80-123
1,2-Dibromo-3-Chloropropane	12.50	10.39	83	59-125
1,2,4-Trichlorobenzene	12.50	10.92	87	66-133
Hexachlorobutadiene	12.50	13.07	105	70-152
Naphthalene	12.50	10.48	84	53-139
1,2,3-Trichlorobenzene	12.50	11.03	88	64-134
tert-Butyl Alcohol (TBA)	62.50	61.57	99	32-155
Isopropyl Ether (DIPE)	12.50	12.77	102	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	13.00	104	62-120
Methyl tert-Amyl Ether (TAME)	12.50	11.60	93	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	111	80-128
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222308
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC784502

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	8.597	86	45-131	9	29
Chloromethane	10.00	10.83	108	48-133	7	25
Vinyl Chloride	10.00	11.07	111	63-132	7	23
Bromomethane	10.00	12.49 b	125	38-161	14	32
Chloroethane	10.00	11.09	111	62-131	3	24
Trichlorofluoromethane	10.00	9.577	96	64-137	8	23
Acetone	12.50	8.912	71	46-151	20	29
Freon 113	12.50	11.38	91	61-138	11	25
1,1-Dichloroethene	12.50	12.35	99	66-135	4	24
Methylene Chloride	12.50	12.79	102	74-131	3	21
Carbon Disulfide	12.50	13.12	105	63-150	8	25
MTBE	12.50	12.40	99	65-120	8	22
trans-1,2-Dichloroethene	12.50	12.66	101	72-134	8	22
Vinyl Acetate	12.50	18.62	149	60-194	11	25
1,1-Dichloroethane	12.50	11.92	95	68-127	7	21
2-Butanone	12.50	10.12	81	50-141	15	24
cis-1,2-Dichloroethene	12.50	12.61	101	73-129	6	20
2,2-Dichloropropane	12.50	14.11	113	72-146	7	24
Chloroform	12.50	12.63	101	73-126	5	20
Bromochloromethane	12.50	13.50	108	78-127	5	20
1,1,1-Trichloroethane	12.50	12.46	100	72-134	7	22
1,1-Dichloropropene	12.50	11.10	89	79-135	4	23
Carbon Tetrachloride	12.50	12.04	96	72-142	6	22
1,2-Dichloroethane	12.50	11.37	91	74-133	3	20
Benzene	12.50	12.11	97	80-123	3	20
Trichloroethene	12.50	11.10	89	80-123	5	20
1,2-Dichloropropane	12.50	10.90	87	74-120	2	20
Bromodichloromethane	12.50	11.53	92	79-121	3	20
Dibromomethane	12.50	11.77	94	80-120	4	20
4-Methyl-2-Pentanone	12.50	9.648	77	57-129	11	23
cis-1,3-Dichloropropene	12.50	11.61	93	80-130	4	20
Toluene	12.50	12.11	97	80-121	1	20
trans-1,3-Dichloropropene	12.50	10.67	85	76-122	3	20
1,1,2-Trichloroethane	12.50	11.33	91	80-120	4	20
2-Hexanone	12.50	9.223	74	49-136	12	24
1,3-Dichloropropane	12.50	11.64	93	80-120	3	20
Tetrachloroethene	12.50	12.47	100	78-130	3	21
Dibromochloromethane	12.50	11.99	96	80-123	3	20
1,2-Dibromoethane	12.50	11.30	90	80-120	6	20
Chlorobenzene	12.50	12.14	97	80-123	3	20
1,1,1,2-Tetrachloroethane	12.50	11.75	94	80-124	3	20
Ethylbenzene	12.50	11.96	96	80-123	3	21
m,p-Xylenes	25.00	25.13	101	80-126	1	21
o-Xylene	12.50	12.00	96	80-126	3	20
Styrene	12.50	11.78	94	80-122	2	20
Bromoform	12.50	12.53	100	72-132	4	20
Isopropylbenzene	12.50	12.05	96	79-130	6	21
1,1,2,2-Tetrachloroethane	12.50	11.42	91	72-129	9	20
1,2,3-Trichloropropane	12.50	11.09	89	72-124	10	22
Propylbenzene	12.50	11.64	93	79-128	7	21
Bromobenzene	12.50	12.71	102	80-122	5	20

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222308
Units:	ug/L	Analyzed:	04/16/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,3,5-Trimethylbenzene	12.50	11.96	96	80-129	6	20
2-Chlorotoluene	12.50	11.80	94	80-130	7	20
4-Chlorotoluene	12.50	11.83	95	79-125	4	20
tert-Butylbenzene	12.50	11.78	94	79-130	8	23
1,2,4-Trimethylbenzene	12.50	11.08	89	78-124	7	22
sec-Butylbenzene	12.50	11.38	91	79-134	8	23
para-Isopropyl Toluene	12.50	10.97	88	74-125	8	24
1,3-Dichlorobenzene	12.50	12.35	99	80-124	6	20
1,4-Dichlorobenzene	12.50	12.32	99	80-121	5	20
n-Butylbenzene	12.50	10.04	80	69-135	8	28
1,2-Dichlorobenzene	12.50	12.21	98	80-123	4	20
1,2-Dibromo-3-Chloropropane	12.50	8.787	70	59-125	17	23
1,2,4-Trichlorobenzene	12.50	10.30	82	66-133	6	24
Hexachlorobutadiene	12.50	11.00	88	70-152	17	26
Naphthalene	12.50	9.991	80	53-139	5	25
1,2,3-Trichlorobenzene	12.50	10.44	83	64-134	6	25
tert-Butyl Alcohol (TBA)	62.50	45.63	73	32-155	30	33
Isopropyl Ether (DIPE)	12.50	11.83	95	57-128	8	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.12	97	62-120	7	20
Methyl tert-Amyl Ether (TAME)	12.50	11.12	89	69-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-120

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784503	Batch#:	222308
Matrix:	Water	Analyzed:	04/16/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784503	Batch#:	222308
Matrix:	Water	Analyzed:	04/16/15
Units:	ug/L		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

CURTIS & TOMPKINS BFB TUNE FOR 266087 MSVOA Water
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0
Seqnum : 415092829003 File : bc503 Time : 05-MAR-2015 12:15

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	105632	27.09	
75	30% - 60% of mass 95	201768	51.75	
95		389888	100.00	
96	5% - 9% of mass 95	25758	6.61	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	297493	76.30	
175	5% - 9% of mass 174	21965	7.38	
176	> 95% and < 101% of mass 174	293909	98.80	
177	5% - 9% of mass 176	19360	6.59	

Analyst: MCT Date: 03/12/15 Reviewer: TKM Date: 03/12/15

CURTIS & TOMPKINS BFB TUNE FOR 266087 MSVOA Water
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0
Seqnum : 415153005003 File : bdg03 Time : 16-APR-2015 07:12

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	83539	25.55	
75	30% - 60% of mass 95	165605	50.66	
95		326912	100.00	
96	5% - 9% of mass 95	21359	6.53	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	264234	80.83	
175	5% - 9% of mass 174	20714	7.84	
176	> 95% and < 101% of mass 174	259989	98.39	
177	5% - 9% of mass 176	17088	6.57	

Analyst: MCT Date: 04/16/15 Reviewer: LW Date: 04/16/15

CURTIS & TOMPKINS BFB TUNE FOR 266087 MSVOA Water
EPA 8260B

Inst : MSVOA11 Run Name : BFB IDF : 1.0
Seqnum : 835120089003 File : kcn03 Time : 24-MAR-2015 10:41

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	5955	16.73	
75	30% - 60% of mass 95	16765	47.10	
95		35592	100.00	
96	5% - 9% of mass 95	2363	6.64	
173	< 2% of mass 174	173	0.54	
174	> 50% and < 100% of mass 95	32248	90.60	
175	5% - 9% of mass 174	2404	7.45	
176	> 95% and < 101% of mass 174	31152	96.60	
177	5% - 9% of mass 176	1795	5.76	

Analyst: DJA Date: 03/25/15 Reviewer: LW Date: 03/25/15

CURTIS & TOMPKINS BFB TUNE FOR 266087 MSVOA Water
EPA 8260B

Inst : MSVOA11 Run Name : BFB IDF : 1.0
Seqnum : 835151690005 File : kdf05 Time : 15-APR-2015 10:59

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	5689	15.59	
75	30% - 60% of mass 95	17181	47.09	
95		36484	100.00	
96	5% - 9% of mass 95	2601	7.13	
173	< 2% of mass 174	277	0.79	
174	> 50% and < 100% of mass 95	34864	95.56	
175	5% - 9% of mass 174	2525	7.24	
176	> 95% and < 101% of mass 174	33748	96.80	
177	5% - 9% of mass 176	2394	7.09	

DJA 04/15/15 : single scan

Analyst: DJA Date: 04/15/15 Reviewer: LW Date: 04/15/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266087 MSVOA Water: EPA 8260B

Inst : MSVOA02
 Calnum : 415092829001
 Units : ug/L
 Date : 05-MAR-2015 14:27
 X Axis : R
 Type : WATER

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	bc507	415092829007	05-MAR-2015 14:27	S25695 (2000000X), S26560 (2000000X), S26570 (2000000X), S26571 (1000000X), S26528 (1000X)
L2	bc508	415092829008	05-MAR-2015 15:03	S25695 (1000000X), S26560 (1000000X), S26570 (1000000X), S26571 (5000000X), S26528 (1000X)
L3	bc509	415092829009	05-MAR-2015 15:38	S25695 (5000000X), S26560 (2500000X), S26570 (2500000X), S26571 (2500000X), S26528 (1000X)
L4	bc510	415092829010	05-MAR-2015 16:14	S25695 (2000000X), S26560 (1000000X), S26570 (1000000X), S26571 (1000000X), S26528 (1000X)
L5	bc511	415092829011	05-MAR-2015 16:50	S25695 (1000000X), S26560 (500000X), S26570 (500000X), S26571 (500000X), S26528 (1000X)
L6	bc512	415092829012	05-MAR-2015 17:26	S25695 (500000X), S26560 (250000X), S26570 (250000X), S26571 (250000X), S26528 (1000X)
L7	bc513	415092829013	05-MAR-2015 18:01	S25695 (200000X), S26560 (100000X), S26570 (100000X), S26571 (100000X), S26528 (1000X)
L8	bc514	415092829014	05-MAR-2015 18:37	S25695 (133300X), S26560 (6667X), S26570 (6667X), S26571 (6667X), S26528 (1000X)
L9	bc515	415092829015	05-MAR-2015 19:12	S25695 (100000X), S26560 (50000X), S26570 (50000X), S26571 (50000X), S26528 (1000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Freon 12		1.0333m	1.0540m	1.0312	1.0044	0.9900	1.0359	0.9907	0.9616	AVRG	0.98752	0.98752		1.0126	3	15	0.05	0.99	
Chloromethane	1.8552m	1.4794m	1.5393	1.4441	1.4866	1.4336	1.4275	1.3921	1.3788	AVRG	0.66981	0.66981		1.4930	10	15	0.10	0.99	
Vinyl Chloride	1.3424m	1.1834m	1.1476	1.0350	1.0901	1.0415	1.1071	1.0711	1.0693	AVRG	0.89220	0.89220		1.1208	9	15	0.05	0.99	
Bromomethane		0.4622m	0.5256	0.4908	0.5180	0.5282	0.5745	0.5821	0.6082	AVRG	1.86496	1.86496		0.5362	9	15	0.05	0.99	
Chloroethane		0.7570m	0.6754	0.6393	0.6182	0.6010	0.6136	0.5959	0.6029	AVRG	1.56764	1.56764		0.6379	9	15	0.05	0.99	
Trichlorofluoromethane		1.2559	1.2463	1.1854	1.2203	1.2012	1.2335	1.1904	1.1751	AVRG	0.82405	0.82405		1.2135	2	15	0.05	0.99	
Acetone			0.6117m	0.5073	0.4462	0.4870	0.4492	0.4914	0.4458	AVRG	2.03570	2.03570		0.4912	12	15	0.05	0.99	
Freon 113		0.6223	0.6259	0.6438	0.6088	0.5984	0.6358	0.6152	0.6068	AVRG	1.61387	1.61387		0.6196	2	15	0.05	0.99	
1,1-Dichloroethene		0.5908m	0.7244	0.6849	0.6542	0.6624	0.6697	0.6549	0.6411	AVRG	1.51452	1.51452		0.6603	6	15	0.05	0.99	
Methylene Chloride		0.9396	0.9056	0.9144	0.8991	0.8923	0.8985	0.8568	0.8588	AVRG	1.11650	1.11650		0.8957	3	15	0.05	0.99	
Carbon Disulfide		2.5130	2.6110	2.5803	2.4999	2.5284	2.5735	2.4637	2.4781	AVRG	0.39511	0.39511		2.5310	2	15	0.05	0.99	
MTBE		2.4905	2.4818	2.4597	2.4700	2.5224	2.5213	2.2645m	2.4187	AVRG	0.40756	0.40756		2.4536	3	15	0.05	0.99	
trans-1,2-Dichloroethene		0.7529m	0.7749	0.7971	0.7661	0.7634	0.7637	0.7464	0.7403	AVRG	1.31048	1.31048		0.7631	2	15	0.05	0.99	
Vinyl Acetate			1.7282	1.8508	2.1593	2.0690	2.1965	1.7384	1.7839	AVRG	0.51752	0.51752		1.9323	11	15	0.05	0.99	
1,1-Dichloroethane		1.8863	1.9080	1.7937	1.7824	1.8003	1.7812	1.7096	1.7036	AVRG	0.55691	0.55691		1.7956	4	15	0.10	0.99	
2-Butanone			0.6242	0.7164	0.6646	0.6788	0.6583	0.6788	0.6340	AVRG	1.50374	1.50374		0.6650	5	15	0.05	0.99	
2,2-Dichloropropane		1.2779	1.2306	1.1457	1.0878	1.0824	1.0590	1.0022	0.9727	AVRG	0.90311	0.90311		1.1073	10	15	0.05	0.99	
cis-1,2-Dichloroethene		0.9140	0.9351	0.9013	0.8609	0.8848	0.8759	0.8552	0.8483	AVRG	1.13067	1.13067		0.8844	3	15	0.05	0.99	
Chloroform		1.5732	1.5891	1.5619	1.5309	1.5569	1.5600	1.5097	1.4979	AVRG	0.64623	0.64623		1.5474	2	15	0.05	0.99	
Bromochloromethane		0.4237	0.4709	0.4620	0.4629	0.4710	0.4621	0.4447	0.4443	AVRG	2.19683	2.19683		0.4552	4	15	0.05	0.99	
1,1,1-Trichloroethane		1.1954	1.1857	1.1912	1.1692	1.1943	1.2069	1.1665	1.1593	AVRG	0.84490	0.84490		1.1836	1	15	0.05	0.99	
1,1-Dichloropropene		0.5952	0.5455	0.5666	0.5507	0.5459	0.5601	0.5422	0.5383	AVRG	1.79999	1.79999		0.5556	3	15	0.05	0.99	
Carbon Tetrachloride		0.4422	0.4864	0.4798	0.4712	0.4833	0.5010	0.4865	0.4822	AVRG	2.08734	2.08734		0.4791	4	15	0.05	0.99	
1,2-Dichloroethane		0.7333	0.7662	0.7300	0.7458	0.7365	0.7381	0.7142	0.7027	AVRG	1.36359	1.36359		0.7334	3	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r ² %RSD	Max %RSD	Min RF	Min r ²	Flg
Benzene	1.5615	1.5815	1.5886	1.5403	1.5580	1.5340	1.4987	1.4890	1.4890	AVRG	0.64769			1.5439	2	15	0.05	0.99	
Trichloroethene	0.4284	0.4291	0.4119	0.3952	0.4215	0.4031	0.4028	0.3973	0.3973	AVRG	2.43216			0.4112	3	15	0.05	0.99	
1,2-Dichloropropane	0.5277	0.5276	0.5300	0.5339	0.5355	0.5279	0.5172	0.5098	0.5098	AVRG	1.90043			0.5262	2	15	0.05	0.99	
Bromodichloromethane	0.5901	0.5860	0.5972	0.5941	0.6105	0.6193	0.6018	0.5959	0.5959	AVRG	1.66844			0.5994	2	15	0.05	0.99	
Dibromomethane	0.3517	0.3393	0.3380	0.3358	0.3403	0.3375	0.3292	0.3254	0.3254	AVRG	2.96612			0.3371	2	15	0.05	0.99	
4-Methyl-2-Pentanone		0.6836	0.7060	0.7208	0.7130	0.7196	0.7168	0.7069	0.7069	AVRG	1.40936			0.7095	2	15	0.05	0.99	
cis-1,3-Dichloropropene	0.6785	0.7213	0.7117	0.7152	0.7259	0.7310	0.7205	0.7177	0.7177	AVRG	1.39814			0.7152	2	15	0.05	0.99	
Toluene	1.0032	0.9623	0.9484	0.9236	0.9296	0.9498	0.9428	0.9389	0.9389	AVRG	1.05283			0.9498	3	15	0.05	0.99	
trans-1,3-Dichloropropene	0.7280	0.7018	0.7206	0.7160	0.7282	0.7442	0.7427	0.7379	0.7379	AVRG	1.37474			0.7274	2	15	0.05	0.99	
1,1,2-Trichloroethane	0.2538	0.2492	0.2525	0.2471	0.2533	0.2499	0.2432	0.2416	0.2416	AVRG	4.01880			0.2488	2	15	0.05	0.99	
2-Hexanone		0.5097	0.5617	0.5412	0.5622	0.5624	0.5768	0.5637	0.5637	AVRG	1.80521			0.5540	4	15	0.05	0.99	
1,3-Dichloropropane	0.7662	0.7530	0.7805	0.7441	0.7575	0.7646	0.7530	0.7493	0.7493	AVRG	1.31832			0.7585	2	15	0.05	0.99	
Tetrachloroethene	0.3845	0.3637	0.3544	0.3434	0.3388	0.3481	0.3486	0.3521	0.3521	AVRG	2.82331			0.3542	4	15	0.05	0.99	
Dibromochloromethane	0.4438	0.4545	0.4860	0.4870	0.5079	0.5338	0.5301	0.5333	0.5333	AVRG	2.01186			0.4971	7	15	0.05	0.99	
1,2-Dibromoethane	0.4586	0.4827	0.4881	0.4792	0.4884	0.4973	0.4888	0.4876	0.4876	AVRG	2.06683			0.4838	2	15	0.05	0.99	
Chlorobenzene	1.0766	1.0829	1.0883	1.0535	1.0617	1.0767	1.0661	1.0674	1.0674	AVRG	0.93314			1.0716	1	15	0.30	0.99	
1,1,1,2-Tetrachloroethane	0.3825	0.3907	0.4049	0.3951	0.3987	0.4103	0.4083	0.4086	0.4086	AVRG	2.50076			0.3999	2	15	0.05	0.99	
Ethylbenzene	1.7363	1.7412	1.7579	1.7132	1.7233	1.7606	1.7505	1.7714	1.7714	AVRG	0.57329			1.7443	1	15	0.05	0.99	
m,p-Xylenes	0.5559	0.5906	0.6111	0.6089	0.6112	0.6218	0.6125	0.6161	0.6161	AVRG	1.65824			0.6030	3	15	0.05	0.99	
o-Xylene	0.5837	0.6162	0.6243	0.6220	0.6201	0.6392	0.6227	0.6240	0.6240	AVRG	1.61545			0.6190	3	15	0.05	0.99	
Styrene	0.9974	1.0432	1.0784	1.0891	1.1110	1.1522	1.1266	1.1356	1.1356	AVRG	0.91602			1.0917	5	15	0.05	0.99	
Bromoform	0.2566	0.2702	0.3005	0.3232	0.3397	0.3579	0.3636	0.3684	0.3684	AVRG	3.110053			0.3225	13	15	0.10	0.99	
Isopropylbenzene	3.2023	3.2334	3.1919	3.1547	3.1917	3.2691	3.3068	3.3143	3.3143	AVRG	0.30931			3.2330	2	15	0.05	0.99	
1,1,2,2-Tetrachloroethane	1.2403	1.3367	1.3321	1.3496	1.3178	1.3089	1.2767	1.2822	1.2822	AVRG	0.76597			1.3055	3	15	0.30	0.99	
1,2,3-Trichloropropane	1.2088	1.1508	1.1492	1.0948	1.0831	1.0799	1.0929	1.0883	1.0883	AVRG	0.89408			1.1185	4	15	0.05	0.99	
Propylbenzene	3.9851	3.7872	3.7390	3.6982	3.6922	3.7797	3.8001	3.8149	3.8149	AVRG	0.26406			3.7870	2	15	0.05	0.99	
Bromobenzene	1.0343	0.9674	0.9841	0.9799	0.9640	0.9647	0.9766	0.9752	0.9752	AVRG	1.01961			0.9808	2	15	0.05	0.99	
1,3,5-Trimethylbenzene	2.5626	2.4688	2.4965	2.4804	2.6102	2.5442	2.5591	2.5601	2.5601	AVRG	0.39444			2.5352	2	15	0.05	0.99	
2-Chlorotoluene	2.9536	2.8507	2.8317	2.7629	2.8385	2.7480	2.7750	2.7532	2.7532	AVRG	0.35534			2.8142	2	15	0.05	0.99	
4-Chlorotoluene	2.8909	2.5973	2.5738	2.4910	2.5204	2.5683	2.5802	2.5859	2.5859	AVRG	0.38447			2.6010	5	15	0.05	0.99	
tert-Butylbenzene	2.2226	2.0939	2.0750	2.0584	2.0690	2.1540	2.1607	2.1775	2.1775	AVRG	0.47028			2.1264	3	15	0.05	0.99	
1,2,4-Trimethylbenzene	2.3172	2.2576	2.3840	2.3484	2.4330	2.5275	2.5728	2.5891	2.5891	AVRG	0.41174			2.4287	5	15	0.05	0.99	
sec-Butylbenzene	3.0429	3.0213	3.0299	3.0096	3.0373	3.1913	3.1761	3.1952	3.1952	AVRG	0.32384			3.0880	3	15	0.05	0.99	
para-Isopropyl Toluene	2.2490	2.2246	2.2409	2.3141	2.2741	2.3815	2.4034	2.4256	2.4256	AVRG	0.43213			2.3141	3	15	0.05	0.99	
1,3-Dichlorobenzene	1.4962	1.5255	1.5211	1.4937	1.4570	1.4832	1.4945	1.4992	1.4992	AVRG	0.66832			1.4963	1	15	0.05	0.99	
1,4-Dichlorobenzene	1.7022	1.5569	1.5169	1.5193	1.4927	1.5090	1.5228	1.5354	1.5354	AVRG	0.64749			1.5444	4	15	0.05	0.99	
n-Butylbenzene	1.9251	1.7483	1.7998	1.7906	1.8544	2.0140	2.0347	2.0759	2.0759	AVRG	0.52484			1.9053	7	15	0.05	0.99	
1,2-Dichlorobenzene	1.6049	1.5796	1.5678	1.5546	1.5478	1.5521	1.5547	1.5703	1.5703	AVRG	0.63837			1.5665	1	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane	0.2801	0.2804	0.2617	0.2703	0.2671	0.2678	0.2726	0.2668	0.2668	AVRG	3.69174			0.2709	2	15	0.05	0.99	
1,2,4-Trichlorobenzene	0.6421	0.5671	0.6095	0.6218	0.6647	0.7046	0.7176	0.7366	0.7366	AVRG	1.51972			0.6580	9	15	0.05	0.99	
Hexachlorobutadiene	0.4841	0.4253	0.4071	0.4036	0.3977	0.4210	0.4186	0.4199	0.4199	AVRG	2.36880			0.4222	6	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max	Min	Min	FLg
															%RSD	%RSD	RF	r^2	
Naphthalene	1.5377	1.4713	1.5654	1.6770	1.8343	1.9158	1.9997	2.0211	AVRG		0.57052			1.7528	12	15	0.05	0.99	
1,2,3-Trichlorobenzene	0.5631	0.5634	0.6303	0.6547	0.6964	0.7376	0.7539	0.7683	AVRG		1.49041			0.6710	12	15	0.05	0.99	
tert-Butyl Alcohol (TEA)	0.0852	0.0787	0.0752	0.0738	0.0758	0.0738	0.0855	0.0746	AVRG		12.8509			0.0778	6	15	0.005	0.99	
Isopropyl Ether (DIPE)	4.2600	4.2918	4.2355	4.2629	4.3565	4.3699	4.2475	4.2110	AVRG		0.23368			4.2794	1	15	0.05	0.99	
Ethyl tert-Butyl Ether (ETBE)	3.1905	3.2227	3.2351	3.2261	3.2965	3.3383	3.2383	3.2291	AVRG		0.30797			3.2471	1	15	0.05	0.99	
Methyl tert-Amyl Ether (TAME)	1.3077	1.3497	1.3177	1.3265	1.3408	1.3357	1.3095	1.2949	AVRG		0.75597			1.3228	1	15	0.05	0.99	
Dibromofluoromethane	0.7952	0.8172	0.8166	0.8006	0.8225	0.8171	0.7884	0.7880	AVRG		1.23990			0.8065	2	15	0.05	0.99	
1,2-Dichloroethane-d4	0.5345	0.5373	0.5390	0.5332	0.5344	0.5201	0.5034	0.4913	AVRG		1.90542			0.5248	3	15	0.05	0.99	
Toluene-d8	1.2703	1.2944	1.2825	1.2911	1.2707	1.2784	1.2793	1.2919	AVRG		0.77894			1.2838	1	15	0.05	0.99	
Bromofluorobenzene	1.1364	1.1452	1.1328	1.1285	1.1077	1.0959	1.1144	1.1148	AVRG		0.89251			1.1204	1	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	2	2.0000	4	5.0000	2	10.000	-1	20.000	-2	50.000	2	75.000	-2	100.00	-5
Chloromethane	0.5000	24	1.0000	-1	2.0000	3	5.0000	-3	10.000	0	20.000	-4	50.000	-4	75.000	-7	100.00	-8
Vinyl Chloride	0.5000	20	1.0000	6	2.0000	2	5.0000	-8	10.000	-3	20.000	-7	50.000	-1	75.000	-4	100.00	-5
Bromomethane			1.0000	-14	2.0000	-2	5.0000	-8	10.000	-3	20.000	-2	50.000	7	75.000	9	100.00	13
Chloroethane			1.0000	19	2.0000	6	5.0000	0	10.000	-3	20.000	-6	50.000	-4	75.000	-7	100.00	-5
Trichlorofluoromethane			1.0000	3	2.0000	3	5.0000	-2	10.000	1	20.000	-1	50.000	2	75.000	-2	100.00	-3
Acetone					2.0000	25	5.0000	3	10.000	-9	20.000	-1	50.000	-9	75.000	0	100.00	-9
Freon 113			0.5000	0	2.0000	1	5.0000	4	10.000	-2	20.000	-3	50.000	3	75.000	-1	100.00	-2
1,1-Dichloroethene			0.5000	-11	2.0000	10	5.0000	4	10.000	-1	20.000	0	50.000	1	75.000	-1	100.00	-3
Methylene Chloride			0.5000	5	2.0000	1	5.0000	2	10.000	0	20.000	0	50.000	0	75.000	-4	100.00	-4
Carbon Disulfide			0.5000	-1	2.0000	3	5.0000	2	10.000	-1	20.000	0	50.000	2	75.000	-3	100.00	-2
MTBE			0.5000	2	2.0000	1	5.0000	0	10.000	1	20.000	3	50.000	3	75.000	-8	100.00	-1
trans-1,2-Dichloroethene			0.5000	-1	2.0000	2	5.0000	4	10.000	0	20.000	0	50.000	0	75.000	-2	100.00	-3
Vinyl Acetate					2.0000	-11	5.0000	-4	10.000	12	20.000	7	50.000	14	75.000	-10	100.00	-8
1,1-Dichloroethane			0.5000	5	2.0000	6	5.0000	0	10.000	-1	20.000	0	50.000	-1	75.000	-5	100.00	-5
2-Butanone					2.0000	-6	5.0000	8	10.000	0	20.000	2	50.000	-1	75.000	2	100.00	-5
2,2-Dichloropropane			0.5000	15	2.0000	11	5.0000	3	10.000	-2	20.000	-2	50.000	-4	75.000	-9	100.00	-12
cis-1,2-Dichloroethene			0.5000	3	2.0000	6	5.0000	2	10.000	-3	20.000	0	50.000	-1	75.000	-3	100.00	-4
Chloroform			0.5000	2	2.0000	3	5.0000	1	10.000	-1	20.000	1	50.000	1	75.000	-2	100.00	-3
Bromochloromethane			0.5000	-7	2.0000	3	5.0000	2	10.000	2	20.000	3	50.000	2	75.000	-2	100.00	-2
1,1,1-Trichloroethane			0.5000	1	2.0000	0	5.0000	1	10.000	-1	20.000	1	50.000	2	75.000	-1	100.00	-2
1,1-Dichloropropene			0.5000	7	2.0000	-2	5.0000	2	10.000	-1	20.000	-2	50.000	1	75.000	-2	100.00	-3
Carbon Tetrachloride			0.5000	-8	2.0000	2	5.0000	0	10.000	-2	20.000	1	50.000	5	75.000	2	100.00	1
1,2-Dichloroethane			0.5000	0	2.0000	4	5.0000	0	10.000	2	20.000	0	50.000	0	75.000	-3	100.00	-4
Benzene			0.5000	1	2.0000	2	5.0000	3	10.000	0	20.000	1	50.000	-1	75.000	-3	100.00	-4
Trichloroethene			0.5000	4	2.0000	4	5.0000	0	10.000	-4	20.000	3	50.000	-2	75.000	-2	100.00	-3
1,2-Dichloropropane			0.5000	0	2.0000	0	5.0000	1	10.000	1	20.000	2	50.000	0	75.000	-2	100.00	-3
Bromodichloromethane			0.5000	-2	2.0000	-2	5.0000	0	10.000	-1	20.000	2	50.000	3	75.000	0	100.00	-1
Dibromomethane			0.5000	4	2.0000	1	5.0000	0	10.000	0	20.000	1	50.000	0	75.000	-2	100.00	-3
4-Methyl-2-Pentanone					2.0000	-4	5.0000	0	10.000	2	20.000	0	50.000	0	75.000	1	100.00	0
cis-1,3-Dichloropropene			0.5000	-5	2.0000	1	5.0000	0	10.000	0	20.000	1	50.000	2	75.000	1	100.00	0
Toluene			0.5000	6	2.0000	1	5.0000	0	10.000	-3	20.000	-2	50.000	0	75.000	-1	100.00	-1
trans-1,3-Dichloropropene			0.5000	0	2.0000	-4	5.0000	-1	10.000	-2	20.000	0	50.000	2	75.000	2	100.00	1
1,1,2-Trichloroethane			0.5000	2	2.0000	0	5.0000	1	10.000	-1	20.000	2	50.000	0	75.000	-2	100.00	-3
2-Hexanone					2.0000	-8	5.0000	1	10.000	-2	20.000	1	50.000	2	75.000	4	100.00	2
1,3-Dichloropropane			0.5000	1	2.0000	-1	5.0000	3	10.000	-2	20.000	0	50.000	1	75.000	-1	100.00	-1
Tetrachloroethene			0.5000	9	2.0000	3	5.0000	0	10.000	-3	20.000	-4	50.000	-2	75.000	-2	100.00	-1
Dibromochloromethane			0.5000	-11	2.0000	-9	5.0000	-2	10.000	-2	20.000	2	50.000	7	75.000	7	100.00	7
1,2-Dibromoethane			0.5000	-5	2.0000	0	5.0000	1	10.000	-1	20.000	1	50.000	3	75.000	1	100.00	1
Chlorobenzene			0.5000	0	2.0000	1	5.0000	2	10.000	-2	20.000	-1	50.000	0	75.000	-1	100.00	0
1,1,1,2-Tetrachloroethane			0.5000	-4	2.0000	-2	5.0000	1	10.000	-1	20.000	0	50.000	3	75.000	2	100.00	2
Ethylbenzene			0.5000	0	2.0000	0	5.0000	1	10.000	-2	20.000	-1	50.000	1	75.000	0	100.00	2

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	-8	1.0000	-2	4.0000	1	10.000	1	20.000	-1	40.000	-1	100.00	1	150.00	2	200.00	2
o-Xylene			0.5000	-6	2.0000	0	5.0000	0	10.000	0	20.000	0	50.000	0	75.000	1	100.00	1
Styrene			0.5000	-9	2.0000	-4	5.0000	-4	10.000	0	20.000	0	50.000	2	75.000	3	100.00	4
Bromoform			0.5000	-20	2.0000	-16	5.0000	-16	10.000	0	20.000	0	50.000	5	75.000	11	100.00	14
Isopropylbenzene			0.5000	-1	2.0000	0	5.0000	0	10.000	-1	20.000	-2	50.000	-1	75.000	2	100.00	3
1,1,2,2-Tetrachloroethane			0.5000	-5	2.0000	2	5.0000	2	10.000	3	20.000	3	50.000	1	75.000	-2	100.00	-2
1,2,3-Trichloropropane			0.5000	8	2.0000	3	5.0000	3	10.000	-2	20.000	-2	50.000	-3	75.000	-2	100.00	-3
Propylbenzene			0.5000	5	2.0000	0	5.0000	0	10.000	-1	20.000	-2	50.000	0	75.000	0	100.00	1
Bromobenzene			0.5000	5	2.0000	-1	5.0000	-1	10.000	0	20.000	0	50.000	-2	75.000	0	100.00	-1
1,3,5-Trimethylbenzene			0.5000	1	2.0000	-3	5.0000	-3	10.000	-2	20.000	-2	50.000	3	75.000	1	100.00	1
2-Chlorotoluene			0.5000	5	2.0000	1	5.0000	1	10.000	-2	20.000	-2	50.000	1	75.000	-1	100.00	-2
4-Chlorotoluene			0.5000	11	2.0000	0	5.0000	0	10.000	-4	20.000	-4	50.000	-3	75.000	-1	100.00	-1
tert-Butylbenzene			0.5000	5	2.0000	-2	5.0000	-2	10.000	-3	20.000	-3	50.000	-3	75.000	2	100.00	2
1,2,4-Trimethylbenzene			0.5000	-5	2.0000	-7	5.0000	-7	10.000	-2	20.000	-2	50.000	0	75.000	4	100.00	7
sec-Butylbenzene			0.5000	-1	2.0000	-2	5.0000	-2	10.000	-3	20.000	-3	50.000	-2	75.000	3	100.00	3
para-Isopropyl Toluene			0.5000	-3	2.0000	-4	5.0000	-4	10.000	0	20.000	0	50.000	-2	75.000	3	100.00	5
1,3-Dichlorobenzene			0.5000	0	2.0000	2	5.0000	2	10.000	0	20.000	0	50.000	-3	75.000	0	100.00	0
1,4-Dichlorobenzene			0.5000	10	2.0000	1	5.0000	1	10.000	-2	20.000	-2	50.000	-3	75.000	-2	100.00	-1
n-Butylbenzene			0.5000	1	2.0000	-8	5.0000	-8	10.000	-6	20.000	-6	50.000	-3	75.000	6	100.00	9
1,2-Dichlorobenzene			0.5000	2	2.0000	1	5.0000	1	10.000	-1	20.000	-1	50.000	-1	75.000	-1	100.00	0
1,2-Dibromo-3-Chloropropane			0.5000	3	2.0000	4	5.0000	4	10.000	0	20.000	0	50.000	-1	75.000	1	100.00	-1
1,2,4-Trichlorobenzene			0.5000	-2	2.0000	-14	5.0000	-14	10.000	-6	20.000	-6	50.000	1	75.000	7	100.00	12
Hexachlorobutadiene			0.5000	15	2.0000	1	5.0000	1	10.000	-4	20.000	-4	50.000	-6	75.000	0	100.00	-1
Naphthalene			0.5000	-12	2.0000	-16	5.0000	-16	10.000	-4	20.000	-4	50.000	5	75.000	14	100.00	15
1,2,3-Trichlorobenzene			0.5000	-16	2.0000	-16	5.0000	-16	10.000	-2	20.000	-2	50.000	4	75.000	10	100.00	15
tert-Butyl Alcohol (TEA)			5.0000	9	20.000	1	50.000	1	100.00	-5	200.00	-5	500.00	-3	750.00	10	1000.0	-4
Isopropyl Ether (DIPE)			0.5000	0	2.0000	0	5.0000	0	10.000	-1	20.000	0	50.000	2	75.000	-1	100.00	-2
Ethyl tert-Butyl Ether (ETBE)			0.5000	-2	2.0000	-1	5.0000	-1	10.000	-1	20.000	-1	50.000	2	75.000	0	100.00	-1
Methyl tert-Amyl Ether (TAME)			0.5000	-1	2.0000	2	5.0000	2	10.000	0	20.000	0	50.000	1	75.000	-1	100.00	-2
Dibromofluoromethane	50.000	-1	50.000	1	50.000	1	50.000	1	50.000	-1	50.000	-1	50.000	2	50.000	1	50.000	-2
1,2-Dichloroethane-d4	50.000	2	50.000	2	50.000	3	50.000	3	50.000	2	50.000	2	50.000	2	50.000	-1	50.000	-6
Toluene-d8	50.000	-1	50.000	1	50.000	0	50.000	0	50.000	-1	50.000	-1	50.000	0	50.000	1	50.000	1
Bromofluorobenzene	50.000	1	50.000	2	50.000	1	50.000	1	50.000	1	50.000	1	50.000	-1	50.000	-2	50.000	0

MCT 03/12/15 [Freon 12]: Combined split peak in multiple levels.

MCT 03/12/15 [Chloromethane]: Corrected baseline noise or negative peak in multiple levels.

MCT 03/12/15 [Vinyl Chloride]: Combined split peak in multiple levels.

MCT 03/12/15 [Bromomethane]: Corrected baseline noise or negative peak in multiple levels.

MCT 03/12/15 [Chloroethane]: Combined split peak in multiple levels.
MCT 03/12/15 [Acetone]: Corrected baseline noise or negative peak in multiple levels.
MCT 03/12/15 [Isopropanol]: Corrected baseline noise or negative peak in multiple levels.
MCT 03/12/15 [trans-1,2-Dichloroethene]: Corrected baseline noise or negative peak in (bc508).
MCT 03/12/15 [1,1-Dichloroethene]: Corrected baseline noise or negative peak in (bc508).
MCT 03/12/15 [2-Chloroethylvinylether]: Picked or reassigned peak in multiple levels.

Analyst: MCT Date: 03/12/15 Reviewer: TKM Date: 03/12/15

m>manual integration
Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor
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415092829001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266087 MSVOA Water
EPA 8260B

Inst : MSVOA02
Calnum : 415092829001

Cal Date : 05-MAR-2015

Type : WATER

ICV 415092829016 (bc516 05-MAR-2015) stds: S26359 (10000X), S26528 (1000X)
ICV 415092829017 (bc517 05-MAR-2015) stds: S26569 (10000X), S26642 (10000X),
S26759 (10000X), S26528 (1000X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	415092829016	20.00	17.44	ug/L	-13	30	
Chloromethane	415092829016	20.00	17.29	ug/L	-14	30	
Vinyl Chloride	415092829016	20.00	19.30	ug/L	-3	20	
Bromomethane	415092829016	20.00	19.52	ug/L	-2	30	
Chloroethane	415092829016	20.00	18.73	ug/L	-6	30	
Trichlorofluoromethane	415092829016	20.00	19.19	ug/L	-4	30	
Acetone	415092829017	25.00	19.24	ug/L	-23	40	!v-
Freon 113	415092829017	25.00	21.93	ug/L	-12	30	
1,1-Dichloroethene	415092829017	25.00	23.66	ug/L	-5	20	
Methylene Chloride	415092829017	25.00	24.53	ug/L	-2	30	
Carbon Disulfide	415092829017	25.00	25.40	ug/L	2	30	
MTBE	415092829017	25.00	23.78	ug/L	-5	30	
trans-1,2-Dichloroethene	415092829017	25.00	24.07	ug/L	-4	30	
Vinyl Acetate	415092829017	25.00	31.21	ug/L	25	40	!v+
1,1-Dichloroethane	415092829017	25.00	23.58	ug/L	-6	30	
2-Butanone	415092829017	25.00	21.71	ug/L	-13	40	
2,2-Dichloropropane	415092829017	25.00	21.63	ug/L	-13	30	
cis-1,2-Dichloroethene	415092829017	25.00	24.48	ug/L	-2	30	
Chloroform	415092829017	25.00	24.53	ug/L	-2	20	
Bromochloromethane	415092829017	25.00	25.49	ug/L	2	30	
1,1,1-Trichloroethane	415092829017	25.00	24.89	ug/L	0	30	
1,1-Dichloropropene	415092829017	25.00	23.88	ug/L	-4	30	
Carbon Tetrachloride	415092829017	25.00	25.20	ug/L	1	30	
1,2-Dichloroethane	415092829017	25.00	23.92	ug/L	-4	30	
Benzene	415092829017	25.00	25.46	ug/L	2	30	
Trichloroethene	415092829017	25.00	24.65	ug/L	-1	30	
1,2-Dichloropropane	415092829017	25.00	23.59	ug/L	-6	20	
Bromodichloromethane	415092829017	25.00	24.29	ug/L	-3	30	
Dibromomethane	415092829017	25.00	24.43	ug/L	-2	30	
4-Methyl-2-Pentanone	415092829017	25.00	23.09	ug/L	-8	40	
cis-1,3-Dichloropropene	415092829017	25.00	24.32	ug/L	-3	30	
Toluene	415092829017	25.00	25.67	ug/L	3	20	
trans-1,3-Dichloropropene	415092829017	25.00	22.90	ug/L	-8	30	
1,1,2-Trichloroethane	415092829017	25.00	24.65	ug/L	-1	30	
2-Hexanone	415092829017	25.00	23.01	ug/L	-8	40	
1,3-Dichloropropane	415092829017	25.00	25.57	ug/L	2	30	
Tetrachloroethene	415092829017	25.00	25.72	ug/L	3	30	
Dibromochloromethane	415092829017	25.00	25.75	ug/L	3	30	
1,2-Dibromoethane	415092829017	25.00	25.22	ug/L	1	30	
Chlorobenzene	415092829017	25.00	25.74	ug/L	3	30	
1,1,1,2-Tetrachloroethane	415092829017	25.00	25.16	ug/L	1	30	
Ethylbenzene	415092829017	25.00	26.08	ug/L	4	20	
m,p-Xylenes	415092829017	50.00	52.57	ug/L	5	30	
o-Xylene	415092829017	25.00	26.03	ug/L	4	30	
Styrene	415092829017	25.00	26.52	ug/L	6	30	
Bromoform	415092829017	25.00	26.21	ug/L	5	30	
Isopropylbenzene	415092829017	25.00	25.77	ug/L	3	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	415092829017	25.00	24.54	ug/L	-2	30	
1,2,3-Trichloropropane	415092829017	25.00	24.20	ug/L	-3	30	
Propylbenzene	415092829017	25.00	25.35	ug/L	1	30	
Bromobenzene	415092829017	25.00	26.00	ug/L	4	30	
1,3,5-Trimethylbenzene	415092829017	25.00	26.56	ug/L	6	30	
2-Chlorotoluene	415092829017	25.00	25.26	ug/L	1	30	
4-Chlorotoluene	415092829017	25.00	25.50	ug/L	2	30	
tert-Butylbenzene	415092829017	25.00	26.03	ug/L	4	30	
1,2,4-Trimethylbenzene	415092829017	25.00	25.77	ug/L	3	30	
sec-Butylbenzene	415092829017	25.00	26.09	ug/L	4	30	
para-Isopropyl Toluene	415092829017	25.00	25.67	ug/L	3	30	
1,3-Dichlorobenzene	415092829017	25.00	25.91	ug/L	4	30	
1,4-Dichlorobenzene	415092829017	25.00	25.83	ug/L	3	30	
n-Butylbenzene	415092829017	25.00	25.56	ug/L	2	30	
1,2-Dichlorobenzene	415092829017	25.00	25.92	ug/L	4	30	
1,2-Dibromo-3-Chloropropane	415092829017	25.00	22.40	ug/L	-10	30	
1,2,4-Trichlorobenzene	415092829017	25.00	26.15	ug/L	5	30	
Hexachlorobutadiene	415092829017	25.00	24.64	ug/L	-1	30	
Naphthalene	415092829017	25.00	23.85	ug/L	-5	30	
1,2,3-Trichlorobenzene	415092829017	25.00	26.99	ug/L	8	30	
tert-Butyl Alcohol (TBA)	415092829017	125.0	96.06	ug/L	-23	30	!v-
Isopropyl Ether (DIPE)	415092829017	25.00	23.70	ug/L	-5	30	
Ethyl tert-Butyl Ether (ETBE)	415092829017	25.00	23.47	ug/L	-6	30	
Methyl tert-Amyl Ether (TAME)	415092829017	25.00	23.23	ug/L	-7	30	

415092829016: Analyst: TKM
415092829017: Analyst: TKM

Date: 03/12/15 *
Date: 03/12/15 *

Reviewer: MCT
Reviewer: MCT

Date: 03/12/15
Date: 03/12/15

!=warning +=high bias -=low bias v=ICV

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266087 MSVOA Water: EPA 8260B

Inst : MSVOA11 Name : 8260GX11
 Calnum : 835120089001 Date : 24-MAR-2015 12:00 Type : WATER
 Units : ug/L X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	kcn06	835120089006	24-MAR-2015 12:00	S25695 (2000000X), S26851 (2000000X), S26838 (2000000X), S25156 (1000000X), S26882 (25000X)
L2	kcn07	835120089007	24-MAR-2015 12:29	S25695 (1000000X), S26851 (1000000X), S26838 (1000000X), S25156 (5000000X), S26882 (25000X)
L3	kcn08	835120089008	24-MAR-2015 12:57	S25695 (5000000X), S26851 (2500000X), S26838 (2500000X), S25156 (2500000X), S26882 (25000X)
L4	kcn09	835120089009	24-MAR-2015 13:26	S25695 (2000000X), S26851 (1000000X), S26838 (1000000X), S25156 (1000000X), S26882 (25000X)
L5	kcn10	835120089010	24-MAR-2015 13:54	S25695 (1000000X), S26851 (5000000X), S26838 (5000000X), S25156 (5000000X), S26882 (25000X)
L6	kcn11	835120089011	24-MAR-2015 14:22	S25695 (5000000X), S26851 (2500000X), S26838 (2500000X), S25156 (2500000X), S26882 (25000X)
L7	kcn12	835120089012	24-MAR-2015 14:50	S25695 (2000000X), S26851 (1000000X), S26838 (1000000X), S25156 (1000000X), S26882 (25000X)
L8	kcn13	835120089013	24-MAR-2015 15:19	S25695 (1333000X), S26851 (6667000X), S26838 (6667000X), S25156 (6667000X), S26882 (25000X)
L9	kcn14	835120089014	24-MAR-2015 15:47	S25695 (1000000X), S26851 (5000000X), S26838 (5000000X), S25156 (5000000X), S26882 (25000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.4176m	0.5104m	0.5321m	0.4359m	0.4989m	0.5178	0.5421	0.5225m	AVRG	2.01144			0.4972	9	15	0.05	0.99	
Chloromethane	0.5381	0.5312	0.5115m	0.4913	0.4750	0.4546	0.4539	0.4515	0.4455	AVRG		2.06776		0.4836	7	15	0.10	0.99	
Vinyl Chloride	0.4961	0.5051	0.5537	0.5307	0.4953	0.5090	0.5230	0.5309	0.5292	AVRG		1.92594		0.5192	4	15	0.05	0.99	
Bromomethane		0.2093	0.2370	0.2504	0.2661	0.2464	0.2701	0.2860	0.2973	AVRG		3.87849		0.2578	11	15	0.05	0.99	
Chloroethane		0.2677	0.2884	0.2848	0.2726	0.2716	0.2747	0.2817	0.2789	AVRG		3.60305		0.2775	3	15	0.05	0.99	
Trichlorofluoromethane		0.5796	0.6637	0.6753	0.5831	0.6436	0.6684	0.6971	0.6921	AVRG		1.53758		0.6504	7	15	0.05	0.99	
Acetone			0.1568	0.1367	0.1277	0.1044	0.1102	0.1323	0.1343	AVRG		7.75752		0.1289	14	15	0.05	0.99	
Freon 113			0.2836	0.3824	0.2520	0.3711	0.3455	0.3666	0.3793	AVRG		2.94056		0.3401	15	15	0.05	0.99	
1,1-Dichloroethene		0.4324	0.3712m	0.4004	0.3242	0.3728	0.3523	0.3707	0.3742	AVRG		2.66826		0.3748	8	15	0.05	0.99	
Methylene Chloride		0.4914	0.4501	0.4472	0.4521	0.4283	0.4274	0.4444	0.4410	AVRG		2.23342		0.4477	4	15	0.05	0.99	
Carbon Disulfide		1.3315	1.2425	1.3164	1.1447	1.2640	1.2139	1.2679	1.2665	AVRG		0.79623		1.2559	5	15	0.05	0.99	
MTBE		1.3893	1.2304	1.2483	1.2515	1.1863	1.1942	1.2602	1.2541	AVRG		0.79886		1.2518	5	15	0.05	0.99	
trans-1,2-Dichloroethene		0.5517	0.4463	0.4501	0.4091	0.4274	0.4200	0.4335	0.4304	AVRG		2.24186		0.4461	10	15	0.05	0.99	
Vinyl Acetate			0.6168	0.6389	0.6500	0.6303	0.6476	0.6630	0.6537	AVRG		1.55542		0.6429	2	15	0.05	0.99	
1,1-Dichloroethane		0.7968	0.7746	0.7643	0.7457	0.7326	0.7309	0.7667	0.7550	AVRG		1.31867		0.7583	3	15	0.10	0.99	
2-Butanone			0.1783	0.1866	0.1785	0.1673	0.1733	0.1897	0.1935	AVRG		5.52345		0.1810	5	15	0.05	0.99	
2,2-Dichloropropane		0.5863	0.5701	0.6194	0.5597	0.6072	0.5934	0.6175	0.6115	AVRG		1.67886		0.5956	4	15	0.05	0.99	
cis-1,2-Dichloroethene		0.6311m	0.5139m	0.4915	0.5032	0.4713	0.4808	0.4990	0.4920	AVRG		1.95951		0.5103	10	15	0.05	0.99	
Chloroform		0.8512	0.7596	0.7717	0.7906	0.7583	0.7597	0.7817	0.7749	AVRG		1.28048		0.7810	4	15	0.05	0.99	
Bromochloromethane		0.2524	0.2476	0.2503	0.2630	0.2487	0.2553	0.2530	0.2512	AVRG		3.95720		0.2527	2	15	0.05	0.99	
1,1,1-Trichloroethane		0.7104	0.6391	0.6846	0.6029	0.6754	0.6513	0.6686	0.6712	AVRG		1.50843		0.6629	5	15	0.05	0.99	
1,1-Dichloropropene		0.3694	0.3563	0.3998	0.3319	0.4003	0.3939	0.4072	0.4121	AVRG		2.60508		0.3839	7	15	0.05	0.99	
Carbon Tetrachloride		0.3226	0.3343	0.3882	0.3117	0.3942	0.3850	0.4122	0.4131	AVRG		2.70161		0.3701	11	15	0.05	0.99	
1,2-Dichloroethane		0.4282	0.3940	0.3951	0.3965	0.3869	0.3952	0.4098	0.4074	AVRG		2.48977		0.4016	3	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r ² %RSD	Max %RSD	Min RF	Min r ²	Flg
Benzene		1.2992	1.1879	1.2152	1.1905	1.2109	1.2263	1.2775	1.2622	AVRG		0.81056		1.2337	3	15	0.05	0.99	
Trichloroethene		0.3094	0.3029	0.3159	0.2964	0.3135	0.3124	0.3331	0.3293	AVRG		3.18357		0.3141	4	15	0.05	0.99	
1,2-Dichloropropane		0.3221	0.3063	0.3240	0.2995	0.2996	0.3076	0.3225	0.3186	AVRG		3.19953		0.3125	3	15	0.05	0.99	
Bromodichloromethane		0.4242	0.3949	0.3994	0.3965	0.3950	0.4038	0.4247	0.4157	AVRG		2.45843		0.4068	3	15	0.05	0.99	
Dibromomethane		0.2088	0.1976	0.1979	0.1965	0.1942	0.1931	0.2065	0.2027	AVRG		5.00854		0.1997	3	15	0.05	0.99	
4-Methyl-2-Pentanone			0.2474	0.2459	0.2512	0.2419	0.2570	0.2746	0.2706	AVRG		3.91359		0.2555	5	15	0.05	0.99	
cis-1,3-Dichloropropene		0.5117	0.4789	0.4898	0.5063	0.4929	0.5172	0.5410	0.5278	AVRG		1.96772		0.5082	4	15	0.05	0.99	
Toluene		1.0102	0.8938	0.9272	0.9453	0.9251	0.9122	0.9524	0.9348	AVRG		1.06652		0.9376	4	15	0.05	0.99	
trans-1,3-Dichloropropene		0.5775	0.5243	0.5309	0.5381	0.5226	0.5374	0.5689	0.5592	AVRG		1.83536		0.5449	4	15	0.05	0.99	
1,1,2-Trichloroethane		0.2003	0.1767	0.1788	0.1764	0.1730	0.1755	0.1853	0.1844	AVRG		5.51582		0.1813	5	15	0.05	0.99	
2-Hexanone			0.2127	0.2034	0.2116	0.2008	0.2043	0.2276	0.2291	AVRG		4.69965		0.2128	5	15	0.05	0.99	
1,3-Dichloropropane		0.5762	0.5244	0.5382	0.5395	0.5216	0.5314	0.5612	0.5522	AVRG		1.84130		0.5431	3	15	0.05	0.99	
Tetrachloroethene		0.3347	0.3306	0.3798	0.3278	0.3979	0.3858	0.4156	0.4155	AVRG		2.67763		0.3735	10	15	0.05	0.99	
Dibromochloromethane		0.4043	0.3704	0.3863	0.3927	0.3882	0.3995	0.4247	0.4194	AVRG		2.51147		0.3982	4	15	0.05	0.99	
1,2-Dibromoethane		0.3669	0.3350	0.3438	0.3520	0.3361	0.3402	0.3560	0.3558	AVRG		2.87187		0.3482	3	15	0.05	0.99	
Chlorobenzene		1.1322	1.0869	1.0997	1.1083	1.0860	1.0883	1.1323	1.1211	AVRG		0.90346		1.1069	2	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.3974	0.3615	0.3748	0.3810	0.3750	0.3781	0.3996	0.4141	AVRG		2.59612		0.3852	4	15	0.05	0.99	
Ethylbenzene		1.8829	1.7189	1.7953	1.7547	1.8265	1.7947	1.9055	1.9347	AVRG		0.54745		1.8266	4	15	0.05	0.99	
m,p-Xylenes	0.7494	0.6659	0.6439	0.7044	0.7126	0.7317	0.7285	0.7986	0.8134	AVRG		1.37438		0.7276	8	15	0.05	0.99	
o-Xylene		0.6682	0.6474	0.6641	0.6915	0.6852	0.6972	0.7750	0.7900	AVRG		1.42383		0.7023	7	15	0.05	0.99	
Styrene		1.1307	1.1037	1.1514	1.1970	1.1906	1.2187	1.4176	1.3018	AVRG		0.82377		1.2139	8	15	0.05	0.99	
Bromoform		0.2798	0.2423	0.2574	0.2671	0.2672	0.2869	0.3283	0.3484	AVRG		3.51294		0.2847	13	15	0.10	0.99	
Isopropylbenzene		3.2457	3.4201	3.5500	3.1998	3.5713	3.5049	3.3638	3.5541	AVRG		0.29187		3.4262	4	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		0.8332	0.8653	0.8349	0.8088	0.7719	0.7711	0.6794	0.7116	AVRG		1.27468		0.7845	8	15	0.30	0.99	
1,2,3-Trichloropropane		0.9147	0.8611	0.7973	0.7958	0.7622	0.7416	0.7373	0.7922	AVRG		1.24957		0.8003	8	15	0.05	0.99	
Propylbenzene		3.7738	3.9707	4.0121	3.6803	4.0687	3.9476	3.6356	3.9958	AVRG		0.25736		3.8856	4	15	0.05	0.99	
Bromobenzene		1.0345	0.9565	0.9790	0.9912	0.9606	0.9103	0.9004	0.9958	AVRG		1.03515		0.9660	5	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.6322	2.8359	2.7833	2.7085	2.8842	2.8133	2.8692	2.9397	AVRG		0.35609		2.8083	4	15	0.05	0.99	
2-Chlorotoluene		2.8250	2.8084	2.7169	2.6789	2.6985	2.6512	2.6636	2.6961	AVRG		0.36801		2.7173	2	15	0.05	0.99	
4-Chlorotoluene		2.5149	2.5544	2.4923	2.4889	2.4549	2.4546	2.5451	2.5474	AVRG		0.39895		2.5066	2	15	0.05	0.99	
tert-Butylbenzene		2.2558	2.3387	2.5098	2.2445	2.5771	2.5449	2.6172	2.5580	AVRG		0.40721		2.4558	6	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.6048	2.6139	2.5762	2.6790	2.7148	2.7387	3.0055	2.3688	AVRG		0.37556		2.6627	7	15	0.05	0.99	
sec-Butylbenzene		2.8769	3.2355	3.5368	3.0841	3.7706	3.7196	3.8904	3.3718	AVRG		0.29106		3.4357	10	15	0.05	0.99	
para-Isopropyl Toluene		2.4301	2.5954	2.7469	2.3719	2.9865	3.0478	3.2553	2.7826	AVRG		0.36009		2.7771	11	15	0.05	0.99	
1,3-Dichlorobenzene		1.6928	1.7431	1.7070	1.7246	1.6843	1.7136	1.7602	1.7826	AVRG		0.57936		1.7260	2	15	0.05	0.99	
1,4-Dichlorobenzene		1.7592	1.7867	1.7713	1.7823	1.7167	1.7512	1.8020	1.7749	AVRG		0.56560		1.7680	1	15	0.05	0.99	
n-Butylbenzene		2.0535	2.0338	2.1637	1.9507	2.3306	2.3795	2.5552	2.5202	AVRG		0.44476		2.2484	10	15	0.05	0.99	
1,2-Dichlorobenzene		1.6890	1.6845	1.6259	1.6343	1.5839	1.5752	1.5359	1.6678	AVRG		0.61555		1.6246	3	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane			0.1584	0.1509	0.1467	0.1369	0.1322	0.1210	0.1247	AVRG		7.20988		0.1387	10	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.7611	0.8200	0.7427	0.7547	0.7392	0.7235	0.6719	0.7103	AVRG		1.35059		0.7404	6	15	0.05	0.99	
Hexachlorobutadiene		0.3597	0.4106	0.4096	0.3722	0.4818	0.4673	0.4287	0.4468	AVRG		2.36917		0.4221	10	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max	Min	Min	FLg
															%RSD	%RSD	RF	r^2	
Naphthalene		1.8332	1.8189	1.6887	1.6624	1.5752	1.4556	1.3535	1.4390	AVRG		0.62371		1.6033	11	15	0.05	0.99	
1,2,3-Trichlorobenzene		0.5718	0.5835	0.5350	0.5436	0.5385	0.5352	0.5037	0.5566	AVRG		1.83153		0.5460	5	15	0.05	0.99	
tert-Butyl Alcohol (TEA)		0.0391	0.0385	0.0389	0.0382	0.0371	0.0378	0.0412	0.0411	AVRG		25.6435		0.0390	4	15	0.005	0.99	
Isopropyl Ether (DIPE)		1.3999	1.2549	1.2522	1.2551	1.1879	1.2160	1.2561	1.2535	AVRG		0.79400		1.2595	5	15	0.05	0.99	
Ethyl tert-Butyl Ether (ETBE)		1.3891	1.3020	1.3034	1.3273	1.2730	1.3008	1.3656	1.3504	AVRG		0.75389		1.3265	3	15	0.05	0.99	
Methyl tert-Amyl Ether (TAME)		0.9883	0.8793	0.8811	0.8990	0.8836	0.9172	0.9630	0.9544	AVRG		1.08609		0.9207	5	15	0.05	0.99	
Dibromofluoromethane	0.4311	0.4341	0.4379	0.4408	0.4411	0.4352	0.4352	0.4337	0.4341	AVRG		2.29409		0.4359	1	15	0.05	0.99	
1,2-Dichloroethane-d4	0.3334	0.3405	0.3386	0.3435	0.3438	0.3470	0.3567	0.3674	0.3665	AVRG		2.86859		0.3486	3	15	0.05	0.99	
Toluene-d8	1.4458	1.4616	1.4470	1.4411	1.4473	1.4372	1.4226	1.4309	1.4280	AVRG		0.69436		1.4402	1	15	0.05	0.99	
Bromofluorobenzene	0.9728	0.9814	1.0171	0.9515	0.9316	0.9137	0.8947	0.7669	0.8497	AVRG		1.08703		0.9199	8	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	-16	2.0000	3	5.0000	7	10.000	-12	20.000	0	50.000	4	75.000	9	100.00	5
Chloromethane	0.5000	11	1.0000	10	2.0000	6	5.0000	2	10.000	-2	20.000	-6	50.000	-6	75.000	-7	100.00	-8
Vinyl Chloride	0.5000	-4	1.0000	-3	2.0000	7	5.0000	2	10.000	-5	20.000	-2	50.000	1	75.000	2	100.00	2
Bromomethane			1.0000	-19	2.0000	-8	5.0000	-3	10.000	3	20.000	-4	50.000	5	75.000	11	100.00	15
Chloroethane			1.0000	-4	2.0000	4	5.0000	3	10.000	-2	20.000	-2	50.000	-1	75.000	2	100.00	0
Trichlorofluoromethane			1.0000	-11	2.0000	2	5.0000	4	10.000	-10	20.000	-1	50.000	3	75.000	7	100.00	6
Acetone					2.0000	22	5.0000	6	10.000	-1	20.000	-19	50.000	-15	75.000	3	100.00	4
Freon 113					2.0000	-17	5.0000	12	10.000	-26	20.000	9	50.000	2	75.000	8	100.00	12
1,1-Dichloroethene	0.5000	15	0.5000	15	2.0000	-1	5.0000	7	10.000	-13	20.000	-1	50.000	-6	75.000	-1	100.00	0
Methylene Chloride	0.5000	10	0.5000	10	2.0000	1	5.0000	0	10.000	1	20.000	-4	50.000	-5	75.000	-1	100.00	-2
Carbon Disulfide	0.5000	6	0.5000	6	2.0000	-1	5.0000	5	10.000	-9	20.000	1	50.000	-3	75.000	1	100.00	1
MTBE	0.5000	11	0.5000	11	2.0000	-2	5.0000	0	10.000	0	20.000	-5	50.000	-5	75.000	1	100.00	0
trans-1,2-Dichloroethene	0.5000	24	0.5000	24	2.0000	0	5.0000	1	10.000	-8	20.000	-4	50.000	-6	75.000	-3	100.00	-4
Vinyl Acetate					2.0000	-4	5.0000	-1	10.000	1	20.000	-2	50.000	1	75.000	3	100.00	2
1,1-Dichloroethane	0.5000	5	0.5000	5	2.0000	2	5.0000	1	10.000	-2	20.000	-3	50.000	-4	75.000	1	100.00	0
2-Butanone					2.0000	-1	5.0000	3	10.000	-1	20.000	-8	50.000	-4	75.000	5	100.00	7
2,2-Dichloropropane	0.5000	-2	0.5000	-2	2.0000	-4	5.0000	4	10.000	-6	20.000	2	50.000	0	75.000	4	100.00	3
cis-1,2-Dichloroethene	0.5000	24	0.5000	24	2.0000	1	5.0000	-4	10.000	-1	20.000	-8	50.000	-6	75.000	-2	100.00	-4
Chloroform	0.5000	9	0.5000	9	2.0000	-3	5.0000	-1	10.000	1	20.000	-3	50.000	-3	75.000	0	100.00	-1
Bromochloromethane	0.5000	0	0.5000	0	2.0000	-2	5.0000	-1	10.000	4	20.000	-2	50.000	1	75.000	0	100.00	-1
1,1,1-Trichloroethane	0.5000	7	0.5000	7	2.0000	-4	5.0000	3	10.000	-9	20.000	2	50.000	-2	75.000	1	100.00	1
1,1-Dichloropropene	0.5000	-4	0.5000	-4	2.0000	-7	5.0000	4	10.000	-14	20.000	4	50.000	3	75.000	6	100.00	7
Carbon Tetrachloride	0.5000	-13	0.5000	-13	2.0000	-10	5.0000	5	10.000	-16	20.000	6	50.000	4	75.000	11	100.00	12
1,2-Dichloroethane	0.5000	7	0.5000	7	2.0000	-2	5.0000	-2	10.000	-1	20.000	-4	50.000	-2	75.000	2	100.00	1
Benzene	0.5000	5	0.5000	5	2.0000	-4	5.0000	-1	10.000	-4	20.000	-2	50.000	-1	75.000	4	100.00	2
Trichloroethene	0.5000	-1	0.5000	-1	2.0000	-4	5.0000	1	10.000	-6	20.000	0	50.000	-1	75.000	6	100.00	5
1,2-Dichloropropane	0.5000	3	0.5000	3	2.0000	-2	5.0000	4	10.000	-4	20.000	-4	50.000	-2	75.000	3	100.00	2
Bromodichloromethane	0.5000	4	0.5000	4	2.0000	-3	5.0000	-2	10.000	-3	20.000	-3	50.000	-1	75.000	4	100.00	2
Dibromomethane	0.5000	5	0.5000	5	2.0000	-1	5.0000	-1	10.000	-2	20.000	-3	50.000	-3	75.000	3	100.00	2
4-Methyl-2-Pentanone					2.0000	-3	5.0000	-4	10.000	-2	20.000	-5	50.000	1	75.000	7	100.00	6
cis-1,3-Dichloropropene	0.5000	1	0.5000	1	2.0000	-6	5.0000	-4	10.000	0	20.000	-3	50.000	2	75.000	6	100.00	4
Toluene	0.5000	8	0.5000	8	2.0000	-5	5.0000	-1	10.000	1	20.000	-1	50.000	-3	75.000	2	100.00	0
trans-1,3-Dichloropropene	0.5000	6	0.5000	6	2.0000	-4	5.0000	-3	10.000	-1	20.000	-4	50.000	-1	75.000	4	100.00	3
1,1,2-Trichloroethane	0.5000	10	0.5000	10	2.0000	-3	5.0000	-1	10.000	-3	20.000	-5	50.000	-3	75.000	2	100.00	2
2-Hexanone					2.0000	0	5.0000	-4	10.000	-1	20.000	-6	50.000	-4	75.000	7	100.00	8
1,3-Dichloropropane	0.5000	6	0.5000	6	2.0000	-3	5.0000	-1	10.000	-1	20.000	-4	50.000	-2	75.000	3	100.00	2
Tetrachloroethene	0.5000	-10	0.5000	-10	2.0000	-11	5.0000	2	10.000	-12	20.000	7	50.000	3	75.000	11	100.00	11
Dibromochloromethane	0.5000	2	0.5000	2	2.0000	-7	5.0000	-3	10.000	-1	20.000	-3	50.000	0	75.000	7	100.00	5
1,2-Dibromoethane	0.5000	5	0.5000	5	2.0000	-4	5.0000	-1	10.000	1	20.000	-3	50.000	-2	75.000	2	100.00	2
Chlorobenzene	0.5000	2	0.5000	2	2.0000	-2	5.0000	-1	10.000	0	20.000	-2	50.000	-2	75.000	2	100.00	1
1,1,1,2-Tetrachloroethane	0.5000	3	0.5000	3	2.0000	-6	5.0000	-3	10.000	-1	20.000	-3	50.000	-2	75.000	4	100.00	8
Ethylbenzene	0.5000	3	0.5000	3	2.0000	-6	5.0000	-2	10.000	-4	20.000	0	50.000	-2	75.000	4	100.00	6

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	3	1.0000	-8	4.0000	-12	10.000	-3	20.000	-2	40.000	1	100.00	0	150.00	10	200.00	12
o-Xylene			0.5000	-5	2.0000	-8	5.0000	-5	10.000	-2	20.000	-2	50.000	-1	75.000	10	100.00	12
Styrene			0.5000	-7	2.0000	-9	5.0000	-5	10.000	-1	20.000	-2	50.000	0	75.000	17	100.00	7
Bromoform			0.5000	-2	2.0000	-15	5.0000	-10	10.000	-6	20.000	-6	50.000	1	75.000	15	100.00	22
Isopropylbenzene			0.5000	-5	2.0000	0	5.0000	4	10.000	-7	20.000	4	50.000	2	75.000	-2	100.00	4
1,1,2,2-Tetrachloroethane			0.5000	6	2.0000	10	5.0000	6	10.000	3	20.000	-2	50.000	-2	75.000	-13	100.00	-9
1,2,3-Trichloropropane			0.5000	14	2.0000	8	5.0000	0	10.000	-1	20.000	-5	50.000	-7	75.000	-8	100.00	-1
Propylbenzene			0.5000	-3	2.0000	2	5.0000	3	10.000	-5	20.000	5	50.000	2	75.000	-6	100.00	3
Bromobenzene			0.5000	7	2.0000	-1	5.0000	1	10.000	3	20.000	-1	50.000	-6	75.000	-7	100.00	3
1,3,5-Trimethylbenzene			0.5000	-6	2.0000	1	5.0000	-1	10.000	-4	20.000	3	50.000	0	75.000	2	100.00	5
2-Chlorotoluene			0.5000	4	2.0000	3	5.0000	0	10.000	-1	20.000	-1	50.000	-2	75.000	-2	100.00	-1
4-Chlorotoluene			0.5000	0	2.0000	2	5.0000	2	10.000	-1	20.000	-2	50.000	-2	75.000	2	100.00	2
tert-Butylbenzene			0.5000	-8	2.0000	-5	5.0000	2	10.000	-9	20.000	5	50.000	4	75.000	7	100.00	4
1,2,4-Trimethylbenzene			0.5000	-2	2.0000	-2	5.0000	-3	10.000	1	20.000	2	50.000	3	75.000	13	100.00	-11
sec-Butylbenzene			0.5000	-16	2.0000	-6	5.0000	3	10.000	-10	20.000	10	50.000	8	75.000	13	100.00	-2
para-Isopropyl Toluene			0.5000	-12	2.0000	-7	5.0000	-1	10.000	-15	20.000	8	50.000	10	75.000	17	100.00	0
1,3-Dichlorobenzene			0.5000	-2	2.0000	1	5.0000	-1	10.000	0	20.000	-2	50.000	-1	75.000	2	100.00	3
1,4-Dichlorobenzene			0.5000	-1	2.0000	1	5.0000	0	10.000	1	20.000	-3	50.000	-1	75.000	2	100.00	0
n-Butylbenzene			0.5000	-9	2.0000	-10	5.0000	-4	10.000	-13	20.000	4	50.000	6	75.000	14	100.00	12
1,2-Dichlorobenzene			0.5000	4	2.0000	4	5.0000	0	10.000	1	20.000	-3	50.000	-3	75.000	-5	100.00	3
1,2-Dibromo-3-Chloropropane					2.0000	14	5.0000	9	10.000	6	20.000	-1	50.000	-5	75.000	-13	100.00	-10
1,2,4-Trichlorobenzene			0.5000	3	2.0000	11	5.0000	0	10.000	2	20.000	0	50.000	-2	75.000	-9	100.00	-4
Hexachlorobutadiene			0.5000	-15	2.0000	-3	5.0000	-3	10.000	-12	20.000	14	50.000	11	75.000	2	100.00	6
Naphthalene			0.5000	14	2.0000	13	5.0000	5	10.000	4	20.000	-2	50.000	-9	75.000	-16	100.00	-10
1,2,3-Trichlorobenzene			0.5000	5	2.0000	7	5.0000	-2	10.000	0	20.000	-1	50.000	-2	75.000	-8	100.00	2
tert-Butyl Alcohol (TEA)			5.0000	0	20.000	-1	50.000	0	100.00	-2	200.00	-5	500.00	-3	750.00	6	1000.0	5
Isopropyl Ether (DIPE)			0.5000	11	2.0000	0	5.0000	-1	10.000	0	20.000	-6	50.000	-3	75.000	0	100.00	0
Ethyl tert-Butyl Ether (ETBE)			0.5000	5	2.0000	-2	5.0000	-2	10.000	0	20.000	-4	50.000	-2	75.000	3	100.00	2
Methyl tert-Amyl Ether (TAME)			0.5000	7	2.0000	-5	5.0000	-4	10.000	-2	20.000	-4	50.000	0	75.000	5	100.00	4
Dibromofluoromethane	50.000	-1	50.000	0	50.000	0	50.000	1	50.000	1	50.000	0	50.000	0	50.000	-1	50.000	0
1,2-Dichloroethane-d4	50.000	-4	50.000	-2	50.000	-3	50.000	-1	50.000	-1	50.000	0	50.000	2	50.000	5	50.000	5
Toluene-d8	50.000	0	50.000	1	50.000	0	50.000	0	50.000	0	50.000	0	50.000	-1	50.000	-1	50.000	-1
Bromofluorobenzene	50.000	6	50.000	7	50.000	11	50.000	3	50.000	1	50.000	-1	50.000	-3	50.000	-17	50.000	-8

DJA 03/25/15 [Freon 12]: Corrected fronting or tailing peak integration in multiple levels.

DJA 03/25/15 [cis-1,2-Dichloroethene]: Corrected automatically drawn baseline in multiple levels.

DJA 03/25/15 [Ethanol]: Corrected fronting or tailing peak integration in multiple levels.

DJA 03/25/15 [Chloromethane]: Corrected fronting or tailing peak integration in (kcn08).

DJA 03/25/15 [1,1-Dichloroethene]: Corrected fronting or tailing peak integration in (kcn08).

DJA 03/25/15 [Isopropanol]: Corrected fronting or tailing peak integration in (kcn08).

DJA 03/25/15 : integrated cis-1,2-Dichloroethene and 1,1-Dichloroethene down to baseline

Analyst: DJA

Date: 03/25/15

Reviewer: LW

Date: 03/25/15

m>manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor

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835120089001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266087 MSVOA Water
EPA 8260B

Inst : MSVOA11
Calnum : 835120089001

Name : 8260GX11
Cal Date : 24-MAR-2015

Type : WATER

ICV 835120089015 (kcn15 24-MAR-2015) stds: S24978 (10000X), S26882 (2500X)
ICV 835120089016 (kcn16 24-MAR-2015) stds: S26642 (10000X), S26876 (10000X),
S26759 (10000X), S26882 (2500X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	835120089015	20.00	17.70	ug/L	-12	30	m
Chloromethane	835120089015	20.00	19.36	ug/L	-3	30	
Vinyl Chloride	835120089015	20.00	20.11	ug/L	1	20	
Bromomethane	835120089015	20.00	14.85	ug/L	-26	30	!v-
Chloroethane	835120089015	20.00	20.19	ug/L	1	30	
Trichlorofluoromethane	835120089015	20.00	19.23	ug/L	-4	30	
Acetone	835120089016	25.00	19.25	ug/L	-23	40	!v-
Freon 113	835120089016	25.00	23.47	ug/L	-6	30	
1,1-Dichloroethene	835120089016	25.00	23.65	ug/L	-5	20	
Methylene Chloride	835120089016	25.00	24.15	ug/L	-3	30	
Carbon Disulfide	835120089016	25.00	25.92	ug/L	4	30	
MTBE	835120089016	25.00	23.19	ug/L	-7	30	
trans-1,2-Dichloroethene	835120089016	25.00	23.83	ug/L	-5	30	
Vinyl Acetate	835120089016	25.00	32.30	ug/L	29	40	!v+
1,1-Dichloroethane	835120089016	25.00	23.81	ug/L	-5	30	
2-Butanone	835120089016	25.00	22.50	ug/L	-10	40	
2,2-Dichloropropane	835120089016	25.00	25.22	ug/L	1	30	
cis-1,2-Dichloroethene	835120089016	25.00	24.06	ug/L	-4	30	
Chloroform	835120089016	25.00	24.68	ug/L	-1	20	
Bromochloromethane	835120089016	25.00	25.22	ug/L	1	30	
1,1,1-Trichloroethane	835120089016	25.00	26.16	ug/L	5	30	
1,1-Dichloropropene	835120089016	25.00	24.86	ug/L	-1	30	
Carbon Tetrachloride	835120089016	25.00	27.02	ug/L	8	30	
1,2-Dichloroethane	835120089016	25.00	23.99	ug/L	-4	30	
Benzene	835120089016	25.00	25.06	ug/L	0	30	
Trichloroethene	835120089016	25.00	24.90	ug/L	0	30	
1,2-Dichloropropane	835120089016	25.00	23.15	ug/L	-7	20	
Bromodichloromethane	835120089016	25.00	23.79	ug/L	-5	30	
Dibromomethane	835120089016	25.00	23.73	ug/L	-5	30	
4-Methyl-2-Pentanone	835120089016	25.00	24.20	ug/L	-3	40	
cis-1,3-Dichloropropene	835120089016	25.00	23.71	ug/L	-5	30	
Toluene	835120089016	25.00	24.70	ug/L	-1	20	
trans-1,3-Dichloropropene	835120089016	25.00	22.11	ug/L	-12	30	
1,1,2-Trichloroethane	835120089016	25.00	23.48	ug/L	-6	30	
2-Hexanone	835120089016	25.00	23.69	ug/L	-5	40	
1,3-Dichloropropane	835120089016	25.00	24.28	ug/L	-3	30	
Tetrachloroethene	835120089016	25.00	26.10	ug/L	4	30	
Dibromochloromethane	835120089016	25.00	24.05	ug/L	-4	30	
1,2-Dibromoethane	835120089016	25.00	24.01	ug/L	-4	30	
Chlorobenzene	835120089016	25.00	24.71	ug/L	-1	30	
1,1,1,2-Tetrachloroethane	835120089016	25.00	23.82	ug/L	-5	30	
Ethylbenzene	835120089016	25.00	24.94	ug/L	0	20	
m,p-Xylenes	835120089016	50.00	49.55	ug/L	-1	30	
o-Xylene	835120089016	25.00	24.67	ug/L	-1	30	
Styrene	835120089016	25.00	24.43	ug/L	-2	30	
Bromoform	835120089016	25.00	23.75	ug/L	-5	30	
Isopropylbenzene	835120089016	25.00	26.30	ug/L	5	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	835120089016	25.00	24.85	ug/L	-1	30	
1,2,3-Trichloropropane	835120089016	25.00	23.58	ug/L	-6	30	
Propylbenzene	835120089016	25.00	25.30	ug/L	1	30	
Bromobenzene	835120089016	25.00	25.25	ug/L	1	30	
1,3,5-Trimethylbenzene	835120089016	25.00	26.63	ug/L	7	30	
2-Chlorotoluene	835120089016	25.00	24.94	ug/L	0	30	
4-Chlorotoluene	835120089016	25.00	24.86	ug/L	-1	30	
tert-Butylbenzene	835120089016	25.00	26.56	ug/L	6	30	
1,2,4-Trimethylbenzene	835120089016	25.00	25.36	ug/L	1	30	
sec-Butylbenzene	835120089016	25.00	27.18	ug/L	9	30	
para-Isopropyl Toluene	835120089016	25.00	26.79	ug/L	7	30	
1,3-Dichlorobenzene	835120089016	25.00	25.06	ug/L	0	30	
1,4-Dichlorobenzene	835120089016	25.00	24.83	ug/L	-1	30	
n-Butylbenzene	835120089016	25.00	26.03	ug/L	4	30	
1,2-Dichlorobenzene	835120089016	25.00	24.68	ug/L	-1	30	
1,2-Dibromo-3-Chloropropane	835120089016	25.00	23.49	ug/L	-6	30	
1,2,4-Trichlorobenzene	835120089016	25.00	24.53	ug/L	-2	30	
Hexachlorobutadiene	835120089016	25.00	26.82	ug/L	7	30	
Naphthalene	835120089016	25.00	22.50	ug/L	-10	30	
1,2,3-Trichlorobenzene	835120089016	25.00	24.63	ug/L	-1	30	
tert-Butyl Alcohol (TBA)	835120089016	125.0	119.3	ug/L	-5	30	
Isopropyl Ether (DIPE)	835120089016	25.00	22.65	ug/L	-9	30	
Ethyl tert-Butyl Ether (ETBE)	835120089016	25.00	23.06	ug/L	-8	30	
Methyl tert-Amyl Ether (TAME)	835120089016	25.00	22.68	ug/L	-9	30	

835120089015: Analyst: DJA Date: 03/25/15 Reviewer: LW Date: 03/25/15
835120089016: Analyst: DJA Date: 03/25/15 Reviewer: LW Date: 03/25/15

!=warning +=high bias -=low bias m=manual integration v=ICV

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.3055	1.2814	15.00	14.72	ug/L	-2	30	0.3000	
1,2,3-Trichloropropane	1.1185	1.0742	15.00	14.41	ug/L	-4	30	0.0500	
Propylbenzene	3.7870	4.1012	15.00	16.24	ug/L	8	30	0.0500	
Bromobenzene	0.9808	1.1039	15.00	16.88	ug/L	13	30	0.0500	
1,3,5-Trimethylbenzene	2.5352	2.6922	15.00	15.93	ug/L	6	30	0.0500	
2-Chlorotoluene	2.8142	3.0176	15.00	16.08	ug/L	7	30	0.0500	
4-Chlorotoluene	2.6010	2.7559	15.00	15.89	ug/L	6	30	0.0500	
tert-Butylbenzene	2.1264	2.3421	15.00	16.52	ug/L	10	30	0.0500	
1,2,4-Trimethylbenzene	2.4287	2.5396	15.00	15.68	ug/L	5	30	0.0500	
sec-Butylbenzene	3.0880	3.3039	15.00	16.05	ug/L	7	30	0.0500	
para-Isopropyl Toluene	2.3141	2.4209	15.00	15.69	ug/L	5	30	0.0500	
1,3-Dichlorobenzene	1.4963	1.6569	15.00	16.61	ug/L	11	30	0.0500	
1,4-Dichlorobenzene	1.5444	1.6709	15.00	16.23	ug/L	8	30	0.0500	
n-Butylbenzene	1.9053	1.8408	15.00	14.49	ug/L	-3	30	0.0500	
1,2-Dichlorobenzene	1.5665	1.7299	15.00	16.56	ug/L	10	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.2709	0.2272	15.00	12.58	ug/L	-16	30	0.0500	
1,2,4-Trichlorobenzene	0.6580	0.6453	15.00	14.71	ug/L	-2	30	0.0500	
Hexachlorobutadiene	0.4222	0.4804	15.00	17.07	ug/L	14	30	0.0500	
Naphthalene	1.7528	1.6538	15.00	14.15	ug/L	-6	30	0.0500	
1,2,3-Trichlorobenzene	0.6710	0.6636	15.00	14.83	ug/L	-1	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0778	0.0618	150.0	119.1	ug/L	-21	30	0.0050	!c- !v-
Isopropyl Ether (DIPE)	4.2794	4.4917	15.00	15.74	ug/L	5	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	3.2471	3.4281	15.00	15.84	ug/L	6	30	0.0500	
Methyl tert-Amyl Ether (TAME)	1.3228	1.3211	15.00	14.98	ug/L	0	30	0.0500	
Dibromofluoromethane	0.8065	0.8366	50.00	51.86	ug/L	4	30	0.0500	
1,2-Dichloroethane-d4	0.5248	0.5108	50.00	48.66	ug/L	-3	30	0.0500	
Toluene-d8	1.2838	1.2810	50.00	49.89	ug/L	0	30	0.0500	
Bromofluorobenzene	1.1204	1.1195	50.00	49.96	ug/L	0	30	0.0500	

ISTD (ICAL bc513)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	663015	603930	-8.91	11.24	11.27	0.03
1,4-Difluorobenzene	1319436	1236953	-6.25	12.46	12.48	0.02
Chlorobenzene-d5	1199148	1119861	-6.61	17.06	17.07	0.01
1,4-Dichlorobenzene-d4	576003	515090	-10.58	20.45	20.47	0.02

MCT 04/16/15 [Freon 12]: Combined split peak.

MCT 04/16/15 [Vinyl Chloride]: Combined split peak.

Analyst: MCT Date: 04/16/15 Reviewer: LW Date: 04/16/15

!=warning +=high bias -=low bias c=CCV m>manual integration v=ICV

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.7845	0.7799	20.00	19.88	ug/L	-1	30	0.3000	
1,2,3-Trichloropropane	0.8003	0.7893	20.00	19.72	ug/L	-1	30	0.0500	
Propylbenzene	3.8856	4.3718	20.00	22.50	ug/L	13	30	0.0500	
Bromobenzene	0.9660	0.9867	20.00	20.43	ug/L	2	30	0.0500	
1,3,5-Trimethylbenzene	2.8083	3.0043	20.00	21.40	ug/L	7	30	0.0500	
2-Chlorotoluene	2.7173	2.9138	20.00	21.45	ug/L	7	30	0.0500	
4-Chlorotoluene	2.5066	2.6502	20.00	21.15	ug/L	6	30	0.0500	
tert-Butylbenzene	2.4558	2.6053	20.00	21.22	ug/L	6	30	0.0500	
1,2,4-Trimethylbenzene	2.6627	2.8195	20.00	21.18	ug/L	6	30	0.0500	
sec-Butylbenzene	3.4357	3.8691	20.00	22.52	ug/L	13	30	0.0500	
para-Isopropyl Toluene	2.7771	3.0114	20.00	21.69	ug/L	8	30	0.0500	
1,3-Dichlorobenzene	1.7260	1.7352	20.00	20.11	ug/L	1	30	0.0500	
1,4-Dichlorobenzene	1.7680	1.7590	20.00	19.90	ug/L	-1	30	0.0500	
n-Butylbenzene	2.2484	2.4618	20.00	21.90	ug/L	9	30	0.0500	
1,2-Dichlorobenzene	1.6246	1.6011	20.00	19.71	ug/L	-1	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.1387	0.1265	20.00	18.24	ug/L	-9	30	0.0500	
1,2,4-Trichlorobenzene	0.7404	0.7148	20.00	19.31	ug/L	-3	30	0.0500	
Hexachlorobutadiene	0.4221	0.4808	20.00	22.78	ug/L	14	30	0.0500	
Naphthalene	1.6033	1.3297	20.00	16.59	ug/L	-17	30	0.0500	
1,2,3-Trichlorobenzene	0.5460	0.4888	20.00	17.91	ug/L	-10	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0390	0.0316	200.0	162.3	ug/L	-19	30	0.0050	
Isopropyl Ether (DIPE)	1.2595	1.2106	20.00	19.22	ug/L	-4	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	1.3265	1.3075	20.00	19.71	ug/L	-1	30	0.0500	
Methyl tert-Amyl Ether (TAME)	0.9207	0.8870	20.00	19.27	ug/L	-4	30	0.0500	
Dibromofluoromethane	0.4359	0.4479	50.00	51.38	ug/L	3	30	0.0500	
1,2-Dichloroethane-d4	0.3486	0.3490	50.00	50.05	ug/L	0	30	0.0500	
Toluene-d8	1.4402	1.4199	50.00	49.30	ug/L	-1	30	0.0500	
Bromofluorobenzene	0.9199	0.9687	50.00	52.65	ug/L	5	30	0.0500	

ISTD (ICAL kcn12)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	915237	913728	-0.16	10.67	10.67	0.00
1,4-Difluorobenzene	1337386	1376748	2.94	11.61	11.60	-0.01
Chlorobenzene-d5	1178204	1215954	3.20	14.70	14.70	0.00
1,4-Dichlorobenzene-d4	608161	590520	-2.90	16.95	16.95	0.00

Analyst: DJA Date: 04/15/15 Reviewer: LW Date: 04/16/15

!=warning +=high bias -=low bias c=CCV v=ICV

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 415153005

Date : 04/16/15
 Sequence : MSVOA02 bdg

Reference : bc513
 Analyzed : 03/05/15 18:01

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	663015	11.24	1319436	12.46	1199148	17.06	576003	20.45
		LOWER LIMIT	331508	10.74	659718	11.96	599574	16.56	288002	19.95
		UPPER LIMIT	1326030	11.74	2638872	12.96	2398296	17.56	1152006	20.95
004	CCV		603930	11.27	1236953	12.48	1119861	17.07	515090	20.47
005	BS	QC784501	571243	11.27	1218913	12.48	1112648	17.07	492911	20.48
006	BSD	QC784502	603976	11.27	1261295	12.48	1146308	17.07	520945	20.47
009	BLANK	QC784503	597435	11.26	1220238	12.48	1112123	17.07	477589	20.47
010	SAMPLE	266107-004	589415	11.26	1204237	12.47	1101006	17.08	470958	20.47
011	SAMPLE	266019-004	579001	11.26	1188186	12.48	1074037	17.07	455854	20.47
012	MSS	266019-005	564089	11.27	1140226	12.48	1045608	17.07	453091	20.47
013	SAMPLE	266090-004	546656	11.26	1134126	12.48	1042880	17.08	450014	20.47
014	SAMPLE	266135-001	560592	11.27	1138241	12.48	1039356	17.07	454674	20.47
015	SAMPLE	266135-002	552218	11.26	1116894	12.48	1007745	17.08	436658	20.48
016	SAMPLE	266107-001	550330	11.27	1100731	12.48	1006996	17.07	443120	20.48
017	SAMPLE	266087-004	533757	11.26	1076088	12.49	997272	17.08	429219	20.47
018	SAMPLE	266107-002	530222	11.27	1075906	12.49	981421	17.08	396902	20.48
019	SAMPLE	266107-003	531858	11.27	1097307	12.49	998292	17.08	418486	20.48
020	SAMPLE	266090-003	540440	11.28	1091055	12.49	999749	17.08	433903	20.48
021	SAMPLE	266020-001	523120	11.27	1092429	12.49	1000385	17.08	429073	20.47
022	MS	QC784589	528655	11.26	1084002	12.48	1003063	17.08	455424	20.47
023	MSD	QC784590	543888	11.27	1104332	12.48	1019239	17.08	460353	20.47
027	SAMPLE	265819-001	545665	11.26	1105051	12.48	1031383	17.07	448305	20.47

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 835151690

Date : 04/15/15
 Sequence : MSVOA11 kdf

Reference : kcn12
 Analyzed : 03/24/15 14:50

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	915237	10.67	1337386	11.61	1178204	14.70	608161	16.95
		LOWER LIMIT	457619	10.17	668693	11.11	589102	14.20	304081	16.45
		UPPER LIMIT	1830474	11.17	2674772	12.11	2356408	15.20	1216322	17.45
004	CCV		792709	10.67	1306807	11.60	1285887	14.70	639884	16.94
006	CCV		913728	10.67	1376748	11.60	1215954	14.70	590520	16.95
008	BS	QC784375	911497	10.67	1362486	11.60	1186477	14.70	577569	16.94
009	BSD	QC784376	923253	10.67	1390285	11.61	1194731	14.70	584826	16.95
011	BLANK	QC784377	893551	10.67	1356922	11.60	1167579	14.70	533571	16.95
012	SAMPLE	266091-001	867785	10.67	1276144	11.60	1121598	14.70	508407	16.95
013	SAMPLE	266082-003	875722	10.67	1335293	11.60	1141637	14.70	516034	16.95
014	SAMPLE	266091-003	855435	10.67	1309686	11.60	1125593	14.70	510032	16.94
015	SAMPLE	266091-006	830272	10.67	1278483	11.61	1104869	14.70	498072	16.95
016	SAMPLE	266091-007	851709	10.67	1311243	11.60	1121145	14.70	511313	16.94
017	SAMPLE	266091-008	859489	10.67	1314918	11.60	1128575	14.70	516020	16.95
018	SAMPLE	266091-009	843066	10.67	1305964	11.60	1111683	14.70	510037	16.94
019	SAMPLE	266091-010	853696	10.67	1296128	11.61	1116632	14.70	516210	16.95
020	SAMPLE	266091-011	848260	10.67	1288839	11.60	1115207	14.70	513512	16.95
021	SAMPLE	266091-012	866046	10.67	1322667	11.61	1123675	14.70	512648	16.95
022	SAMPLE	266087-006	842293	10.67	1295034	11.61	1111062	14.70	507149	16.95
023	SAMPLE	266087-007	837698	10.67	1285063	11.60	1114096	14.70	506866	16.95
024	SAMPLE	266087-008	839786	10.67	1291085	11.61	1108864	14.70	508147	16.95
025	SAMPLE	266087-009	848169	10.67	1287146	11.60	1108494	14.70	500855	16.95
026	SAMPLE	266087-001	841788	10.67	1288868	11.60	1110190	14.70	502163	16.95
027	SAMPLE	266087-004	839271	10.67	1284313	11.60	1108042	14.70	487968	16.95
028	SAMPLE	266026-004	847784	10.67	1287422	11.61	1104398	14.70	497107	16.95
029	SAMPLE	266027-001	845085	10.67	1287710	11.61	1101512	14.70	495204	16.95
030	IB		831815	10.67	1269424	11.61	1102218	14.70	489242	16.95
031	IB		829900	10.67	1271129	11.60	1102308	14.70	513560	16.94
032	IB		829039	10.67	1275546	11.60	1093160	14.70	490649	16.95
033	IB		830251	10.67	1273171	11.60	1091436	14.70	489071	16.95
034	IB		811628	10.67	1264612	11.60	1081629	14.70	488825	16.95

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 415092829

Instrument : MSVOA02 Begun : 03/05/15 11:09
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	bc501	X	IB			03/05/15 11:09	1.0	1
002	bc502	X	IB			03/05/15 11:44	1.0	1
003	bc503	TUN	BFB			03/05/15 12:15	1.0	2
004	bc504	X	IB			03/05/15 12:42	1.0	1
005	bc505	X	IB			03/05/15 13:17	1.0	1
006	bc506	IB	CALIB			03/05/15 13:52	1.0	1
007	bc507	ICAL				03/05/15 14:27	1.0	3 4 5 6 1
008	bc508	ICAL				03/05/15 15:03	1.0	3 4 5 6 1
009	bc509	ICAL				03/05/15 15:38	1.0	3 4 5 6 1
010	bc510	ICAL				03/05/15 16:14	1.0	3 4 5 6 1
011	bc511	ICAL				03/05/15 16:50	1.0	3 4 5 6 1
012	bc512	ICAL				03/05/15 17:26	1.0	3 4 5 6 1
013	bc513	ICAL				03/05/15 18:01	1.0	3 4 5 6 1
014	bc514	ICAL				03/05/15 18:37	1.0	3 4 5 6 1
015	bc515	ICAL				03/05/15 19:12	1.0	3 4 5 6 1
016	bc516	ICV	GAS			03/05/15 19:47	1.0	7 1
017	bc517	ICV	MIX			03/05/15 20:23	1.0	8 9 10 1
018	bc518	X	IB			03/05/15 20:58	1.0	1
019	bc519	X	IB			03/05/15 21:33	1.0	1

MCT 03/12/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.

Analyst: MCT Date: 03/12/15 Reviewer: TKM Date: 03/12/15

Standards used: 1=S26528 2=S26000 3=S25695 4=S26560 5=S26570 6=S26571 7=S26359 8=S26569 9=S26642 10=S26759

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 835120089

Instrument : MSVOA11 Begun : 03/24/15 09:29
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	kcn01	TUN	BFB			03/24/15 09:29	1.0	1
002	kcn02	TUN	BFB			03/24/15 09:45	1.0	1
003	kcn03	TUN	BFB			03/24/15 10:41	1.0	1
004	kcn04	X	IB			03/24/15 11:04	1.0	2
005	kcn05	IB	CALIB			03/24/15 11:32	1.0	2
006	kcn06	ICAL				03/24/15 12:00	1.0	3 4 5 6 2
007	kcn07	ICAL				03/24/15 12:29	1.0	3 4 5 6 2
008	kcn08	ICAL				03/24/15 12:57	1.0	3 4 5 6 2
009	kcn09	ICAL				03/24/15 13:26	1.0	3 4 5 6 2
010	kcn10	ICAL				03/24/15 13:54	1.0	3 4 5 6 2
011	kcn11	ICAL				03/24/15 14:22	1.0	3 4 5 6 2
012	kcn12	ICAL				03/24/15 14:50	1.0	3 4 5 6 2
013	kcn13	ICAL				03/24/15 15:19	1.0	3 4 5 6 2
014	kcn14	ICAL				03/24/15 15:47	1.0	3 4 5 6 2
015	kcn15	ICV				03/24/15 16:15	1.0	7 2
016	kcn16	ICV				03/24/15 16:43	1.0	8 9 10 2
017	kcn17	X	IB			03/24/15 17:12	1.0	2
018	kcn18	X	IB			03/24/15 17:40	1.0	2
019	kcn19	X	IB			03/24/15 18:08	1.0	2

DJA 03/25/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.

Analyst: DJA Date: 03/25/15 Reviewer: LW Date: 03/25/15

Standards used: 1=S26000 2=S26882 3=S25695 4=S26851 5=S26838 6=S25156 7=S24978 8=S26642 9=S26876 10=S26759

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 835151690

Instrument : MSVOA11 Begun : 04/15/15 08:10
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	kdf01	X	HIGH GAS			04/15/15 08:10	1.0	1	
002	kdf02	X	IB			04/15/15 08:38	1.0	1	
003	kdf03	TUN	BFB			04/15/15 09:22	1.0	2	
004	kdf04	CCV				04/15/15 09:45	1.0	3 4 5 6 1	cc+
005	kdf05	TUN	BFB			04/15/15 10:59	1.0	2	
006	kdf06	CCV				04/15/15 11:26	1.0	3 4 5 6 1	
007	kdf07	ICAL	A/A			04/15/15 12:03	1.0	7 1	
008	kdf08	BS	QC784375	Water	222281	04/15/15 12:31	1.0	8 9 10 11 1	
009	kdf09	BSD	QC784376	Water	222281	04/15/15 12:59	1.0	8 9 10 11 1	
010	kdf10	X	IB			04/15/15 13:27	1.0	1	
011	kdf11	BLANK	QC784377	Water	222281	04/15/15 13:56	1.0	1	
012	kdf12	SAMPLE	266091-001	Water	222281	04/15/15 14:24	1.0	1	
013	kdf13	SAMPLE	266082-003	Water	222281	04/15/15 14:52	1.0	1	
014	kdf14	SAMPLE	266091-003	Water	222281	04/15/15 15:20	1.0	1	
015	kdf15	SAMPLE	266091-006	Water	222281	04/15/15 15:49	1.0	1	
016	kdf16	SAMPLE	266091-007	Water	222281	04/15/15 16:17	1.0	1	
017	kdf17	SAMPLE	266091-008	Water	222281	04/15/15 16:45	1.0	1	
018	kdf18	SAMPLE	266091-009	Water	222281	04/15/15 17:13	1.0	1	
019	kdf19	SAMPLE	266091-010	Water	222281	04/15/15 17:41	1.0	1	
020	kdf20	SAMPLE	266091-011	Water	222281	04/15/15 18:10	1.0	1	
021	kdf21	SAMPLE	266091-012	Water	222281	04/15/15 18:38	1.0	1	
022	kdf22	SAMPLE	266087-006	Water	222281	04/15/15 19:06	1.0	1	
023	kdf23	SAMPLE	266087-007	Water	222281	04/15/15 19:34	1.0	1	
024	kdf24	SAMPLE	266087-008	Water	222281	04/15/15 20:03	1.0	1	
025	kdf25	SAMPLE	266087-009	Water	222281	04/15/15 20:31	1.0	1	
026	kdf26	SAMPLE	266087-001	Water	222281	04/15/15 20:59	2.0	1	
027	kdf27	SAMPLE	266087-004	Water	222281	04/15/15 21:27	2.0	1	
028	kdf28	SAMPLE	266026-004	Water	222281	04/15/15 21:56	4.0	1	
029	kdf29	SAMPLE	266027-001	Water	222281	04/15/15 22:24	2500	1	
030	kdf30	IB				04/15/15 22:52	222300	1	
031	kdf31	IB				04/15/15 23:21	222300	1	<<t
032	kdf32	IB				04/15/15 23:49	222300	1	<<t
033	kdf33	IB				04/16/15 00:17	222300	1	<<t
034	kdf34	IB				04/16/15 00:45	222300	1	<<t
035	kdf35	LOD	263628-009	Water	222281	04/16/15 01:14	1.0	7 1	<<t

DJA 04/15/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 7.

DJA 04/16/15 : returned after file 4

DJA 04/16/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 8 through 35.

DJA 04/16/15 : Matrix spikes were not performed for this analysis in batch 222281 due to insufficient sample amount.

Analyst: DJA Date: 04/15/15 Reviewer: LW Date: 04/16/15

Standards used: 1=S26882 2=S26000 3=S25695 4=S26948 5=S26838 6=S25156 7=S27011 8=S26876 9=S27022 10=S26759 11=S24978

Flags used: +=high bias <<t=out of clock cc=CCV CCC failure

MSVOA WATER Prepsheet

Batch #: 222 281
 Prep Date: 4/15/15
 Instrument: MS11

Dilutions prepared & pH of dilutions checked (initials/date): DJA 4/15/15
 For Undiluted samples, pH checked (initials/date): JJA 4/15/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
1 ¹ 266086-4	C	✓			129	2	4x	runs dont match				
1 ¹ 266087-1	C	✓			910	1	2500x	Acetone Acetone 7 LR			4/17	X
2 ⁰ 266088-3	B	✓				1	1x	OD				
2 ⁰ 266091-1	A	✓					1x	TB				
5	B	✓										
6	A	✓										
7	-7	✓										
8	-8	✓										
9	-9	✓										
10	-10	✓										
11	-11	✓										
12	-12	✓										
2 ⁰ 266087-1	A	✓			1011	074	2x					
14	-4	✓			1112	4/15	2x					
15	-6	✓					1x					
16	-7	✓										
17	-8	✓										
18	-9	✓										
19												
20												
21												
22												

MSVOA WATER Prepsheet

Batch #: 222308
 Prep Date: 4/16/15
 Instrument: WQ62

Dilutions prepared & pH of dilutions checked (initials/date): MCI 4/16/15
 For Undiluted samples, pH checked (initials/date): 224/7/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
26090-2	B	✓			12	1	50X	chloroform > LR put off; on a list				
	-4 B	✓				1	1X	ob.				
	-3 B	✓			9	1	2.5X	CARBON TETRA. c-o				
204	6019-5MS A	✓					1X					
	-5MS B,C	✓										
	-5MS D	✓										
	-5MS E											
	-5MS F											
	-6 B	✓										
	-7 ↓	✓										
266107-1	A	✓					1X					
	-2 ↓	✓			5		2X					
	-3 ↓	✓			6							
	-4 A	✓					1X					
	6019-4 B	✓					1X					
	6087-4 B	✓				1	1X	OD				
266135-1	A		6 ml		8		8.3X	Methylum Chloride ASFP ↓				
	-2 A		12 ml		12		333X	↓				
265819-1	B		6			1	1X	RODAGE BEASTLE, CLEMSTATION FAHOP				
266020-1	B	✓			12	1	5	FOLMER, Confusion poured by MHL				



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266087

ANALYTICAL REPORT


Semivolatile Organics by GC/MS

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

<u>Sample ID</u>	<u>Lab ID</u>
20150414B180	266087-005
20150414ER	266087-007
20150414B163	266087-009

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/28/2015

**CASE NARRATIVE
SEMIVOLATILE ORGANICS BY GC/MS (EPA 8270C)**

Laboratory number: 266087
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/14/15
Samples Received: 04/14/15

This data package contains sample and QC results for three water samples, requested for the above referenced project on 04/14/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Semivolatile Organics by GC/MS (EPA 8270C):

No analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266087

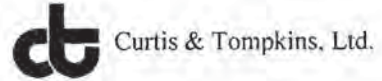
Chain of Custody Record No. 6088

Page 1 of 1

Lab PO#: 150AK32 Lab: Curts and Tompkins TIEMI technical contact: Sara Woolley TIEMI project manager: Jason Broderick		No./Container Types 40 ml VOA: 3 1 liter Amber: 1 500 ml Poly: 1 Sleeve: 1 Glass Jar: 1		Preservative Added HCl NaOH None	
Project name: 2015 Groundwater Project (CTO) number: 103225323.05		Field samplers: Mark Duffy Matt Hanson Field samplers' signatures: <i>[Signatures]</i>		Analysis Required VOA SVOA Pes/PCBs Metals TPH Purgeables TPH Extractables PAH (SIM)	
Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD
13 20150414B197R		4-14-15	920	water	
24 20150414P28		1015			
153 20150414P28D		1020			
104 20150414B195		1050			
15 20150414B180		1135			
4 20150414B450		1255			
7 20150414ER		1540			
8 20150414RWF		1340			
9 20150414B163		1425			

Relinquished by: <i>[Signature]</i>	Name (print): Mark Duffy	Company Name: Tetra Tech	Date: 4-14-15	Time: 1:57
Received by: <i>[Signature]</i>	Mikelle Chang	C&T	4/14	1:17
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Turnaround time/remarks: * Metals were Field Filtered				
Fed Ex #: NA				

COOLER RECEIPT CHECKLIST



Login # 266087 Date Received 4/14/15 Number of coolers 3
Client Tetra Tech EM Inc. Project 2015 Ground Water

Date Opened 4/14 By (print) BL (sign) [Signature]
Date Logged in [Signature] By (print) [Signature] (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Cloth material, Foam blocks, Cardboard, Bags, Styrofoam, None, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 53, 20, 60°

- Samples Received on ice & cold without a temperature blank; temp. taken with IR gun
Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO

If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 266087

Sample	pH: <2	>9	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-002a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-003a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-004a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-006a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-007a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-009a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: SL
 Date: 4/14/15

Results & QC Summary

Semivolatile Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0414 B180	Batch#:	222270
Lab ID:	266087-005	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.6	2.1
Phenol	ND	9.6	0.77
bis(2-Chloroethyl)ether	ND	9.6	1.5
2-Chlorophenol	ND	9.6	0.88
1,3-Dichlorobenzene	ND	9.6	1.4
1,4-Dichlorobenzene	ND	9.6	1.5
Benzyl alcohol	ND	9.6	1.4
1,2-Dichlorobenzene	ND	9.6	1.5
2-Methylphenol	ND	9.6	0.67
bis(2-Chloroisopropyl) ether	ND	9.6	1.5
4-Methylphenol	ND	9.6	1.1
N-Nitroso-di-n-propylamine	ND	9.6	1.2
Hexachloroethane	ND	9.6	1.4
Nitrobenzene	ND	9.6	1.2
Isophorone	ND	9.6	1.6
2-Nitrophenol	ND	19	2.0
2,4-Dimethylphenol	ND	9.6	0.56
Benzoic acid	ND	48	6.6
bis(2-Chloroethoxy)methane	ND	9.6	1.3
2,4-Dichlorophenol	ND	9.6	0.77
1,2,4-Trichlorobenzene	ND	9.6	1.4
4-Chloroaniline	ND	9.6	1.3
Hexachlorobutadiene	ND	9.6	1.3
4-Chloro-3-methylphenol	ND	9.6	1.5
Hexachlorocyclopentadiene	ND	19	1.6
2,4,6-Trichlorophenol	ND	9.6	0.91
2,4,5-Trichlorophenol	ND	9.6	1.1
2-Chloronaphthalene	ND	9.6	1.2
2-Nitroaniline	ND	19	1.5
Dimethylphthalate	ND	9.6	1.6
2,6-Dinitrotoluene	ND	9.6	1.6
3-Nitroaniline	ND	19	3.7
2,4-Dinitrophenol	ND	19	2.5
4-Nitrophenol	ND	19	1.4
Dibenzofuran	ND	9.6	1.5
2,4-Dinitrotoluene	ND	9.6	1.3

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0414 B180	Batch#:	222270
Lab ID:	266087-005	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.6	1.5
4-Chlorophenyl-phenylether	ND	9.6	1.3
4-Nitroaniline	ND	19	2.1
2,3,4,6-Tetrachlorophenol	ND	9.6	2.1
4,6-Dinitro-2-methylphenol	ND	19	1.6
N-Nitrosodiphenylamine	ND	9.6	1.2
Azobenzene	ND	9.6	1.3
4-Bromophenyl-phenylether	ND	9.6	1.3
Hexachlorobenzene	ND	9.6	1.3
Pentachlorophenol	ND	19	1.3
Carbazole	ND	9.6	1.9
Di-n-butylphthalate	ND	9.6	1.3
Butylbenzylphthalate	ND	9.6	1.2
3,3'-Dichlorobenzidine	ND	19	1.4
bis(2-Ethylhexyl)phthalate	ND	9.6	1.8
Di-n-octylphthalate	ND	9.6	1.4

Surrogate	%REC	Limits
2-Fluorophenol	60	38-120
Phenol-d5	57	38-120
2,4,6-Tribromophenol	75	46-120
Nitrobenzene-d5	63	51-120
2-Fluorobiphenyl	72	54-120
Terphenyl-d14	68	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0414 ER	Batch#:	222270
Lab ID:	266087-007	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.6	2.1
Phenol	ND	9.6	0.77
bis(2-Chloroethyl)ether	ND	9.6	1.5
2-Chlorophenol	ND	9.6	0.88
1,3-Dichlorobenzene	ND	9.6	1.4
1,4-Dichlorobenzene	ND	9.6	1.5
Benzyl alcohol	ND	9.6	1.4
1,2-Dichlorobenzene	ND	9.6	1.5
2-Methylphenol	ND	9.6	0.67
bis(2-Chloroisopropyl) ether	ND	9.6	1.5
4-Methylphenol	ND	9.6	1.1
N-Nitroso-di-n-propylamine	ND	9.6	1.2
Hexachloroethane	ND	9.6	1.4
Nitrobenzene	ND	9.6	1.2
Isophorone	ND	9.6	1.6
2-Nitrophenol	ND	19	2.0
2,4-Dimethylphenol	ND	9.6	0.56
Benzoic acid	ND	48	6.6
bis(2-Chloroethoxy)methane	ND	9.6	1.3
2,4-Dichlorophenol	ND	9.6	0.77
1,2,4-Trichlorobenzene	ND	9.6	1.4
4-Chloroaniline	ND	9.6	1.3
Hexachlorobutadiene	ND	9.6	1.3
4-Chloro-3-methylphenol	ND	9.6	1.5
Hexachlorocyclopentadiene	ND	19	1.6
2,4,6-Trichlorophenol	ND	9.6	0.91
2,4,5-Trichlorophenol	ND	9.6	1.1
2-Chloronaphthalene	ND	9.6	1.2
2-Nitroaniline	ND	19	1.5
Dimethylphthalate	ND	9.6	1.6
2,6-Dinitrotoluene	ND	9.6	1.6
3-Nitroaniline	ND	19	3.7
2,4-Dinitrophenol	ND	19	2.5
4-Nitrophenol	ND	19	1.4
Dibenzofuran	ND	9.6	1.5
2,4-Dinitrotoluene	ND	9.6	1.3

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0414 ER	Batch#:	222270
Lab ID:	266087-007	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.6	1.5
4-Chlorophenyl-phenylether	ND	9.6	1.3
4-Nitroaniline	ND	19	2.1
2,3,4,6-Tetrachlorophenol	ND	9.6	2.1
4,6-Dinitro-2-methylphenol	ND	19	1.6
N-Nitrosodiphenylamine	ND	9.6	1.2
Azobenzene	ND	9.6	1.3
4-Bromophenyl-phenylether	ND	9.6	1.3
Hexachlorobenzene	ND	9.6	1.3
Pentachlorophenol	ND	19	1.3
Carbazole	ND	9.6	1.9
Di-n-butylphthalate	ND	9.6	1.3
Butylbenzylphthalate	ND	9.6	1.2
3,3'-Dichlorobenzidine	ND	19	1.4
bis(2-Ethylhexyl)phthalate	ND	9.6	1.8
Di-n-octylphthalate	ND	9.6	1.4

Surrogate	%REC	Limits
2-Fluorophenol	57	38-120
Phenol-d5	55	38-120
2,4,6-Tribromophenol	73	46-120
Nitrobenzene-d5	61	51-120
2-Fluorobiphenyl	69	54-120
Terphenyl-d14	68	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0414 B163	Batch#:	222270
Lab ID:	266087-009	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	10	2.2
Phenol	ND	10	0.80
bis(2-Chloroethyl)ether	ND	10	1.5
2-Chlorophenol	ND	10	0.91
1,3-Dichlorobenzene	ND	10	1.5
1,4-Dichlorobenzene	ND	10	1.5
Benzyl alcohol	ND	10	1.5
1,2-Dichlorobenzene	ND	10	1.5
2-Methylphenol	ND	10	0.70
bis(2-Chloroisopropyl) ether	ND	10	1.5
4-Methylphenol	ND	10	1.2
N-Nitroso-di-n-propylamine	ND	10	1.3
Hexachloroethane	ND	10	1.5
Nitrobenzene	ND	10	1.3
Isophorone	ND	10	1.7
2-Nitrophenol	ND	20	2.0
2,4-Dimethylphenol	ND	10	0.58
Benzoic acid	ND	50	6.9
bis(2-Chloroethoxy)methane	ND	10	1.3
2,4-Dichlorophenol	ND	10	0.80
1,2,4-Trichlorobenzene	ND	10	1.4
4-Chloroaniline	ND	10	1.4
Hexachlorobutadiene	ND	10	1.4
4-Chloro-3-methylphenol	ND	10	1.5
Hexachlorocyclopentadiene	ND	20	1.7
2,4,6-Trichlorophenol	ND	10	0.94
2,4,5-Trichlorophenol	ND	10	1.1
2-Chloronaphthalene	ND	10	1.3
2-Nitroaniline	ND	20	1.6
Dimethylphthalate	ND	10	1.6
2,6-Dinitrotoluene	ND	10	1.7
3-Nitroaniline	ND	20	3.8
2,4-Dinitrophenol	ND	20	2.6
4-Nitrophenol	ND	20	1.4
Dibenzofuran	ND	10	1.5
2,4-Dinitrotoluene	ND	10	1.4

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0414 B163	Batch#:	222270
Lab ID:	266087-009	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	10	1.5
4-Chlorophenyl-phenylether	ND	10	1.4
4-Nitroaniline	ND	20	2.2
2,3,4,6-Tetrachlorophenol	ND	10	2.1
4,6-Dinitro-2-methylphenol	ND	20	1.6
N-Nitrosodiphenylamine	ND	10	1.3
Azobenzene	ND	10	1.4
4-Bromophenyl-phenylether	ND	10	1.3
Hexachlorobenzene	ND	10	1.4
Pentachlorophenol	ND	20	1.4
Carbazole	ND	10	1.9
Di-n-butylphthalate	ND	10	1.3
Butylbenzylphthalate	ND	10	1.3
3,3'-Dichlorobenzidine	ND	20	1.5
bis(2-Ethylhexyl)phthalate	ND	10	1.9
Di-n-octylphthalate	ND	10	1.4

Surrogate	%REC	Limits
2-Fluorophenol	63	38-120
Phenol-d5	63	38-120
2,4,6-Tribromophenol	82	46-120
Nitrobenzene-d5	68	51-120
2-Fluorobiphenyl	76	54-120
Terphenyl-d14	68	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784342	Batch#:	222270
Matrix:	Water	Prepared:	04/14/15
Units:	ug/L	Analyzed:	04/15/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	10	2.2
Phenol	ND	10	0.80
bis(2-Chloroethyl)ether	ND	10	1.5
2-Chlorophenol	ND	10	0.91
1,3-Dichlorobenzene	ND	10	1.5
1,4-Dichlorobenzene	ND	10	1.5
Benzyl alcohol	ND	10	1.5
1,2-Dichlorobenzene	ND	10	1.5
2-Methylphenol	ND	10	0.70
bis(2-Chloroisopropyl) ether	ND	10	1.5
4-Methylphenol	ND	10	1.2
N-Nitroso-di-n-propylamine	ND	10	1.3
Hexachloroethane	ND	10	1.5
Nitrobenzene	ND	10	1.3
Isophorone	ND	10	1.7
2-Nitrophenol	ND	20	2.0
2,4-Dimethylphenol	ND	10	0.58
Benzoic acid	ND	50	6.9
bis(2-Chloroethoxy)methane	ND	10	1.3
2,4-Dichlorophenol	ND	10	0.80
1,2,4-Trichlorobenzene	ND	10	1.4
4-Chloroaniline	ND	10	1.4
Hexachlorobutadiene	ND	10	1.4
4-Chloro-3-methylphenol	ND	10	1.5
Hexachlorocyclopentadiene	ND	20	1.7
2,4,6-Trichlorophenol	ND	10	0.94
2,4,5-Trichlorophenol	ND	10	1.1
2-Chloronaphthalene	ND	10	1.3
2-Nitroaniline	ND	20	1.6
Dimethylphthalate	ND	10	1.6
2,6-Dinitrotoluene	ND	10	1.7
3-Nitroaniline	ND	20	3.8
2,4-Dinitrophenol	ND	20	2.6
4-Nitrophenol	ND	20	1.4
Dibenzofuran	ND	10	1.5
2,4-Dinitrotoluene	ND	10	1.4

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784342	Batch#:	222270
Matrix:	Water	Prepared:	04/14/15
Units:	ug/L	Analyzed:	04/15/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	10	1.5
4-Chlorophenyl-phenylether	ND	10	1.4
4-Nitroaniline	ND	20	2.2
2,3,4,6-Tetrachlorophenol	ND	10	2.1
4,6-Dinitro-2-methylphenol	ND	20	1.6
N-Nitrosodiphenylamine	ND	10	1.3
Azobenzene	ND	10	1.4
4-Bromophenyl-phenylether	ND	10	1.3
Hexachlorobenzene	ND	10	1.4
Pentachlorophenol	ND	20	1.4
Carbazole	ND	10	1.9
Di-n-butylphthalate	ND	10	1.3
Butylbenzylphthalate	ND	10	1.3
3,3'-Dichlorobenzidine	ND	20	1.5
bis(2-Ethylhexyl)phthalate	ND	10	1.9
Di-n-octylphthalate	ND	10	1.4

Surrogate	%REC	Limits
2-Fluorophenol	70	38-120
Phenol-d5	67	38-120
2,4,6-Tribromophenol	81	46-120
Nitrobenzene-d5	74	51-120
2-Fluorobiphenyl	80	54-120
Terphenyl-d14	73	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	222270
Units:	ug/L	Prepared:	04/14/15
Diln Fac:	1.000	Analyzed:	04/15/15

Type: BS Lab ID: QC784343

Analyte	Spiked	Result	%REC	Limits
N-Nitrosodimethylamine	80.00	71.34	89	45-120
Phenol	80.00	72.19	90	46-120
bis(2-Chloroethyl)ether	80.00	75.86	95	59-120
2-Chlorophenol	80.00	74.67	93	48-120
1,3-Dichlorobenzene	80.00	59.66	75	50-120
1,4-Dichlorobenzene	80.00	63.27	79	52-120
Benzyl alcohol	80.00	75.67	95	64-120
1,2-Dichlorobenzene	80.00	63.63	80	53-120
2-Methylphenol	80.00	73.77	92	40-120
bis(2-Chloroisopropyl) ether	80.00	65.16	81	43-120
4-Methylphenol	80.00	74.23	93	46-120
N-Nitroso-di-n-propylamine	80.00	70.58	88	46-120
Hexachloroethane	80.00	55.31	69	42-120
Nitrobenzene	80.00	75.20	94	63-120
Isophorone	80.00	74.26	93	62-120
2-Nitrophenol	80.00	76.22	95	43-122
2,4-Dimethylphenol	80.00	57.37	72	47-120
Benzoic acid	120.0	44.19	37	20-120
bis(2-Chloroethoxy)methane	30.00	27.95	93	62-120
2,4-Dichlorophenol	80.00	78.96	99	50-120
1,2,4-Trichlorobenzene	80.00	64.25	80	53-120
4-Chloroaniline	80.00	57.66	72	39-120
Hexachlorobutadiene	80.00	55.63	70	42-120
4-Chloro-3-methylphenol	80.00	79.76	100	40-120
Hexachlorocyclopentadiene	80.00	28.75	36	13-120
2,4,6-Trichlorophenol	80.00	81.08	101	49-120
2,4,5-Trichlorophenol	80.00	76.68	96	49-120
2-Chloronaphthalene	30.00	27.61	92	61-120
2-Nitroaniline	80.00	73.32	92	56-120
Dimethylphthalate	80.00	79.34	99	43-120
2,6-Dinitrotoluene	80.00	80.40	100	65-120
3-Nitroaniline	80.00	75.88	95	55-120
2,4-Dinitrophenol	80.00	70.80	89	45-120
4-Nitrophenol	80.00	74.87	94	40-120
Dibenzofuran	30.00	28.81	96	65-120

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	222270
Units:	ug/L	Prepared:	04/14/15
Diln Fac:	1.000	Analyzed:	04/15/15

Analyte	Spiked	Result	%REC	Limits
2,4-Dinitrotoluene	80.00	83.09	104	64-120
Diethylphthalate	30.00	30.74	102	45-120
4-Chlorophenyl-phenylether	30.00	29.67	99	64-120
4-Nitroaniline	80.00	64.58	81	50-120
2,3,4,6-Tetrachlorophenol	80.00	82.36	103	42-126
4,6-Dinitro-2-methylphenol	80.00	86.92	109	45-131
N-Nitrosodiphenylamine	30.00	26.63	89	54-120
Azobenzene	30.00	28.77	96	55-120
4-Bromophenyl-phenylether	30.00	30.74	102	63-120
Hexachlorobenzene	80.00	80.19	100	59-120
Pentachlorophenol	80.00	80.29	100	47-120
Carbazole	80.00	66.00	82	50-120
Di-n-butylphthalate	30.00	30.48	102	56-120
Butylbenzylphthalate	30.00	30.75	102	51-120
3,3'-Dichlorobenzidine	80.00	58.59	73	30-120
bis(2-Ethylhexyl)phthalate	30.00	32.37	108	58-126
Di-n-octylphthalate	30.00	29.44	98	54-120

Surrogate	%REC	Limits
2-Fluorophenol	96	38-120
Phenol-d5	96	38-120
2,4,6-Tribromophenol	110	46-120
Nitrobenzene-d5	86	51-120
2-Fluorobiphenyl	84	54-120
Terphenyl-d14	101	21-120

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	222270
Units:	ug/L	Prepared:	04/14/15
Diln Fac:	1.000	Analyzed:	04/15/15

Type: BSD Lab ID: QC784344

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
N-Nitrosodimethylamine	80.00	67.33	84	45-120	6	32
Phenol	80.00	68.83	86	46-120	5	55
bis(2-Chloroethyl)ether	80.00	70.69	88	59-120	7	26
2-Chlorophenol	80.00	70.15	88	48-120	6	54
1,3-Dichlorobenzene	80.00	64.10	80	50-120	7	30
1,4-Dichlorobenzene	80.00	66.61	83	52-120	5	30
Benzyl alcohol	80.00	71.29	89	64-120	6	24
1,2-Dichlorobenzene	80.00	66.42	83	53-120	4	29
2-Methylphenol	80.00	69.67	87	40-120	6	51
bis(2-Chloroisopropyl) ether	80.00	62.66	78	43-120	4	26
4-Methylphenol	80.00	70.08	88	46-120	6	54
N-Nitroso-di-n-propylamine	80.00	67.10	84	46-120	5	25
Hexachloroethane	80.00	62.26	78	42-120	12	34
Nitrobenzene	80.00	69.89	87	63-120	7	24
Isophorone	80.00	71.02	89	62-120	4	21
2-Nitrophenol	80.00	73.27	92	43-122	4	52
2,4-Dimethylphenol	80.00	54.20	68	47-120	6	51
Benzoic acid	120.0	61.19	51	20-120	32	62
bis(2-Chloroethoxy)methane	30.00	26.97	90	62-120	4	26
2,4-Dichlorophenol	80.00	74.46	93	50-120	6	47
1,2,4-Trichlorobenzene	80.00	67.71	85	53-120	5	26
4-Chloroaniline	80.00	58.44	73	39-120	1	47
Hexachlorobutadiene	80.00	64.61	81	42-120	15	33
4-Chloro-3-methylphenol	80.00	76.28	95	40-120	4	54
Hexachlorocyclopentadiene	80.00	29.32	37	13-120	2	63
2,4,6-Trichlorophenol	80.00	75.67	95	49-120	7	46
2,4,5-Trichlorophenol	80.00	72.50	91	49-120	6	44
2-Chloronaphthalene	30.00	26.98	90	61-120	2	24
2-Nitroaniline	80.00	69.44	87	56-120	5	23
Dimethylphthalate	80.00	74.07	93	43-120	7	46
2,6-Dinitrotoluene	80.00	75.26	94	65-120	7	30
3-Nitroaniline	80.00	72.11	90	55-120	5	40
2,4-Dinitrophenol	80.00	73.13	91	45-120	3	35
4-Nitrophenol	80.00	69.39	87	40-120	8	45
Dibenzofuran	30.00	27.81	93	65-120	4	23

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	222270
Units:	ug/L	Prepared:	04/14/15
Diln Fac:	1.000	Analyzed:	04/15/15

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
2,4-Dinitrotoluene	80.00	78.19	98	64-120	6	32
Diethylphthalate	30.00	29.13	97	45-120	5	46
4-Chlorophenyl-phenylether	30.00	28.60	95	64-120	4	24
4-Nitroaniline	80.00	66.39	83	50-120	3	37
2,3,4,6-Tetrachlorophenol	80.00	77.39	97	42-126	6	62
4,6-Dinitro-2-methylphenol	80.00	83.37	104	45-131	4	55
N-Nitrosodiphenylamine	30.00	26.27	88	54-120	1	31
Azobenzene	30.00	27.48	92	55-120	5	23
4-Bromophenyl-phenylether	30.00	29.28	98	63-120	5	25
Hexachlorobenzene	80.00	76.57	96	59-120	5	24
Pentachlorophenol	80.00	77.48	97	47-120	4	48
Carbazole	80.00	63.53	79	50-120	4	35
Di-n-butylphthalate	30.00	28.85	96	56-120	5	36
Butylbenzylphthalate	30.00	29.34	98	51-120	5	34
3,3'-Dichlorobenzidine	80.00	63.75	80	30-120	8	44
bis(2-Ethylhexyl)phthalate	30.00	30.35	101	58-126	6	56
Di-n-octylphthalate	30.00	27.91	93	54-120	5	37

Surrogate	%REC	Limits
2-Fluorophenol	88	38-120
Phenol-d5	90	38-120
2,4,6-Tribromophenol	102	46-120
Nitrobenzene-d5	80	51-120
2-Fluorobiphenyl	79	54-120
Terphenyl-d14	92	21-120

RPD= Relative Percent Difference

CURTIS & TOMPKINS DFTPP TUNE FOR 266087 MSBNA Water
EPA 8270C

Inst : MSBNA06 Run Name : DFTPP IDF : 1.0
Seqnum : 555120229009 File : yco09 Time : 24-MAR-2015 15:50

Standards: S26170

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	173190	44.21	
68	< 2% of mass 69	0	0.00	
69		171552	100.00	
70	< 2% of mass 69	137	0.08	
127	40% - 60% of mass 198	173290	44.24	
197	< 1% of mass 198	0	0.00	
198		391701	100.00	
199	5% - 9% of mass 198	27384	6.99	
275	10% - 30% of mass 198	97650	24.93	
365	> 1% of mass 198	11479	2.93	
441	Present, < mass 443	43290	74.41	
442	> 40% and < 100% of mass 198	295808	75.52	
443	17% - 23% of mass 442	58178	19.67	

Analyst: NPM Date: 03/25/15 Reviewer: LW Date: 03/26/15

PEM Report

File Name : G:\msbna06\032415\YCO09.D
 Date Acquired : 24 Mar 2015 3:50 pm
 Sample Name : TUN,S26170
 Misc. Info : DFTPP
 Calib. Title : MSBNA06 BNA DFTPP/PEM
 Inst. Name : MSBNA06
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	0.881	5.49	736084
Benzidine	0.569	7.35	2546584
4,4'-DDT		8.37	1789243
4,4'-DDE		7.58	19791
4,4'-DDD		8.00	86883
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	6%	PASS
Tailing: Pentachlorophenol	8270C <5.0	0.9	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.6	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 266087 MSBNA Water
EPA 8270C

Inst : MSBNA06 Run Name : DFTPP IDF : 1.0
Seqnum : 555151818002 File : ydf02 Time : 15-APR-2015 10:47

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	139952	40.85	
68	< 2% of mass 69	0	0.00	
69		144429	100.00	
70	< 2% of mass 69	609	0.42	
127	40% - 60% of mass 198	148888	43.46	
197	< 1% of mass 198	0	0.00	
198		342570	100.00	
199	5% - 9% of mass 198	23672	6.91	
275	10% - 30% of mass 198	88834	25.93	
365	> 1% of mass 198	11167	3.26	
441	Present, < mass 443	43066	75.27	
442	> 40% and < 100% of mass 198	288192	84.13	
443	17% - 23% of mass 442	57213	19.85	

Analyst: NPM Date: 04/15/15 Reviewer: LW Date: 04/15/15

PEM Report

File Name : G:\msbna06\041515\YDF02.D
 Date Acquired : 15 Apr 2015 10:47 am
 Sample Name : TUN,S26814
 Misc. Info : DFTPP
 Calib. Title : MSBNA06 BNA DFTPP/PEM
 Inst. Name : MSBNA06
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.341	5.47	509191
Benzidine	0.706	7.34	2298248
4,4'-DDT		8.35	1483111
4,4'-DDE		7.56	4897
4,4'-DDD		7.98	40810
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	3%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.3	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 266087 MSBNA Water
EPA 8270C

Inst : MSBNA06 Run Name : DFTPP IDF : 1.0
Seqnum : 555153274002 File : ydg02 Time : 16-APR-2015 11:03

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	137731	40.60	
68	< 2% of mass 69	1110	0.80	
69		138792	100.00	
70	< 2% of mass 69	754	0.54	
127	40% - 60% of mass 198	150058	44.23	
197	< 1% of mass 198	0	0.00	
198		339242	100.00	
199	5% - 9% of mass 198	23640	6.97	
275	10% - 30% of mass 198	88866	26.20	
365	> 1% of mass 198	10478	3.09	
441	Present, < mass 443	41810	77.74	
442	> 40% and < 100% of mass 198	285653	84.20	
443	17% - 23% of mass 442	53784	18.83	

Analyst: KMH Date: 04/16/15 Reviewer: LW Date: 04/20/15

PEM Report

File Name : G:\msbna06\041615\YDG02.D
 Date Acquired : 16 Apr 2015 11:03 am
 Sample Name : TUN,S26814
 Misc. Info : DFTPP
 Calib. Title : MSBNA06 BNA DFTPP/PEM
 Inst. Name : MSBNA06
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.258	5.47	515334
Benzidine	0.733	7.34	2278652
4,4'-DDT		8.35	1464545
4,4'-DDE		7.56	7142
4,4'-DDD		7.98	57256
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	4%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.3	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266087 MSBNA Water: EPA 8270C

Inst : MSBNA06
 Calnum : 555120229001
 Units : ug/mL

Name : 6PTBNA6
 Date : 24-MAR-2015 16:49
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Std
L1	Yco11	555120229011	ICAL 24-MAR-2015 16:49	S26474
L2	Yco12	555120229012	ICAL 24-MAR-2015 17:25	S26475
L3	Yco13	555120229013	ICAL 24-MAR-2015 18:01	S26476
L4	Yco14	555120229014	ICAL 24-MAR-2015 18:37	S26477
L5	Yco15	555120229015	ICAL 24-MAR-2015 19:14	S26478
L6	Yco16	555120229016	ICAL 24-MAR-2015 19:50	S26479
L7	Yco17	555120229017	ICAL 24-MAR-2015 20:28	S26480
L8	Yco18	555120229018	ICAL 24-MAR-2015 21:07	S26481
L9	Yco19	555120229019	ICAL 24-MAR-2015 21:45	S26482

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
N-Nitrosodimethylamine		1.3307	1.5049	1.5667	1.5813	1.5648	1.5018	1.4510	1.4252	AVRG	0.67079	0.67079	1.4908	6	15	0.05	0.99		
Phenol		1.9695	2.0270	2.0160	2.0056	1.9671	1.8901m	1.8366	1.8444	AVRG	0.51426	0.51426	1.9445	4	15	0.05	0.99		
bis(2-Chloroethyl) ether		1.4461m	1.4290	1.3624	1.3572	1.3154	1.2739m	1.2380m	1.1616m	AVRG	0.75588	0.75588	1.3230	7	15	0.05	0.99		
2-Chlorophenol		1.4296	1.4027	1.3955	1.3856	1.3703	1.3500	1.3245	1.3346	AVRG	0.72775	0.72775	1.3741	3	15	0.05	0.99		
1,3-Dichlorobenzene		1.6099	1.5785	1.6009	1.5877	1.5642	1.5471	1.5097	1.5014	AVRG	0.64003	0.64003	1.5624	3	15	0.05	0.99		
1,4-Dichlorobenzene		1.3648	1.4121	1.4292	1.4382	1.4403	1.4327	1.3968	1.3932	AVRG	0.70751	0.70751	1.4134	2	15	0.05	0.99		
Benzyl alcohol		0.8185	0.8487	0.8633	0.8820	0.8744	0.8778	0.8696	0.9000	AVRG	1.15369	1.15369	0.8668	3	15	0.05	0.99		
1,2-Dichlorobenzene		1.3102	1.3492	1.3631	1.3718	1.3595	1.3462	1.3013	1.2875	AVRG	0.74844	0.74844	1.3361	2	15	0.05	0.99		
2-Methylphenol		0.9195	0.9763	1.0087	1.0056	1.0074	0.9979	0.9952	0.9896	AVRG	1.01263	1.01263	0.9875	3	15	0.05	0.99		
bis(2-Chloroisopropyl) ether		2.2241	2.2134	2.1602	2.1669	2.0843	1.9565	1.8476	1.7731	AVRG	0.48703	0.48703	2.0533	8	15	0.05	0.99		
4-Methylphenol		1.3922	1.4729	1.5322	1.5346	1.5309	1.5442			AVRG	0.66614	0.66614	1.5012	4	15	0.05	0.99		
N-Nitroso-di-n-propylamine		0.7996	0.8268	0.8338	0.8228	0.8144	0.8159	0.8207	0.8394	AVRG	1.21704	1.21704	0.8217	1	15	0.050	0.99		
Hexachloroethane		0.6099	0.6399	0.6636	0.6651	0.6567	0.6506	0.6292	0.6224	AVRG	1.55722	1.55722	0.6422	3	15	0.05	0.99		
Nitrobenzene		0.4583	0.4571	0.4507	0.4481	0.4352	0.4306	0.4150	0.4084	AVRG	2.28354	2.28354	0.4379	4	15	0.05	0.99		
Isophorone		0.8707	0.8475	0.8545	0.8571	0.8579	0.8761	0.8670	0.8633	AVRG	1.16040	1.16040	0.8618	1	15	0.05	0.99		
2-Nitrophenol			0.2131	0.2163	0.2150	0.2127	0.2127	0.1999	0.1979m	AVRG	4.76986	4.76986	0.2096	4	15	0.05	0.99		
2,4-Dimethylphenol		0.4380	0.4121	0.4151	0.4090	0.3974	0.3924	0.3815	0.3748	AVRG	2.48433	2.48433	0.4025	5	15	0.05	0.99		
bis(2-Chloroethoxy)methane			0.4570	0.4568	0.4590	0.4562	0.4473	0.4452	0.4523	AVRG	2.20555	2.20555	0.4534	1	15	0.05	0.99		
Benzoic acid		0.2757	0.2779	0.2941	0.2980	0.3000	0.3133	0.3098	0.3153	AVRG	3.35561	3.35561	0.2980	5	15	0.05	0.99		
2,4-Dichlorophenol		0.3561	0.3561	0.3505	0.3486	0.3438	0.3395	0.3273	0.3274	AVRG	2.90992	2.90992	0.3437	3	15	0.05	0.99		
1,2,4-Trichlorobenzene		0.4247	0.4272	0.4262	0.4240	0.4170	0.4107	0.3941	0.3797	AVRG	2.42160	2.42160	0.4130	4	15	0.05	0.99		
4-Chloroaniline		0.2778m	0.4133	0.4290	0.4372	0.4397	0.4464	0.4483	0.4484	LINEAR	2.53671	2.17378	0.4175	1.000	15	0.05	0.99		
Hexachlorobutadiene		0.2729	0.2791	0.2765	0.2751	0.2735	0.2641	0.2475	0.2390	AVRG	3.75983	3.75983	0.2660	6	15	0.05	0.99		
4-Chloro-3-methylphenol		0.3650	0.3791	0.3879	0.3929	0.3867	0.3839	0.3692	0.3635	AVRG	2.64186	2.64186	0.3785	3	15	0.05	0.99		

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r ² %RSD	Max %RSD	Min RF	Min r ²	Flg
Hexachlorocyclopentadiene			0.4175	0.4629	0.4606	0.4598	0.4657	0.4554	0.4526	AVRG	2.20520			0.4535	4	15	0.050	0.99	
2,4,6-Trichlorophenol		0.5108	0.5151	0.5253	0.5305	0.5212	0.5223	0.5169	0.5141	AVRG	1.92486			0.5195	1	15	0.05	0.99	
2,4,5-Trichlorophenol		0.5272	0.5254	0.5407	0.5269	0.5333	0.5193m	0.5067m	0.5018m	AVRG	1.91329			0.5227	2	15	0.05	0.99	
2-Chloronaphthalene			1.2826	1.2727	1.2799	1.2731	1.3165	1.3135	1.3197	AVRG	0.77280			1.2940	2	15	0.05	0.99	
2-Nitroaniline			0.4727	0.4755	0.4756	0.4714	0.4714	0.4687	0.4649	AVRG	2.12101			0.4715	1	15	0.05	0.99	
Dimethylphthalate		1.6348	1.5826	1.6120	1.5945	1.5671	1.5458	1.5182	1.4903	AVRG	0.63769			1.5682	3	15	0.05	0.99	
2,6-Dinitrotoluene		0.3531	0.3472	0.3519	0.3515	0.3490	0.3529	0.3508	0.3508	AVRG	2.84971			0.3509	1	15	0.05	0.99	
3-Nitroaniline			0.3257	0.3567	0.3422	0.3477	0.3703	0.3726	0.3817	AVRG	2.80345			0.3567	6	15	0.05	0.99	
2,4-Dinitrophenol			0.1275	0.1699	0.1861	0.2018	0.2276	0.2439	0.2520	LI NR	12.6402			0.2013	0.999	15	0.050	0.99	
4-Nitrophenol			0.2513	0.2633	0.2634	0.2588	0.2656	0.2618	0.2665	AVRG	3.82385			0.2615	2	15	0.050	0.99	
Dibenzofuran			1.7589	1.8052	1.7751	1.7665	1.7223	1.6703	1.6326	AVRG	0.57705			1.7330	4	15	0.05	0.99	
2,4-Dinitrotoluene		0.4359	0.4485	0.4708	0.4706	0.4627	0.4710	0.4598	0.4515	AVRG	2.17929			0.4589	3	15	0.05	0.99	
2,3,4,6-Tetrachlorophenol		0.4338	0.4525	0.4747	0.4702	0.4699	0.4712	0.4715	0.4738	AVRG	2.15194			0.4647	3	15	0.05	0.99	
Diethylphthalate			1.6170	1.6367	1.6220	1.6175	1.6078	1.5897	1.5792	AVRG	0.62112			1.6100	1	15	0.05	0.99	
4-Chlorophenyl-phenylether			0.8797	0.9042	0.9056	0.9012	0.9076	0.9000	0.8836	AVRG	1.11432			0.8974	1	15	0.05	0.99	
4-Nitroaniline			0.2764	0.3172	0.3121	0.3216	0.3229	0.3471m	0.3557m	AVRG	3.10689			0.3219	8	15	0.05	0.99	
4,6-Dinitro-2-methylphenol			0.1206	0.1336	0.1366	0.1373	0.1398	0.1387		AVRG	7.43742			0.1345	5	15	0.05	0.99	
N-Nitrosodiphenylamine			0.5197	0.5248	0.5079	0.5025	0.4914	0.4764	0.4736	AVRG	2.00213			0.4995	4	15	0.05	0.99	
Azobenzene			0.7569	0.7592	0.7378	0.7211	0.6852	0.6636	0.6477	AVRG	1.40800			0.7102	6	15	0.05	0.99	
4-Bromophenyl-phenylether			0.2626	0.2680	0.2714	0.2623	0.2604	0.2594	0.2577	AVRG	3.80070			0.2631	2	15	0.05	0.99	
Hexachlorobenzene		0.2648	0.2682	0.2661	0.2635	0.2590	0.2491	0.2397	0.2356	AVRG	3.91004			0.2558	5	15	0.05	0.99	
Pentachlorophenol			0.1812	0.1931	0.1936	0.1948	0.1900	0.1854	0.1865	AVRG	5.28472			0.1892	3	15	0.05	0.99	
Carbazole		0.8721	0.9055	0.9292	0.9298	0.9256	0.8996	0.8629	0.8470	AVRG	1.11550			0.8965	4	15	0.05	0.99	
Di-n-butylphthalate			1.4071	1.4334	1.3907	1.3864	1.3197	1.2570	1.2310	AVRG	0.74268			1.3465	6	15	0.05	0.99	
Butylbenzylphthalate			0.6557	0.6894	0.6917	0.6817	0.6832	0.6651	0.6668	AVRG	1.47877			0.6762	2	15	0.05	0.99	
3,3'-Dichlorobenzidine			0.4727	0.5582	0.5682	0.5739	0.5553	0.5292	0.5140	AVRG	1.85603			0.5388	7	15	0.05	0.99	
bis(2-Ethylhexyl)phthalate			0.8762	0.8850	0.8678	0.8522	0.7779	0.7434	0.7394	AVRG	1.21911			0.8203	8	15	0.05	0.99	
Di-n-octylphthalate			1.4977	1.5796	1.5701	1.5542	1.5191	1.4824	1.4551	AVRG	0.65678			1.5226	3	15	0.05	0.99	
2-Fluorophenol	1.4394	1.5826	1.6954	1.7335	1.7446	1.6983	1.6762	1.6688	1.6873	AVRG	0.60297			1.6585	6	15	0.05	0.99	
Phenol-d5	1.8330	1.9930	2.1586	2.1984	2.1661	2.1589	2.1145	2.0687	2.0608	AVRG	0.47995			2.0836	5	15	0.05	0.99	
Nitrobenzene-d5	0.5404	0.5262	0.5215	0.5153	0.5180	0.5049	0.5102	0.5004	0.4983	AVRG	1.94163			0.5150	3	15	0.05	0.99	
2-Fluorobiphenyl	1.7758	1.7475	1.6289	1.6053	1.5848	1.5576	1.5885	1.5622	1.5587	AVRG	0.61604			1.6233	5	15	0.05	0.99	
2,4,6-Tribromophenol	0.2560	0.2710	0.2730	0.2806	0.2830	0.2810	0.2965	0.2989	0.3019	AVRG	3.54068			0.2824	5	15	0.05	0.99	
Terphenyl-d14	1.0974	1.1340	1.1399	1.1837	1.1796	1.1680	1.1436	1.1164	1.1239	AVRG	0.87494			1.1429	3	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
N-Nitrosodimethylamine			10.000	-11	20.000	1	32.000	5	40.000	6	50.000	5	80.000	1	100.00	-3	120.00	-4
Phenol			10.000	1	20.000	4	32.000	4	40.000	3	50.000	1	80.000	-3	100.00	-6	120.00	-5
bis(2-Chloroethyl) ether			10.000	9	20.000	8	32.000	3	40.000	3	50.000	-1	80.000	-4	100.00	-6	120.00	-12
2-Chlorophenol			10.000	4	20.000	2	32.000	2	40.000	1	50.000	0	80.000	-2	100.00	-4	120.00	-3
1,3-Dichlorobenzene			10.000	3	20.000	1	32.000	2	40.000	2	50.000	0	80.000	-1	100.00	-3	120.00	-4
1,4-Dichlorobenzene			10.000	-3	20.000	0	32.000	1	40.000	2	50.000	2	80.000	1	100.00	-1	120.00	-1
Benzyl alcohol			10.000	-6	20.000	-2	32.000	0	40.000	2	50.000	1	80.000	1	100.00	0	120.00	4
1,2-Dichlorobenzene			10.000	-2	20.000	1	32.000	2	40.000	3	50.000	2	80.000	1	100.00	-3	120.00	-4
2-Methylphenol			10.000	-7	20.000	-1	32.000	2	40.000	2	50.000	2	80.000	1	100.00	1	120.00	0
bis(2-Chloroisopropyl) ether			10.000	8	20.000	8	32.000	5	40.000	6	50.000	2	80.000	-5	100.00	-10	120.00	-14
4-Methylphenol			10.000	-7	20.000	-2	32.000	2	40.000	2	50.000	2	80.000	3				
N-Nitroso-di-n-propylamine			10.000	-3	20.000	1	32.000	1	40.000	0	50.000	-1	80.000	-1	100.00	0	120.00	2
Hexachloroethane			10.000	-5	20.000	0	32.000	3	40.000	4	50.000	2	80.000	1	100.00	-2	120.00	-3
Nitrobenzene			10.000	5	20.000	4	32.000	3	40.000	2	50.000	-1	80.000	-2	100.00	-5	120.00	-7
Isophorone			10.000	1	20.000	-2	32.000	-1	40.000	-1	50.000	0	80.000	2	100.00	1	120.00	0
2-Nitrophenol			10.000		20.000	2	32.000	3	40.000	3	50.000	1	80.000	1	100.00	-5	120.00	-6
2,4-Dimethylphenol			10.000	9	20.000	2	32.000	3	40.000	2	50.000	-1	80.000	-3	100.00	-5	120.00	-7
bis(2-Chloroethoxy)methane			10.000		10.000	1	16.000	1	20.000	1	25.000	1	40.000	-1	50.000	-2	60.000	0
Benzoic acid			50.000	-7	60.000	-7	80.000	-1	90.000	0	100.00	1	120.00	5	130.00	4	140.00	6
2,4-Dichlorophenol			10.000	4	20.000	4	32.000	2	40.000	1	50.000	0	80.000	-1	100.00	-5	120.00	-5
1,2,4-Trichlorobenzene			10.000	3	20.000	3	32.000	3	40.000	3	50.000	1	80.000	-1	100.00	-5	120.00	-8
4-Chloroaniline			10.000	-13	20.000	3	32.000	1	40.000	1	50.000	1	80.000	0	100.00	0	120.00	0
Hexachlorobutadiene			10.000	3	20.000	5	32.000	4	40.000	3	50.000	3	80.000	-1	100.00	-7	120.00	-10
4-Chloro-3-methylphenol			10.000	-4	20.000	0	32.000	2	40.000	4	50.000	2	80.000	1	100.00	-2	120.00	-4
Hexachlorocyclopentadiene			10.000		20.000	-8	32.000	2	40.000	2	50.000	1	80.000	3	100.00	0	120.00	0
2,4,6-Trichlorophenol			10.000	-2	20.000	-1	32.000	1	40.000	2	50.000	0	80.000	1	100.00	-1	120.00	-1
2,4,5-Trichlorophenol			10.000	1	20.000	1	32.000	3	40.000	1	50.000	2	80.000	-1	100.00	-3	120.00	-4
2-Chloronaphthalene					10.000	-1	16.000	-2	20.000	-1	25.000	-2	40.000	2	50.000	2	60.000	2
2-Nitroaniline					20.000	0	32.000	1	40.000	1	50.000	0	80.000	0	100.00	-1	120.00	-1
Dimethylphthalate			10.000	4	20.000	1	32.000	3	40.000	2	50.000	0	80.000	-1	100.00	-3	120.00	-5
2,6-Dinitrotoluene			10.000	1	20.000	-1	32.000	0	40.000	0	50.000	-1	80.000	1	100.00	0	120.00	0
3-Nitroaniline					20.000	-9	32.000	0	40.000	-4	50.000	-3	80.000	4	100.00	4	120.00	7
2,4-Dinitrophenol					20.000	9	32.000	1	40.000	-2	50.000	-2	80.000	-2	100.00	0	120.00	1
4-Nitrophenol					20.000	-4	32.000	1	40.000	1	50.000	-1	80.000	2	100.00	0	120.00	2
Dibenzofuran					10.000	1	16.000	4	20.000	2	25.000	2	40.000	-1	50.000	-4	60.000	-6
2,4-Dinitrotoluene			10.000	-5	20.000	-2	32.000	3	40.000	3	50.000	1	80.000	3	100.00	0	120.00	-2
2,3,4,6-Tetrachlorophenol			10.000	-7	20.000	-3	32.000	2	40.000	1	50.000	1	80.000	1	100.00	1	120.00	2
Diethylphthalate					10.000	0	16.000	2	20.000	1	25.000	0	40.000	0	50.000	-1	60.000	-2
4-Chlorophenyl-phenylether					10.000	-2	16.000	1	20.000	1	25.000	0	40.000	1	50.000	0	60.000	-2
4-Nitroaniline					20.000	-14	32.000	-1	40.000	-3	50.000	0	80.000	0	100.00	8	120.00	11
4,6-Dinitro-2-methylphenol					20.000	-10	32.000	-1	40.000	2	50.000	2	80.000	4	100.00	3		
N-Nitrosodiphenylamine					10.000	4	16.000	5	20.000	2	25.000	1	40.000	-2	50.000	-5	60.000	-5

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Azobenzene					10.000	7	16.000	7	20.000	4	25.000	4	40.000	-4	50.000	-7	60.000	-9
4-Bromophenyl-phenylether					10.000	0	16.000	2	20.000	3	25.000	0	40.000	-1	50.000	-1	60.000	-2
Hexachlorobenzene			10.000	4	20.000	5	32.000	4	40.000	3	50.000	1	80.000	-3	100.000	-6	120.000	-8
Pentachlorophenol					20.000	-4	32.000	2	40.000	2	50.000	3	80.000	0	100.000	-2	120.000	-1
Carbazole			10.000	-3	20.000	1	32.000	4	40.000	4	50.000	3	80.000	0	100.000	-4	120.000	-6
Di-n-butylphthalate					10.000	5	16.000	6	20.000	3	25.000	3	40.000	-2	50.000	-7	60.000	-9
Butylbenzylphthalate					10.000	-3	16.000	2	20.000	2	25.000	1	40.000	1	50.000	-2	60.000	-1
3,3'-Dichlorobenzidine					20.000	-12	32.000	4	40.000	5	50.000	7	80.000	3	100.000	-2	120.000	-5
bis(2-Ethylhexyl)phthalate					10.000	7	16.000	8	20.000	6	25.000	4	40.000	-5	50.000	-9	60.000	-10
Di-n-octylphthalate					10.000	-2	16.000	4	20.000	3	25.000	2	40.000	0	50.000	-3	60.000	-4
2-Fluorophenol	2.0000	-13	5.0000	-5	10.000	2	16.000	5	20.000	5	25.000	2	40.000	1	50.000	1	60.000	2
Phenol-d5	2.0000	-12	5.0000	-4	10.000	4	16.000	6	20.000	4	25.000	4	40.000	1	50.000	-1	60.000	-1
Nitrobenzene-d5	2.0000	5	5.0000	2	10.000	1	16.000	0	20.000	1	25.000	-2	40.000	-1	50.000	-3	60.000	-3
2-Fluorobiphenyl	2.0000	9	5.0000	8	10.000	0	16.000	-1	20.000	-1	25.000	-4	40.000	-2	50.000	-4	60.000	-4
2,4,6-Tribromophenol	2.0000	-9	5.0000	-4	10.000	-3	16.000	-1	20.000	0	25.000	-1	40.000	5	50.000	6	60.000	7
Terphenyl-d14	2.0000	-4	5.0000	-1	10.000	0	16.000	4	20.000	3	25.000	2	40.000	0	50.000	-2	60.000	-2

NPM 03/25/15 [Aniline]: Picked or reassigned peak in multiple levels.

NPM 03/25/15 [bis(2-Chloroethyl)ether]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [2,4,5-Trichlorophenol]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [Benzo(k)fluoranthene]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [4-Chloroaniline]: Corrected automatically drawn baseline in ICAL (yco12).

NPM 03/25/15 [Benzidine]: Corrected automatically drawn baseline in ICAL (yco12).

NPM 03/25/15 [Phenol]: Picked or reassigned peak in ICAL (yco17).

NPM 03/25/15 [4-Methylphenol]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [Aniline]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [4-Nitroaniline]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [Benzo(k)fluoranthene]: Picked or reassigned peak in multiple levels.

NPM 03/25/15 [Pyridine]: Corrected automatically drawn baseline in ICAL (yco19).

NPM 03/25/15 [2-Nitrophenol]: Corrected automatically drawn baseline in ICAL (yco19).

NPM 03/25/15 [Resorcinol]: Corrected automatically drawn baseline in ICAL (yco19).

NPM 03/25/15 [4,6-Dinitro-2-methylphenol]: Corrected automatically drawn baseline in ICAL (yco19).

Analyst: NPM

Date: 03/25/15

Reviewer: IW

Date: 03/26/15

m>manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor; LINR=Linear regression

Page 5 of 5

555120229001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266087 MSBNA Water
EPA 8270C

Inst : MSBNA06
Calnum : 555120229001

Name : 6PTBNA6
Cal Date : 24-MAR-2015

ICV 555120229020 (yco20 24-MAR-2015) stds: S26696

Analyte	Spiked	Quant	Units	%D	Max	Flags
N-Nitrosodimethylamine	40.00	40.57	ug/mL	1	30	
Phenol	40.00	37.01	ug/mL	-7	20	
bis(2-Chloroethyl)ether	40.00	37.87	ug/mL	-5	30	
2-Chlorophenol	40.00	37.60	ug/mL	-6	30	
1,3-Dichlorobenzene	40.00	38.61	ug/mL	-3	30	
1,4-Dichlorobenzene	40.00	38.94	ug/mL	-3	20	
Benzyl alcohol	40.00	38.78	ug/mL	-3	30	
1,2-Dichlorobenzene	40.00	39.81	ug/mL	0	30	
2-Methylphenol	40.00	39.37	ug/mL	-2	30	
bis(2-Chloroisopropyl) ether	40.00	38.86	ug/mL	-3	30	
4-Methylphenol	40.00	35.55	ug/mL	-11	30	
N-Nitroso-di-n-propylamine	40.00	38.03	ug/mL	-5	30	
Hexachloroethane	40.00	39.27	ug/mL	-2	30	
Nitrobenzene	40.00	37.56	ug/mL	-6	30	
Isophorone	40.00	37.96	ug/mL	-5	30	
2-Nitrophenol	40.00	39.52	ug/mL	-1	20	
2,4-Dimethylphenol	40.00	38.75	ug/mL	-3	30	
bis(2-Chloroethoxy)methane	40.00	37.43	ug/mL	-6	30	
Benzoic acid	100.0	98.65	ug/mL	-1	40	
2,4-Dichlorophenol	40.00	38.04	ug/mL	-5	20	
1,2,4-Trichlorobenzene	40.00	39.93	ug/mL	0	30	
4-Chloroaniline	40.00	38.21	ug/mL	-4	30	
Hexachlorobutadiene	40.00	40.43	ug/mL	1	20	
4-Chloro-3-methylphenol	40.00	38.65	ug/mL	-3	20	
Hexachlorocyclopentadiene	40.00	37.15	ug/mL	-7	40	
2,4,6-Trichlorophenol	40.00	38.55	ug/mL	-4	20	
2,4,5-Trichlorophenol	40.00	38.89	ug/mL	-3	30	
2-Chloronaphthalene	40.00	37.40	ug/mL	-7	30	
2-Nitroaniline	40.00	37.59	ug/mL	-6	30	
Dimethylphthalate	40.00	37.77	ug/mL	-6	30	
2,6-Dinitrotoluene	40.00	37.29	ug/mL	-7	30	
3-Nitroaniline	40.00	36.42	ug/mL	-9	30	
2,4-Dinitrophenol	40.00	39.87	ug/mL	0	40	
4-Nitrophenol	40.00	37.10	ug/mL	-7	40	
Dibenzofuran	40.00	39.34	ug/mL	-2	30	
2,4-Dinitrotoluene	40.00	40.78	ug/mL	2	30	
2,3,4,6-Tetrachlorophenol	40.00	37.98	ug/mL	-5	30	
Diethylphthalate	40.00	36.54	ug/mL	-9	30	
4-Chlorophenyl-phenylether	40.00	37.82	ug/mL	-5	40	
4-Nitroaniline	40.00	37.61	ug/mL	-6	30	
4,6-Dinitro-2-methylphenol	40.00	37.56	ug/mL	-6	30	
N-Nitrosodiphenylamine	40.00	43.60	ug/mL	9	20	
Azobenzene	40.00	35.74	ug/mL	-11	30	
4-Bromophenyl-phenylether	40.00	36.77	ug/mL	-8	30	
Hexachlorobenzene	40.00	37.86	ug/mL	-5	30	
Pentachlorophenol	40.00	38.02	ug/mL	-5	20	
Carbazole	40.00	40.51	ug/mL	1	30	
Di-n-butylphthalate	40.00	36.66	ug/mL	-8	30	
Butylbenzylphthalate	40.00	37.87	ug/mL	-5	30	

Analyte	Spiked	Quant	Units	%D	Max	Flags
3,3'-Dichlorobenzidine	60.00	58.22	ug/mL	-3	40	
bis(2-Ethylhexyl)phthalate	40.00	37.26	ug/mL	-7	30	
Di-n-octylphthalate	40.00	36.91	ug/mL	-8	20	

Analyst: NPM

Date: 03/25/15

Reviewer: LW

Date: 03/26/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 MSBNA Water
EPA 8270C

Inst : MSBNA06
Seqnum : 555151818003
Cal : 555120229001
Standards: S26478

File : ydf03
Caldate : 24-MAR-2015

IDF : 1.0
Time : 15-APR-2015 11:06

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
N-Nitrosodimethylamine	1.4908	1.3777	40.00	36.97	ug/mL	-8	30	0.0500	
Phenol	1.9445	1.9374	40.00	39.85	ug/mL	0	20	0.0500	
bis(2-Chloroethyl)ether	1.3230	1.3134	40.00	39.71	ug/mL	-1	30	0.0500	
2-Chlorophenol	1.3741	1.3541	40.00	39.42	ug/mL	-1	30	0.0500	
1,3-Dichlorobenzene	1.5624	1.5649	40.00	40.06	ug/mL	0	30	0.0500	
1,4-Dichlorobenzene	1.4134	1.4312	40.00	40.50	ug/mL	1	20	0.0500	
Benzyl alcohol	0.8668	0.8291	40.00	38.26	ug/mL	-4	30	0.0500	
1,2-Dichlorobenzene	1.3361	1.3437	40.00	40.23	ug/mL	1	30	0.0500	
2-Methylphenol	0.9875	0.9797	40.00	39.69	ug/mL	-1	30	0.0500	
bis(2-Chloroisopropyl) ether	2.0533	1.9124	40.00	37.26	ug/mL	-7	30	0.0500	
4-Methylphenol	1.5012	1.4752	40.00	39.31	ug/mL	-2	30	0.0500	
N-Nitroso-di-n-propylamine	0.8217	0.8043	40.00	39.15	ug/mL	-2	30	0.0500	
Hexachloroethane	0.6422	0.6496	40.00	40.46	ug/mL	1	30	0.0500	
Nitrobenzene	0.4379	0.4280	40.00	39.09	ug/mL	-2	30	0.0500	
Isophorone	0.8618	0.8292	40.00	38.49	ug/mL	-4	30	0.0500	
2-Nitrophenol	0.2096	0.2143	40.00	40.88	ug/mL	2	20	0.0500	
2,4-Dimethylphenol	0.4025	0.3973	40.00	39.48	ug/mL	-1	30	0.0500	
bis(2-Chloroethoxy)methane	0.4534	0.4504	20.00	19.87	ug/mL	-1	30	0.0500	
Benzoic acid	0.2980	0.2591	90.00	78.23	ug/mL	-13	40	0.0500	
2,4-Dichlorophenol	0.3437	0.3500	40.00	40.74	ug/mL	2	20	0.0500	
1,2,4-Trichlorobenzene	0.4130	0.4247	40.00	41.13	ug/mL	3	30	0.0500	
4-Chloroaniline	0.4175	0.4321	40.00	40.10	ug/mL	0	30	0.0500	
Hexachlorobutadiene	0.2660	0.2786	40.00	41.91	ug/mL	5	20	0.0500	
4-Chloro-3-methylphenol	0.3785	0.3796	40.00	40.11	ug/mL	0	20	0.0500	
Hexachlorocyclopentadiene	0.4535	0.5177	40.00	45.66	ug/mL	14	40	0.0500	
2,4,6-Trichlorophenol	0.5195	0.5190	40.00	39.96	ug/mL	0	20	0.0500	
2,4,5-Trichlorophenol	0.5227	0.5348	40.00	40.93	ug/mL	2	30	0.0500	
2-Chloronaphthalene	1.2940	1.2860	20.00	19.88	ug/mL	-1	30	0.0500	
2-Nitroaniline	0.4715	0.4465	40.00	37.88	ug/mL	-5	30	0.0500	
Dimethylphthalate	1.5682	1.6092	40.00	41.05	ug/mL	3	30	0.0500	
2,6-Dinitrotoluene	0.3509	0.3609	40.00	41.14	ug/mL	3	30	0.0500	
3-Nitroaniline	0.3567	0.3252	40.00	36.46	ug/mL	-9	30	0.0500	
2,4-Dinitrophenol	0.2013	0.2107	40.00	42.93	ug/mL	7	40	0.0500	
4-Nitrophenol	0.2615	0.2286	40.00	34.97	ug/mL	-13	40	0.0500	
Dibenzofuran	1.7330	1.7655	20.00	20.38	ug/mL	2	30	0.0500	
2,4-Dinitrotoluene	0.4589	0.4766	40.00	41.55	ug/mL	4	30	0.0500	
2,3,4,6-Tetrachlorophenol	0.4647	0.4689	40.00	40.36	ug/mL	1	30	0.0500	
Diethylphthalate	1.6100	1.6517	20.00	20.52	ug/mL	3	30	0.0500	
4-Chlorophenyl-phenylether	0.8974	0.9246	20.00	20.61	ug/mL	3	40	0.0500	
4-Nitroaniline	0.3219	0.2864	40.00	35.60	ug/mL	-11	30	0.0500	
4,6-Dinitro-2-methylphenol	0.1345	0.1448	40.00	43.07	ug/mL	8	30	0.0500	
N-Nitrosodiphenylamine	0.4995	0.5131	20.00	20.55	ug/mL	3	20	0.0500	
Azobenzene	0.7102	0.6981	20.00	19.66	ug/mL	-2	30	0.0500	
4-Bromophenyl-phenylether	0.2631	0.2706	20.00	20.57	ug/mL	3	30	0.0500	
Hexachlorobenzene	0.2558	0.2776	40.00	43.42	ug/mL	9	30	0.0500	
Pentachlorophenol	0.1892	0.1882	40.00	39.78	ug/mL	-1	20	0.0500	
Carbazole	0.8965	0.8941	40.00	39.89	ug/mL	0	30	0.0500	
Di-n-butylphthalate	1.3465	1.4000	20.00	20.79	ug/mL	4	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Butylbenzylphthalate	0.6762	0.6977	20.00	20.64	ug/mL	3	30	0.0500	
3,3'-Dichlorobenzidine	0.5388	0.5468	40.00	40.60	ug/mL	1	40	0.0500	
bis(2-Ethylhexyl)phthalate	0.8203	0.8976	20.00	21.89	ug/mL	9	30	0.0500	
Di-n-octylphthalate	1.5226	1.5799	20.00	20.75	ug/mL	4	20	0.0500	
2-Fluorophenol	1.6585	1.6545	20.00	19.95	ug/mL	0	30	0.0500	
Phenol-d5	2.0836	2.0850	20.00	20.01	ug/mL	0	30	0.0500	
Nitrobenzene-d5	0.5150	0.5001	20.00	19.42	ug/mL	-3	30	0.0500	
2-Fluorobiphenyl	1.6233	1.6003	20.00	19.72	ug/mL	-1	30	0.0500	
2,4,6-Tribromophenol	0.2824	0.2865	20.00	20.29	ug/mL	1	30	0.0500	
Terphenyl-d14	1.1429	1.2354	20.00	21.62	ug/mL	8	30	0.0500	

NPM 04/15/15 [Aniline]: Picked or reassigned peak.

Analyst: NPM

Date: 04/15/15

Reviewer: LW

Date: 04/15/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 MSBNA Water
EPA 8270C

Inst : MSBNA06
Seqnum : 555153274003
Cal : 555120229001
Standards: S26477

File : ydg03
Caldate : 24-MAR-2015

IDF : 1.0
Time : 16-APR-2015 11:27

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
N-Nitrosodimethylamine	1.4908	1.3955	32.00	29.95	ug/mL	-6	30	0.0500	
Phenol	1.9445	2.0070	32.00	33.03	ug/mL	3	20	0.0500	
bis(2-Chloroethyl)ether	1.3230	1.3689	32.00	33.11	ug/mL	3	30	0.0500	
2-Chlorophenol	1.3741	1.3874	32.00	32.31	ug/mL	1	30	0.0500	
1,3-Dichlorobenzene	1.5624	1.5738	32.00	32.23	ug/mL	1	30	0.0500	
1,4-Dichlorobenzene	1.4134	1.4189	32.00	32.12	ug/mL	0	20	0.0500	
Benzyl alcohol	0.8668	0.8625	32.00	31.84	ug/mL	0	30	0.0500	
1,2-Dichlorobenzene	1.3361	1.3656	32.00	32.71	ug/mL	2	30	0.0500	
2-Methylphenol	0.9875	0.9710	32.00	31.46	ug/mL	-2	30	0.0500	
bis(2-Chloroisopropyl) ether	2.0533	1.9702	32.00	30.71	ug/mL	-4	30	0.0500	
4-Methylphenol	1.5012	1.4925	32.00	31.82	ug/mL	-1	30	0.0500	
N-Nitroso-di-n-propylamine	0.8217	0.8141	32.00	31.71	ug/mL	-1	30	0.0500	
Hexachloroethane	0.6422	0.6524	32.00	32.51	ug/mL	2	30	0.0500	
Nitrobenzene	0.4379	0.4461	32.00	32.60	ug/mL	2	30	0.0500	
Isophorone	0.8618	0.8471	32.00	31.45	ug/mL	-2	30	0.0500	
2-Nitrophenol	0.2096	0.2164	32.00	33.03	ug/mL	3	20	0.0500	
2,4-Dimethylphenol	0.4025	0.3869	32.00	30.76	ug/mL	-4	30	0.0500	
bis(2-Chloroethoxy)methane	0.4534	0.4598	16.00	16.22	ug/mL	1	30	0.0500	
Benzoic acid	0.2980	0.2662	80.00	71.45	ug/mL	-11	40	0.0500	
2,4-Dichlorophenol	0.3437	0.3553	32.00	33.08	ug/mL	3	20	0.0500	
1,2,4-Trichlorobenzene	0.4130	0.4324	32.00	33.51	ug/mL	5	30	0.0500	
4-Chloroaniline	0.4175	0.4289	32.00	32.37	ug/mL	1	30	0.0500	
Hexachlorobutadiene	0.2660	0.2811	32.00	33.82	ug/mL	6	20	0.0500	
4-Chloro-3-methylphenol	0.3785	0.3880	32.00	32.80	ug/mL	2	20	0.0500	
Hexachlorocyclopentadiene	0.4535	0.4848	32.00	34.21	ug/mL	7	40	0.0500	
2,4,6-Trichlorophenol	0.5195	0.5123	32.00	31.56	ug/mL	-1	20	0.0500	
2,4,5-Trichlorophenol	0.5227	0.5266	32.00	32.24	ug/mL	1	30	0.0500	
2-Chloronaphthalene	1.2940	1.2775	16.00	15.80	ug/mL	-1	30	0.0500	
2-Nitroaniline	0.4715	0.4497	32.00	30.52	ug/mL	-5	30	0.0500	
Dimethylphthalate	1.5682	1.6004	32.00	32.66	ug/mL	2	30	0.0500	
2,6-Dinitrotoluene	0.3509	0.3582	32.00	32.67	ug/mL	2	30	0.0500	
3-Nitroaniline	0.3567	0.3139	32.00	28.16	ug/mL	-12	30	0.0500	
2,4-Dinitrophenol	0.2013	0.1971	32.00	35.31	ug/mL	10	40	0.0500	
4-Nitrophenol	0.2615	0.2245	32.00	27.48	ug/mL	-14	40	0.0500	
Dibenzofuran	1.7330	1.7812	16.00	16.45	ug/mL	3	30	0.0500	
2,4-Dinitrotoluene	0.4589	0.4703	32.00	32.80	ug/mL	2	30	0.0500	
2,3,4,6-Tetrachlorophenol	0.4647	0.4636	32.00	31.92	ug/mL	0	30	0.0500	
Diethylphthalate	1.6100	1.6441	16.00	16.34	ug/mL	2	30	0.0500	
4-Chlorophenyl-phenylether	0.8974	0.8980	16.00	16.01	ug/mL	0	40	0.0500	
4-Nitroaniline	0.3219	0.2934	32.00	29.17	ug/mL	-9	30	0.0500	
4,6-Dinitro-2-methylphenol	0.1345	0.1454	32.00	34.61	ug/mL	8	30	0.0500	
N-Nitrosodiphenylamine	0.4995	0.5208	16.00	16.68	ug/mL	4	20	0.0500	
Azobenzene	0.7102	0.7251	16.00	16.34	ug/mL	2	30	0.0500	
4-Bromophenyl-phenylether	0.2631	0.2741	16.00	16.67	ug/mL	4	30	0.0500	
Hexachlorobenzene	0.2558	0.2781	32.00	34.79	ug/mL	9	30	0.0500	
Pentachlorophenol	0.1892	0.1891	32.00	31.98	ug/mL	0	20	0.0500	
Carbazole	0.8965	0.8870	32.00	31.66	ug/mL	-1	30	0.0500	
Di-n-butylphthalate	1.3465	1.4363	16.00	17.07	ug/mL	7	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Butylbenzylphthalate	0.6762	0.7227	16.00	17.10	ug/mL	7	30	0.0500	
3,3'-Dichlorobenzidine	0.5388	0.5543	32.00	32.92	ug/mL	3	40	0.0500	
bis(2-Ethylhexyl)phthalate	0.8203	0.9257	16.00	18.06	ug/mL	13	30	0.0500	
Di-n-octylphthalate	1.5226	1.5937	16.00	16.75	ug/mL	5	20	0.0500	
2-Fluorophenol	1.6585	1.6909	16.00	16.31	ug/mL	2	30	0.0500	
Phenol-d5	2.0836	2.1385	16.00	16.42	ug/mL	3	30	0.0500	
Nitrobenzene-d5	0.5150	0.5116	16.00	15.89	ug/mL	-1	30	0.0500	
2-Fluorobiphenyl	1.6233	1.5962	16.00	15.73	ug/mL	-2	30	0.0500	
2,4,6-Tribromophenol	0.2824	0.2823	16.00	15.99	ug/mL	0	30	0.0500	
Terphenyl-d14	1.1429	1.2399	16.00	17.36	ug/mL	8	30	0.0500	

KMH 04/16/15 [Aniline]: Picked or reassigned peak.

Analyst: KMH

Date: 04/16/15

Reviewer: LW

Date: 04/20/15

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 555151818

Date : 04/15/15
 Sequence : MSBNA06 ydf

Reference : ydf03
 Analyzed : 04/15/15 11:06

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV/BS+ICV/ICV/CCV+ICV/LCS+RCCV+RICV STD	425756	6.08	1388464	7.57	829991	9.73	1823327	11.58	1751191	14.98	1879534	17.87
	LOWER LIMIT		212878	5.58	694232	7.07	414996	9.23	911664	11.08	875596	14.48	939767	17.37
	UPPER LIMIT		851512	6.58	2776928	8.07	1659982	10.23	3646654	12.08	3502382	15.48	3759068	18.37
003	CCV		425756	6.08	1388464	7.57	829991	9.73	1823327	11.58	1751191	14.98	1879534	17.87
004	BS	QC784311	447949	6.08	1464105	7.57	881273	9.73	1881866	11.58	1896730	14.98	2158608	17.88
005	BLANK	QC784342	523315	6.08	1772445	7.57	983937	9.72	1972496	11.58	2210351	14.98	2310839	17.87
006	BS	QC784343	411017	6.08	1375859	7.58	820585	9.73	1839713	11.58	1752383	14.98	2030874	17.88
007	BSD	QC784344	424271	6.08	1411835	7.58	851924	9.73	1893996	11.58	1810134	14.98	2093532	17.88
008	BLANK	QC784456	503209	6.09	1794291	7.57	1041615	9.73	1986252	11.58	2243200	14.98	2334540	17.88
009	LCS	QC784457	392060	6.09	1315032	7.58	823760	9.73	1807827	11.58	1707928	14.98	1973980	17.88

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 555153274

Date : 04/16/15
 Sequence : MSBNA06 ydg

Reference : ydg03
 Analyzed : 04/16/15 11:27

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+R1CV STD	469278	6.08	1508691	7.57	913630	9.73	1961864	11.58	1888170	14.98	2017927	17.88
	LOWER LIMIT		234639	5.58	754346	7.07	456815	9.23	980932	11.08	944085	14.48	1008964	17.38
	UPPER LIMIT		938556	6.58	3017382	8.07	1827260	10.23	3923728	12.08	3776340	15.48	4035854	18.38
003	CCV		469278	6.08	1508691	7.57	913630	9.73	1961864	11.58	1888170	14.98	2017927	17.88
005	SAMPLE	266094-002	500587	6.08	1760984	7.57	941204	9.73	1863154	11.58	1773790	14.98	1733475	17.88
006	SAMPLE	266087-005	604505	6.08	2075702	7.57	1136011	9.73	2371674	11.58	2331401	14.98	2325405	17.88
007	SAMPLE	266087-007	622555	6.08	2064334	7.57	1141838	9.73	2424707	11.58	2555122	14.98	2514795	17.88
008	SAMPLE	266087-009	592327	6.08	1999218	7.57	1100299	9.73	2321869	11.58	2370403	14.98	2488385	17.88
009	SAMPLE	266091-003	595531	6.08	2044338	7.57	1101338	9.73	2315466	11.58	2385635	14.98	2431926	17.88
010	SAMPLE	266091-004	590258	6.08	2033212	7.57	1103932	9.73	2352362	11.58	2392149	14.98	2424340	17.88
011	SAMPLE	266091-005	613590	6.08	2075463	7.57	1166300	9.73	2464523	11.58	2516033	14.98	2562290	17.88
012	SAMPLE	266091-008	632240	6.08	2118252	7.57	1159138	9.73	2431841	11.58	2703331	14.98	2648871	17.88
013	SAMPLE	266091-009	600297	6.08	2071863	7.57	1141378	9.73	2423040	11.58	2577080	14.98	2646932	17.88
014	SAMPLE	266091-011	570843	6.08	2034000	7.57	1130116	9.73	2431544	11.58	2511232	14.98	2558625	17.88
015	SAMPLE	266091-012	577099	6.08	2009094	7.57	1126047	9.73	2378486	11.58	2597725	14.98	2554774	17.88

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 555120229

Instrument : MSBNA06 Begun : 03/24/15 11:49
 Method : EPA 8270C SOP Version : bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	yco01	IB	IB			03/24/15 11:49	1.0		?t
002	yco02	TUN	DFTPP			03/24/15 12:18	1.0	1	
003	yco03	CCV				03/24/15 12:38	1.0	2	cc+
004	yco04	TUN	DFTPP			03/24/15 13:15	1.0	1	t
005	yco05	TUN	DFTPP			03/24/15 13:30	1.0	1	
006	yco06	CCV				03/24/15 13:51	1.0	2	cc+
007	yco07	TUN	DFTPP			03/24/15 14:39	1.0	1	
008	yco08	CCV				03/24/15 14:57	1.0	2	cc+
009	yco09	TUN	DFTPP			03/24/15 15:50	1.0	1	
010	yco10	CCV				03/24/15 16:12	1.0	2	cc+
011	yco11	ICAL	ICAL			03/24/15 16:49	1.0	3	
012	yco12	ICAL	ICAL			03/24/15 17:25	1.0	4	
013	yco13	ICAL	ICAL			03/24/15 18:01	1.0	5	
014	yco14	ICAL	ICAL			03/24/15 18:37	1.0	6	
015	yco15	ICAL	ICAL			03/24/15 19:14	1.0	2	
016	yco16	ICAL	ICAL			03/24/15 19:50	1.0	7	
017	yco17	ICAL	ICAL			03/24/15 20:28	1.0	8	
018	yco18	ICAL	ICAL			03/24/15 21:07	1.0	9	
019	yco19	ICAL	ICAL			03/24/15 21:45	1.0	10	
020	yco20	ICV	ICV			03/24/15 22:23	1.0	11	

KMH 03/24/15 : tune adjusted after runs 3, 4 & 6. maint done after run 8

NPM 03/25/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 20.

Standards used: 1=S26170 2=S26478 3=S26474 4=S26475 5=S26476 6=S26477 7=S26479 8=S26480 9=S26481 10=S26482 11=S26696

Flags used: +=high bias ?t=missing tune cc=CCV CCC failure t=tune failure

SAMPLE PREPARATION SUMMARY

Batch # : 222270
 Started By : ARW
 Method : 3520C
 Spike #1 ID : S26606

Prep Date : 14-APR-2015 18:00
 SOP Version : 8270_3520_rv20
 Spike #2 ID : S26837

Analysis : 8270-1
 Finished By : JCD
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266025-002		Water	1020	1	1	0.0009804	10	.4				625	
266025-003		Water	1020	1	1	0.0009804	7	.4				625	
266027-001		Water	1000	2	1	0.002	10	.4				8270-1	
266086-001		Water	1000	5	1	0.005	10	.4				625	
266087-005		Water	1040	1	1	0.0009615	7	.4				8270-1	Prepped 15-APR-2015 14:52
266087-007		Water	1040	1	1	0.0009615	5	.4				8270-1	Prepped 15-APR-2015 14:52
266087-009		Water	1000	1	1	0.001	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-003		Water	1060	1	1	0.0009434	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-004		Water	1060	1	1	0.0009434	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-005		Water	1060	1	1	0.0009434	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-008		Water	1020	1	1	0.0009804	5	.4				8270-1	Prepped 15-APR-2015 14:52
266091-009		Water	1040	1	1	0.0009615	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-011		Water	1060	1	1	0.0009434	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-012		Water	1020	1	1	0.0009804	5	.4				8270-1	Prepped 15-APR-2015 14:52
QC784342	BLANK	Water	1000	1	1	0.001		.4				8270-1	
QC784343	BS	Water	1000	1	1	0.001		.4	1			8270-1	
QC784344	BSD	Water	1000	1	1	0.001		.4	1			8270-1	

KMH 04/16/15 : Matrix spikes were not performed for this analysis in batch 222270 due to insufficient sample amount.

Analyst: KMH

Date: 04/16/15

Reviewer: LW

Date: 04/16/15

LIMS Batch No: 22220
 LIMS Analysis: 82701
 Date Extracted: 4/14/15

Extraction Method:
 EPA 3520c cont. L/L

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Confirmed pH ≤2	Comments
266025-002	H	1020	7.10	1.0	≤2	
↓ 3	F	1020	7	1.0	≤2	
266087-001	E	1000	7.10	1.0	≤2	
266086-001	F	1000	7.10	1.0	≤2	
MS Q178M3V	WT	1000	7	1.0	≤2	
BS ↓ 3	J	1000	7	1.0	≤2	
BS ↓ 4	J	1000	7	1.0	≤2	
266087-005	A	1040	7	1.0	≤2	n/a @ 14:52, 4/15/15 by KKL
↓ 7	F	1040	7.5	1.0	≤2	
↓ 9	↓	1000	7	1.0	≤2	
266091-003	D	1060	7	1.0	≤2	
↓ 4	B	1060	7	1.0	≤2	
↓ 5	C	1060	7	1.0	≤2	
↓ 8	F	1020	7.5	1.0	≤2	
↓ 9	↓	1040	7	1.0	≤2	
↓ 11	E	1060	7	1.0	≤2	
↓ 12	F	1020	7.5	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	

MS/MSD not included due to: insufficient volume, or other (reason)

0.4 mL of surrogate solution was added to all samples
 10 mL of matrix spiking solution was added to all spikes
 pH of all samples adjusted to pH ≤ 2 with H₂SO₄
 Cont. L/L extracted with 450mL of CH₂Cl₂
 Extraction Start Time:
 Extraction End Time:
 pH of all samples adjusted to pH ≥ 11 with 10 N NaOH
 Extraction Start Time:
 Extraction End Time:
 Extracts filtered through baked, CH₂Cl₂-rinsed granular Na₂SO₄
 Concentrated to final volume at temperature (degrees C)
 Relinquished to BNA department

Lot# / LIMS # / Time	Date / Initials
S26606B	APW 4/14/15
S26637A	
F3140056	
KMS4281	
1000 / 14:52	
1201 8:52	KLG 4/15/15
NA	
EMXF27F	JCO 4/15/15
70	
✓	

Jim R. Wyz 4/14/2015
 Extraction Chemist Date
 Continued from Page _____
 Continued on Page _____

APW 4/16/15
 Reviewed by Date



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266087

ANALYTICAL REPORT


Semivolatile Organics by GC/MS SIM

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

<u>Sample ID</u>	<u>Lab ID</u>
20150414B180	266087-005
20150414ER	266087-007
20150414B163	266087-009

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/28/2015

CA ELAP# 2896, NELAP# 4044-001

**CASE NARRATIVE
SEMIVOLATILE ORGANICS BY GC/MS SIM (EPA 8270C-SIM)**

Laboratory number: 266087
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/14/15
Samples Received: 04/14/15

This data package contains sample and QC results for three water samples, requested for the above referenced project on 04/14/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Semivolatile Organics by GC/MS SIM (EPA 8270C-SIM):

No analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266087

Chain of Custody Record No. 6088

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6088

No./Container Types

MS/MSD	Analysis Required
VOA	
SVOA	
Pes/PCBs	
Metals	
TPH Purgeables	
TPH Extractables	
PAH (SIM)	

HCl	Preservative Added
None	
None	

40 ml VOA	3
1 liter Amber	3
500 ml Poly	1
Sieve	1
Glass Jar	1

Field samplers' signatures	Mark Duffy Matt Hanson
Field samplers	Mark Duffy Matt Hanson

Lab:	Curtis and Tompkins
Lab PO#:	150AK32
TIEMI technical contact:	Sara Woolley
TIEMI project manager:	Jason Broderick

Project name:	2015 Groundwater
Project (CTO) number:	103225323.05

Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix
13 20150414B197R		4-14-15	920	water
24 20150414P28		1015		
153 20150414P28D		1020		
104 20150414B195		1050		
15 20150414B180		1135		
4 20150414B450		1255		
7 20150414ER		1540		
8 20150414RWF		1340		
9 20150414B163		1425		

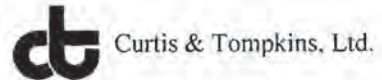
VOA	X
SVOA	X
Pes/PCBs	X
Metals	X
TPH Purgeables	X
TPH Extractables	X
PAH (SIM)	X

Relinquished by:	<i>Mark Duffy</i>	Company Name	Tetra Tech
Received by:	<i>Mikelle Chang</i>	Date	4-14-15
Relinquished by:		Time	1617
Received by:			
Relinquished by:			
Received by:			

Turnaround time/remarks:
* Metals were Field Filtered

Fed Ex #: NA

COOLER RECEIPT CHECKLIST



Login # 266087 Date Received 4/14/15 Number of coolers 3
Client Tetra Tech EM Inc. Project 2015 Ground Water

Date Opened 4/14 By (print) BL (sign) [Signature]
Date Logged in [Signature] By (print) [Signature] (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Cloth material, Foam blocks, Cardboard, Bags, Styrofoam, None, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 53, 20, 60°

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO

If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 266087

Sample	pH: <2	>9	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-002a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-003a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-004a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-006a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-007a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-009a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: SL
 Date: 4/14/15
 Page 1 of 1

Results & QC Summary

Semivolatile Organics by GC/MS SIM

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	2015 0414 B180	Batch#:	222297
Lab ID:	266087-005	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	0.9	0.03
Naphthalene	ND	0.09	0.02
1-Methylnaphthalene	ND	0.09	0.02
2-Methylnaphthalene	ND	0.09	0.02
Acenaphthylene	ND	0.09	0.02
Acenaphthene	ND	0.09	0.02
Fluorene	ND	0.09	0.02
Phenanthrene	ND	0.09	0.02
Anthracene	ND	0.09	0.02
Fluoranthene	ND	0.09	0.02
Pyrene	ND	0.09	0.02
Benzo(a)anthracene	ND	0.09	0.02
Chrysene	ND	0.09	0.02
Benzo(b)fluoranthene	ND	0.09	0.02
Benzo(k)fluoranthene	ND	0.09	0.02
Benzo(a)pyrene	ND	0.09	0.02
Indeno(1,2,3-cd)pyrene	ND	0.09	0.02
Dibenz(a,h)anthracene	ND	0.09	0.02
Benzo(g,h,i)perylene	ND	0.09	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	62	45-120
2-Fluorobiphenyl	81	46-120
Terphenyl-d14	76	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	2015 0414 ER	Batch#:	222297
Lab ID:	266087-007	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	1.0	0.03
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.02
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.02
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.02
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	60	45-120
2-Fluorobiphenyl	80	46-120
Terphenyl-d14	77	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	2015 0414 B163	Batch#:	222297
Lab ID:	266087-009	Sampled:	04/14/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
1,4-Dioxane	0.2 J	0.9	0.03
Naphthalene	ND	0.09	0.02
1-Methylnaphthalene	ND	0.09	0.02
2-Methylnaphthalene	ND	0.09	0.02
Acenaphthylene	ND	0.09	0.02
Acenaphthene	ND	0.09	0.02
Fluorene	ND	0.09	0.02
Phenanthrene	ND	0.09	0.02
Anthracene	ND	0.09	0.02
Fluoranthene	ND	0.09	0.02
Pyrene	ND	0.09	0.02
Benzo(a)anthracene	ND	0.09	0.02
Chrysene	ND	0.09	0.02
Benzo(b)fluoranthene	ND	0.09	0.02
Benzo(k)fluoranthene	ND	0.09	0.02
Benzo(a)pyrene	ND	0.09	0.02
Indeno(1,2,3-cd)pyrene	ND	0.09	0.02
Dibenz(a,h)anthracene	ND	0.09	0.02
Benzo(g,h,i)perylene	ND	0.09	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	60	45-120
2-Fluorobiphenyl	79	46-120
Terphenyl-d14	71	30-120

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report
Semivolatile Organics by GC/MS SIM

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784446	Batch#:	222297
Matrix:	Water	Prepared:	04/15/15
Units:	ug/L	Analyzed:	04/16/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	1.0	0.03
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.02
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.02
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.02
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	64	45-120
2-Fluorobiphenyl	79	46-120
Terphenyl-d14	82	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Matrix:	Water	Batch#:	222297
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Type: BS Lab ID: QC784447

Analyte	Spiked	Result	%REC	Limits
1,4-Dioxane	3.000	2.160	72	44-120
Naphthalene	1.000	0.7289	73	59-120
1-Methylnaphthalene	1.000	0.8052	81	62-120
2-Methylnaphthalene	1.000	0.7789	78	62-120
Acenaphthylene	1.000	0.7974	80	60-120
Acenaphthene	1.000	0.7838	78	61-120
Fluorene	1.000	0.8169	82	63-120
Phenanthrene	1.000	0.7271	73	60-120
Anthracene	1.000	0.7029	70	58-120
Fluoranthene	1.000	0.7137	71	60-120
Pyrene	1.000	0.8180	82	53-120
Benzo(a)anthracene	1.000	0.7087	71	57-120
Chrysene	1.000	0.6155	62	54-120
Benzo(b)fluoranthene	1.000	0.7486	75	54-120
Benzo(k)fluoranthene	1.000	0.7664	77	50-120
Benzo(a)pyrene	1.000	0.7317	73	53-120
Indeno(1,2,3-cd)pyrene	1.000	0.6816	68	49-120
Dibenz(a,h)anthracene	1.000	0.6516	65	47-120
Benzo(g,h,i)perylene	1.000	0.6512	65	48-120

Surrogate	%REC	Limits
Nitrobenzene-d5	58	45-120
2-Fluorobiphenyl	74	46-120
Terphenyl-d14	74	30-120

RPD= Relative Percent Difference

Batch QC Report
Semivolatile Organics by GC/MS SIM

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Matrix:	Water	Batch#:	222297
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Type: BSD Lab ID: QC784448

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,4-Dioxane	3.000	2.479	83	44-120	14	43
Naphthalene	1.000	0.8238	82	59-120	12	37
1-Methylnaphthalene	1.000	0.9017	90	62-120	11	35
2-Methylnaphthalene	1.000	0.8767	88	62-120	12	37
Acenaphthylene	1.000	0.8929	89	60-120	11	32
Acenaphthene	1.000	0.8977	90	61-120	14	30
Fluorene	1.000	0.9127	91	63-120	11	27
Phenanthrene	1.000	0.8412	84	60-120	15	24
Anthracene	1.000	0.8152	82	58-120	15	25
Fluoranthene	1.000	0.8287	83	60-120	15	25
Pyrene	1.000	0.9245	92	53-120	12	27
Benzo(a)anthracene	1.000	0.7892	79	57-120	11	25
Chrysene	1.000	0.6926	69	54-120	12	26
Benzo(b)fluoranthene	1.000	0.8328	83	54-120	11	27
Benzo(k)fluoranthene	1.000	0.8642	86	50-120	12	32
Benzo(a)pyrene	1.000	0.8051	81	53-120	10	28
Indeno(1,2,3-cd)pyrene	1.000	0.7740	77	49-120	13	27
Dibenz(a,h)anthracene	1.000	0.7415	74	47-120	13	28
Benzo(g,h,i)perylene	1.000	0.7381	74	48-120	13	27

Surrogate	%REC	Limits
Nitrobenzene-d5	66	45-120
2-Fluorobiphenyl	83	46-120
Terphenyl-d14	83	30-120

RPD= Relative Percent Difference

CURTIS & TOMPKINS DFTPP TUNE FOR 266087 MSSIM Water
EPA 8270C

Inst : MSBNA03 Run Name : DFTPP IDF : 1.0
Seqnum : 525131701005 File : vd105 Time : 01-APR-2015 12:58

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	144572	42.83	
68	< 2% of mass 69	0	0.00	
69		166261	100.00	
70	< 2% of mass 69	1218	0.73	
127	40% - 60% of mass 198	186729	55.32	
197	< 1% of mass 198	0	0.00	
198		337514	100.00	
199	5% - 9% of mass 198	24104	7.14	
275	10% - 30% of mass 198	74893	22.19	
365	> 1% of mass 198	12658	3.75	
441	Present, < mass 443	47405	74.51	
442	> 40% and < 100% of mass 198	315029	93.34	
443	17% - 23% of mass 442	63621	20.20	

Analyst: KMH Date: 04/01/15 Reviewer: LW Date: 04/02/15

CURTIS & TOMPKINS DFTPP TUNE FOR 266087 MSSIM Water
EPA 8270C

Inst : MSBNA03 Run Name : DFTPP IDF : 1.0
Seqnum : 525153256002 File : vdg02 Time : 16-APR-2015 10:42

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	95005	43.63	
68	< 2% of mass 69	0	0.00	
69		111800	100.00	
70	< 2% of mass 69	808	0.72	
127	40% - 60% of mass 198	126170	57.94	
197	< 1% of mass 198	1376	0.63	
198		217749	100.00	
199	5% - 9% of mass 198	14279	6.56	
275	10% - 30% of mass 198	54448	25.00	
365	> 1% of mass 198	7901	3.63	
441	Present, < mass 443	30872	81.08	
442	> 40% and < 100% of mass 198	195712	89.88	
443	17% - 23% of mass 442	38077	19.46	

Analyst: KMH Date: 04/16/15 Reviewer: LW Date: 04/17/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266087 MSSIM Water: EPA 8270C-SIM

Inst : MSBNA03
 Calnum : 525131701001
 Units : ug/mL

Name : 3PAHSIM
 Date : 01-APR-2015 13:17
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	vd106	525131701006	ICAL 01-APR-2015 13:17	S26126
L2	vd107	525131701007	ICAL 01-APR-2015 13:50	S26127
L3	vd108	525131701008	ICAL 01-APR-2015 14:24	S26919
L4	vd109	525131701009	ICAL 01-APR-2015 14:57	S26920
L5	vd110	525131701010	ICAL 01-APR-2015 15:30	S26130
L6	vd111	525131701011	ICAL 01-APR-2015 16:03	S26131
L7	vd112	525131701012	ICAL 01-APR-2015 16:36	S26132

Analyte	L1	L2	L3	L4	L5	L6	L7	Type	a0	a1	a2	Avg	r^2	Max	Min	Min	Flg
1,4-Dioxane	0.3884m	0.3959m	0.4095m	0.4030m	0.3911	0.4012	0.4179	AVRG	2.49376			0.4010	3	15	0.05	0.99	
Naphthalene	1.0149	1.0289	1.0641	1.0871	1.0618	1.0776	1.1597	AVRG	0.93405			1.0706	4	15	0.05	0.99	
2-Methylnaphthalene	0.6287	0.6326	0.6663	0.6791	0.6667	0.6827	0.7441	AVRG	1.48929			0.6715	6	15	0.05	0.99	
1-Methylnaphthalene	0.6083	0.6009	0.6337	0.6524	0.6379	0.6566	0.7009	AVRG	1.55872			0.6416	5	15	0.05	0.99	
Acenaphthylene	1.7445	1.7619	2.0357	2.0852	1.8385	1.8877	2.0244	AVRG	0.52325			1.9111	7	15	0.05	0.99	
Acenaphthene	1.1518	1.1546	1.3343	1.3635	1.2251	1.2296	1.3413	AVRG	0.79544			1.2572	7	15	0.05	0.99	
Fluorene	1.2852	1.3126	1.5176	1.5180	1.3771	1.4726	1.6612	AVRG	0.69005			1.4492	9	15	0.05	0.99	
Phenanthrene	1.0751	1.0919	1.1075	1.1303	1.1292	1.1693	1.2351	AVRG	0.88179			1.1341	5	15	0.05	0.99	
Anthracene	1.0472	1.0715	1.0845	1.0926	1.1015	1.1636	1.2267	AVRG	0.89886			1.1125	6	15	0.05	0.99	
Fluoranthene	1.2044	1.2242	1.2327	1.2515	1.2696	1.3195	1.4104	AVRG	0.78542			1.2732	6	15	0.05	0.99	
Pyrene	1.2698	1.2713	1.3017	1.2862	1.2973	1.2606	1.3668	AVRG	0.77316			1.2934	3	15	0.05	0.99	
Benzo(a)anthracene	1.1612	1.1342	1.1513	1.1677	1.1912	1.2423	1.3566	AVRG	0.83290			1.2006	6	15	0.05	0.99	
Chrysene	1.0584	1.0738	1.0954	1.1042	1.1142	1.1056	1.1762	AVRG	0.90581			1.1040	3	15	0.05	0.99	
Benzo(b)fluoranthene	1.0931	1.1271	1.1614	1.1894	1.2318	1.3145	1.4314	AVRG	0.81883			1.2213	10	15	0.05	0.99	
Benzo(k)fluoranthene	1.0825	1.1143	1.1019	1.2027	1.2171	1.2750	1.4384	AVRG	0.83017			1.2046	10	15	0.05	0.99	
Benzo(a)pyrene	0.9393	0.9772	1.0307	1.0484	1.0950	1.1681	1.2650	AVRG	0.93039			1.0748	10	15	0.05	0.99	
Indeno(1,2,3-cd)pyrene	1.1076	1.1400	1.1697	1.2539	1.3238	1.4807		AVRG	0.80260			1.2459	11	15	0.05	0.99	
Dibenz(a,h)anthracene	0.8945	0.9304	0.9427	1.0116	1.0792	1.2108		AVRG	0.98859			1.0115	12	15	0.05	0.99	
Benzo(g,h,i)perylene	0.9997	1.0119	1.0071	1.0727	1.1105	1.1724	1.2619	AVRG	0.91668			1.0909	9	15	0.05	0.99	
Nitrobenzene-d5	0.2927	0.2862	0.3037	0.3172	0.3142	0.3243	0.3460	AVRG	3.20468			0.3120	6	15	0.05	0.99	
2-Fluorobiphenyl	1.5354	1.5623	1.8123	1.8183	1.6439	1.6800	1.8067	AVRG	0.59027			1.6941	7	15	0.05	0.99	
Terphenyl-d14	0.9490	0.9736	0.9598	0.9801	0.9874	0.9955	1.0694	AVRG	1.01233			0.9878	4	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D
1,4-Dioxane	0.5000	-3	1.0000	-1	2.5000	2	5.0000	1	10.0000	-2	25.0000	0	50.0000	4
Naphthalene	0.1000	-5	0.2000	-4	0.5000	-1	1.0000	2	2.0000	-1	5.0000	1	10.0000	8
2-Methylnaphthalene	0.1000	-6	0.2000	-6	0.5000	-1	1.0000	1	2.0000	-1	5.0000	2	10.0000	11
1-Methylnaphthalene	0.1000	-5	0.2000	-6	0.5000	-1	1.0000	2	2.0000	-1	5.0000	2	10.0000	9
Acenaphthylene	0.1000	-9	0.2000	-8	0.5000	7	1.0000	9	2.0000	-4	5.0000	-1	10.0000	6
Acenaphthene	0.1000	-8	0.2000	-8	0.5000	6	1.0000	8	2.0000	-3	5.0000	-2	10.0000	7
Fluorene	0.1000	-11	0.2000	-9	0.5000	5	1.0000	5	2.0000	-5	5.0000	2	10.0000	15
Phenanthrene	0.1000	-5	0.2000	-4	0.5000	-2	1.0000	0	2.0000	0	5.0000	3	10.0000	9
Anthracene	0.1000	-6	0.2000	-4	0.5000	-3	1.0000	-2	2.0000	-1	5.0000	5	10.0000	10
Fluoranthene	0.1000	-5	0.2000	-4	0.5000	-3	1.0000	-2	2.0000	0	5.0000	4	10.0000	11
Pyrene	0.1000	-2	0.2000	-2	0.5000	1	1.0000	-1	2.0000	0	5.0000	-3	10.0000	6
Benzo(a)anthracene	0.1000	-3	0.2000	-6	0.5000	-4	1.0000	-3	2.0000	-1	5.0000	3	10.0000	13
Chrysene	0.1000	-4	0.2000	-3	0.5000	-1	1.0000	0	2.0000	1	5.0000	0	10.0000	7
Benzo(b)fluoranthene	0.1000	-10	0.2000	-8	0.5000	-5	1.0000	-3	2.0000	1	5.0000	8	10.0000	17
Benzo(k)fluoranthene	0.1000	-10	0.2000	-7	0.5000	-9	1.0000	0	2.0000	1	5.0000	6	10.0000	19
Benzo(a)pyrene	0.1000	-13	0.2000	-9	0.5000	-4	1.0000	-2	2.0000	2	5.0000	9	10.0000	18
Indeno(1,2,3-cd)pyrene	0.1000	-11	0.2000	-9	0.5000	-6	1.0000	1	2.0000	6	5.0000	19		
Dibenz(a,h)anthracene	0.1000	-12	0.2000	-8	0.5000	-7	1.0000	0	2.0000	7	5.0000	20		
Benzo(g,h,i)perylene	0.1000	-8	0.2000	-7	0.5000	-8	1.0000	-2	2.0000	2	5.0000	7	10.0000	16
Nitrobenzene-d5	0.1000	-6	0.2000	-8	0.5000	-3	1.0000	2	2.0000	1	5.0000	4	10.0000	11
2-Fluorobiphenyl	0.1000	-9	0.2000	-8	0.5000	7	1.0000	7	2.0000	-3	5.0000	-1	10.0000	7
Terphenyl-d14	0.1000	-4	0.2000	-1	0.5000	-3	1.0000	-1	2.0000	0	5.0000	1	10.0000	8

KMH 04/02/15 [1,4-Dioxane]: Corrected automatically drawn baseline in multiple levels.

Analyst: KMH

Date: 04/01/15

Reviewer: LW

Date: 04/02/15

m=manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor

Page 2 of 2

525131701001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266087 MSSIM Water
EPA 8270C-SIM

Inst : MSBNA03
Calnum : 525131701001

Name : 3PAHSIM
Cal Date : 01-APR-2015

ICV 525131701013 (vd113 01-APR-2015) stds: S26530

Analyte	Spiked	Quant	Units	%D	Max	Flags
1,4-Dioxane	10.00	10.24	ug/mL	2	30	
Naphthalene	1.000	0.8880	ug/mL	-11	30	
2-Methylnaphthalene	1.000	0.9439	ug/mL	-6	30	
1-Methylnaphthalene	1.000	0.9391	ug/mL	-6	30	
Acenaphthylene	1.000	0.9299	ug/mL	-7	30	
Acenaphthene	1.000	0.8706	ug/mL	-13	20	
Fluorene	1.000	0.8700	ug/mL	-13	30	
Phenanthrene	1.000	0.9112	ug/mL	-9	30	
Anthracene	1.000	0.9398	ug/mL	-6	30	
Fluoranthene	1.000	0.9169	ug/mL	-8	20	
Pyrene	1.000	1.016	ug/mL	2	30	
Benzo(a)anthracene	1.000	0.8835	ug/mL	-12	30	
Chrysene	1.000	0.9391	ug/mL	-6	30	
Benzo(b)fluoranthene	1.000	0.9116	ug/mL	-9	30	
Benzo(k)fluoranthene	1.000	0.8596	ug/mL	-14	30	
Benzo(a)pyrene	1.000	0.9589	ug/mL	-4	20	
Indeno(1,2,3-cd)pyrene	1.000	0.9374	ug/mL	-6	30	
Dibenz(a,h)anthracene	1.000	0.9568	ug/mL	-4	30	
Benzo(g,h,i)perylene	1.000	0.9333	ug/mL	-7	30	

Analyst: KMH

Date: 04/01/15

Reviewer: LW

Date: 04/02/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 MSSIM Water
EPA 8270C-SIM

Inst : MSBNA03
Seqnum : 525153256004
Cal : 525131701001
Standards: S26920

File : vdg04
Caldate : 01-APR-2015

IDF : 1.0
Time : 16-APR-2015 11:36

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,4-Dioxane	0.4010	0.4010	5.000	5.000	ug/mL	0	30	0.0500	
Naphthalene	1.0706	1.0707	1.000	1.000	ug/mL	0	30	0.0500	
2-Methylnaphthalene	0.6715	0.6676	1.000	0.9943	ug/mL	-1	30	0.0500	
1-Methylnaphthalene	0.6416	0.6338	1.000	0.9880	ug/mL	-1	30	0.0500	
Acenaphthylene	1.9111	2.0480	1.000	1.072	ug/mL	7	30	0.0500	
Acenaphthene	1.2572	1.3562	1.000	1.079	ug/mL	8	20	0.0500	
Fluorene	1.4492	1.5380	1.000	1.061	ug/mL	6	30	0.0500	
Phenanthrene	1.1341	1.1450	1.000	1.010	ug/mL	1	30	0.0500	
Anthracene	1.1125	1.0942	1.000	0.9836	ug/mL	-2	30	0.0500	
Fluoranthene	1.2732	1.2332	1.000	0.9685	ug/mL	-3	20	0.0500	
Pyrene	1.2934	1.4364	1.000	1.111	ug/mL	11	30	0.0500	
Benzo(a)anthracene	1.2006	1.1919	1.000	0.9927	ug/mL	-1	30	0.0500	
Chrysene	1.1040	1.1327	1.000	1.026	ug/mL	3	30	0.0500	
Benzo(b)fluoranthene	1.2213	1.2732	1.000	1.043	ug/mL	4	30	0.0500	
Benzo(k)fluoranthene	1.2046	1.2236	1.000	1.016	ug/mL	2	30	0.0500	
Benzo(a)pyrene	1.0748	1.0876	1.000	1.012	ug/mL	1	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.2459	1.2054	1.000	0.9674	ug/mL	-3	30	0.0500	
Dibenz(a,h)anthracene	1.0115	1.0026	1.000	0.9912	ug/mL	-1	30	0.0500	
Benzo(g,h,i)perylene	1.0909	1.0009	1.000	0.9175	ug/mL	-8	30	0.0500	
Nitrobenzene-d5	0.3120	0.2727	1.000	0.8739	ug/mL	-13	30	0.0500	
2-Fluorobiphenyl	1.6941	1.8365	1.000	1.084	ug/mL	8	30	0.0500	
Terphenyl-d14	0.9878	1.0384	1.000	1.051	ug/mL	5	30	0.0500	

Analyst: KMH

Date: 04/16/15

Reviewer: LW

Date: 04/17/15

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 525153256

Date : 04/16/15
 Sequence : MSBNA03 vdg

Reference : vdg04
 Analyzed : 04/16/15 11:36

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
	CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+RICV	STD	27161	7.30	105926	8.93	49494	11.23	99638	13.17	88160	16.62	75130	18.34
	LOWER LIMIT		13581	6.80	52963	8.43	24747	10.73	49819	12.67	44080	16.12	37565	17.84
	UPPER LIMIT		54322	7.80	211852	9.43	98988	11.73	199276	13.67	176320	17.12	150260	18.84
004	CCV		27161	7.30	105926	8.93	49494	11.23	99638	13.17	88160	16.62	75130	18.34
005	BLANK	QC784474	22244	7.30	88699	8.93	42962	11.23	90400	13.17	80686	16.62	69945	18.34
006	LCS	QC784475	22851	7.31	89624	8.93	44189	11.22	93116	13.17	84577	16.62	70554	18.34
007	SAMPLE	266078-003	22688	7.31	89889	8.93	43851	11.23	91446	13.17	80420	16.61	66671	18.34
008	SAMPLE	266078-004	23133	7.30	92225	8.93	45134	11.23	95429	13.17	82172	16.61	68857	18.34
009	SAMPLE	266094-003	21846	7.30	87827	8.93	43004	11.22	91540	13.17	78647	16.61	66168	18.34
010	SAMPLE	266078-002	22463	7.30	89254	8.93	42835	11.22	91364	13.17	76167	16.61	63477	18.34
011	SAMPLE	266078-001	21895	7.30	88343	8.93	42906	11.22	89072	13.17	69515	16.62	57396	18.35
012	MSS	266094-002	20274	7.30	82369	8.93	39451	11.22	82814	13.17	69709	16.62	61307	18.34
013	SAMPLE	266094-001	20719	7.30	82908	8.92	39750	11.22	82571	13.17	68210	16.61	60728	18.34
014	MSS	266094-002	20377	7.30	80771	8.92	38774	11.22	81816	13.17	70908	16.61	62298	18.34
015	MS	QC784476	21338	7.30	84762	8.92	40770	11.22	85439	13.17	74736	16.61	65386	18.34
016	MSD	QC784477	21808	7.30	86970	8.92	41596	11.22	87242	13.17	78500	16.61	67967	18.34
017	BLANK	QC784446	23097	7.30	90404	8.92	44144	11.22	92196	13.17	80909	16.61	70152	18.34
018	BS	QC784447	23912	7.30	93977	8.92	45031	11.22	96643	13.17	85606	16.61	73872	18.34
019	BSD	QC784448	23059	7.30	90357	8.92	43531	11.22	90982	13.17	83265	16.61	71944	18.34
020	SAMPLE	266087-005	23552	7.30	91353	8.92	44037	11.22	92792	13.16	87875	16.61	71421	18.34
021	SAMPLE	266087-007	23201	7.30	91047	8.92	44625	11.22	91990	13.17	87322	16.61	70631	18.34
022	SAMPLE	266087-009	22220	7.30	85973	8.92	41177	11.22	86753	13.17	85955	16.61	66824	18.34
023	SAMPLE	266091-003	21908	7.30	85511	8.92	41191	11.22	85909	13.17	79358	16.61	65366	18.34
024	MS	QC784476	20985	7.30	82260	8.92	39819	11.22	83769	13.17	72603	16.61	63855	18.34
025	MSD	QC784477	21053	7.30	83520	8.92	39939	11.22	85465	13.17	73111	16.61	64541	18.34

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 525131701

Instrument : MSBNA03 Begun : 04/01/15 11:01
 Method : EPA 8270C, EPA 8270C-SIM SOP Version : 8270-SIM_OBPA_rv1, bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	vd101	TUN	DFTPP			04/01/15 11:01	1.0	1
002	vd102	TUN	DFTPP			04/01/15 11:35	1.0	1
003	vd103	CCV	RTCHECK			04/01/15 11:55	1.0	2
004	vd104	IB	IB			04/01/15 12:32	1.0	
005	vd105	TUN	DFTPP			04/01/15 12:58	1.0	1
006	vd106	ICAL	ICAL			04/01/15 13:17	1.0	3
007	vd107	ICAL	ICAL			04/01/15 13:50	1.0	4
008	vd108	ICAL	ICAL			04/01/15 14:24	1.0	5
009	vd109	ICAL	ICAL			04/01/15 14:57	1.0	6
010	vd110	ICAL	ICAL			04/01/15 15:30	1.0	7
011	vd111	ICAL	ICAL			04/01/15 16:03	1.0	8
012	vd112	ICAL	ICAL			04/01/15 16:36	1.0	9
013	vd113	ICV	ICV			04/01/15 17:08	1.0	10
014	vd114	CCV	PAHDIOX			04/01/15 17:42	1.0	6
015	vd115	LOD	209076-066	Soil	221583	04/01/15 18:14	1.0	11
016	vd116	LOD	209076-067	Soil	221583	04/01/15 18:47	1.0	11
017	vd117	LOD	209076-068	Soil	221583	04/01/15 19:21	1.0	11

KMH 04/02/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 17.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 525153256

Instrument : MSBNA03 Begun : 04/16/15 10:16
 Method : EPA 8270C, EPA 8270C-SIM SOP Version : 8270-SIM_OBPA_rv1, bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	vdg01	IB	IB			04/16/15 10:16	1.0		?t
002	vdg02	TUN	DFTPP			04/16/15 10:42	1.0	1	
003	vdg03	CCV				04/16/15 11:02	1.0	2	
004	vdg04	CCV				04/16/15 11:36	1.0	2	
005	vdg05	BLANK	QC784474	Soil	222304	04/16/15 12:12	1.0	3	
006	vdg06	LCS	QC784475	Soil	222304	04/16/15 12:45	1.0	3	
007	vdg07	SAMPLE	266078-003	Soil	222216	04/16/15 13:19	1.0	3	
008	vdg08	SAMPLE	266078-004	Soil	222216	04/16/15 13:51	1.0	3	
009	vdg09	SAMPLE	266094-003	Soil	222304	04/16/15 14:24	1.0	3	
010	vdg10	SAMPLE	266078-002	Soil	222216	04/16/15 14:57	1.0	3	
011	vdg11	SAMPLE	266078-001	Soil	222216	04/16/15 15:30	1.0	3	
012	vdg12	MSS	266094-002	Soil	222304	04/16/15 16:03	1.0	3	4:PHAN=18
013	vdg13	SAMPLE	266094-001	Soil	222304	04/16/15 16:35	3.0	3	
014	vdg14	MSS	266094-002	Soil	222304	04/16/15 17:08	3.0	3	
015	vdg15	MS	QC784476	Soil	222304	04/16/15 17:41	5.0	3	
016	vdg16	MSD	QC784477	Soil	222304	04/16/15 18:14	5.0	3	
017	vdg17	BLANK	QC784446	Water	222297	04/16/15 18:47	1.0	3	
018	vdg18	BS	QC784447	Water	222297	04/16/15 19:20	1.0	3	
019	vdg19	BSD	QC784448	Water	222297	04/16/15 19:54	1.0	3	
020	vdg20	SAMPLE	266087-005	Water	222297	04/16/15 20:27	1.0	3	
021	vdg21	SAMPLE	266087-007	Water	222297	04/16/15 21:01	1.0	3	
022	vdg22	SAMPLE	266087-009	Water	222297	04/16/15 21:35	1.0	3	
023	vdg23	SAMPLE	266091-003	Water	222297	04/16/15 22:09	1.0	3	
024	vdg24	MS	QC784476	Soil	222304	04/16/15 22:43	5.0	3	<<t
025	vdg25	MSD	QC784477	Soil	222304	04/16/15 23:17	5.0	3	<<t

KMH 04/17/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 25.

Standards used: 1=S26814 2=S26920 3=S26588

Flags used: <<t=out of clock ?t=missing tune

SAMPLE PREPARATION SUMMARY

Batch #	: 222297				Analysis	: 8270-SIM
Started By	: KKL	Prep Date	: 15-APR-2015 14:52	Finished By	: JCD	
Method	: 3520C	SOP Version	: 8270-SIM_3520_rv5	Units	: mL	
Spike #1 ID	: S26499	Spike #2 ID	: S26609			

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266087-005		Water	1060	1	1	0.0009434	7	1				8270-SIM	
266087-007		Water	1020	1	1	0.0009804	5	1				8270-SIM	
266087-009		Water	1060	1	1	0.0009434	7	1				8270-SIM	
266091-003		Water	1020	1	1	0.0009804	7	1				8270-SIM	
266091-004		Water	1000	1	1	0.001	7	1				8270-SIM	
266091-005		Water	1070	1	1	0.0009346	7	1				8270-SIM	
266091-008		Water	1060	1	1	0.0009434	5	1				8270-SIM	
266091-009		Water	1020	1	1	0.0009804	7	1				8270-SIM	
266091-011		Water	1000	1	1	0.001	7	1				8270-SIM	
266091-012		Water	1060	1	1	0.0009434	5	1				8270-SIM	
266092-016		Water	1070	1	1	0.0009346	7	1				8270-SIM	
266092-017		Water	1070	1	1	0.0009346	7	1				8270-SIM	
QC784446	BLANK	Water	1000	1	1	0.001		1				8270-1	
QC784447	BS	Water	1000	1	1	0.001		1	1			8270-1	
QC784448	BSD	Water	1000	1	1	0.001		1	1			8270-1	

KMH 04/17/15 : Matrix spikes were not performed for this analysis in batch 222297 due to insufficient sample amount.

Analyst: KMH Date: 04/17/15 Reviewer: LW Date: 04/17/15

BNA (8270 & 625) Water Prep Log

Curtis & Tompkins, Ltd.

BNA (8

Page 12 BK 3648

LIM
LIM
Date

LIMS Batch No: 222277
LIMS Analysis: 8270 - SIM
Date Extracted: 4/15/15

Extraction Method:
 EPA 3520c cont. L/L

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Confirmed pH <= 2	Comments
266087-005	B	1060	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
7	E	1020	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
9		1060	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
266091-003		1020	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
4	C	1000	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
5	B	1070	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
8	E	1060	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
9		1020	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
11	D	1000	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
12	E	1060	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
266092-016	C	1070	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
17		1070	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
MB GC784446	N/A	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> NA	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
BS	7	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> NA	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
BSD	8	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> NA	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
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			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	

Sample
266C
↓
266C
↓
266C
↓
MS

MS/MSD not included due to: insufficient volume, or other (reason)

1.0 mL of surrogate solution was added to all samples
1.0 mL of matrix spiking solution was added to all spikes
pH of all samples adjusted to pH <= 2 with H₂SO₄
Cont. L/L extracted with 450mL of CH₂Cl₂
Extraction Start Time:
Extraction End Time:
pH of all samples adjusted to pH >= 11 with 10 N NaOH
Extraction Start Time:
Extraction End Time:
Extracts filtered through baked, CH₂Cl₂-rinsed granular Na₂SO₄
Concentrated to final volume at temperature (degrees C)
Relinquished to BNA department

Lot# / LIMS # / Time	Date/ Initials
326499 C	KKL 4/15/15
326609 B	
FS140636	
EM54351	
14:52	
08:52	UEB 4/16/15
NA	SCD 4/16/15
EMXF27F	
70	
✓	

Kristin Low 4/15/15
Extraction Chemist Date

Continued from Page /
Continued on Page /

Jim Q. Uy 4/16/15
Reviewed by Date

SLC
EX



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266087

ANALYTICAL REPORT


Metals

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

<u>Sample ID</u>	<u>Lab ID</u>
20150414B197R	266087-001
20150414PZ8	266087-002
20150414PZ8D	266087-003
20150414B195	266087-004
20150414450	266087-006
20150414ER	266087-007
20150414B163	266087-009

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/28/2015

CA ELAP# 2896, NELAP# 4044-001

**CASE NARRATIVE
METALS (EPA 6020 AND EPA 7470A)**

Laboratory number: 266087
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/14/15
Samples Received: 04/14/15

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 04/14/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Metals (EPA 6020 and EPA 7470A):

Low recoveries were observed for selenium in the MS/MSD of 20150414B197R (lab # 266087-001); the BS/BSD were within limits, and the associated RPD was within limits.

Responses exceeding the instrument's linear range were observed for a number of analytes in the MS/MSD of 20150414B197R (lab # 266087-001).

High % difference was observed for sodium in the serial dilution of 20150414B197R (lab # 266087-001).

A number of analytes were detected between the MDL and the RL in the method blank for batch 222325.

No other analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266087

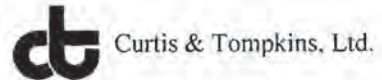
Chain of Custody Record No. 6088

Page 1 of 1

Project name: 2015 Groundwater	Lab PO#: 150AK32	Lab: Curtis and Tompkins	No./Container Types		Preservative Added			
Project (CTO) number: 103225323.05	TIEMI technical contact: Sara Woolley	Field samplers: Mark Duffy Matt Hanson	Analysis Required					
Sample ID	TIEMI project manager: Jason Broderick	Field samplers' signature: <i>[Signature]</i>	VOA	Pes/PCBs	Metals	TPH Purgeables	TPH Extractables	PAH (SIM)
13 20150414B197R			X	X	X			
14 20150414P28								
15 20150414P28D								
16 20150414B195			X	X	X			
17 20150414B180			X	X	X			
18 20150414B450			X	X	X			
19 20150414ER			X	X	X			
20 20150414RWF			X	X	X			
21 20150414B163			X	X	X			

Relinquished by: <i>[Signature]</i>	Name (print) Mark Duffy	Company Name Tetra Tech	Date 4-14-15	Time 15:57
Received by: <i>[Signature]</i>	Mikelle Chang	C&T	4/14	16:17
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Turnaround time/remarks: * Metals were Field Filtered				
Fed Ex #: NA				

COOLER RECEIPT CHECKLIST



Login # 266087 Date Received 4/14/15 Number of coolers 3
Client Tetra Tech EM Inc. Project 2015 Ground Water

Date Opened 4/14 By (print) BL (sign) [Signature]
Date Logged in [Signature] By (print) [Signature] (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Cloth material, Foam blocks, Cardboard, Bags, Styrofoam, None, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 53, 20, 60°

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO

If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 266087

Sample	pH: <2	>9	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-002a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-003a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-004a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-006a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-007a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-009a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: SL
 Date: 4/14/15
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Results & QC Summary

Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150414B197R	Units:	ug/L
Lab ID:	266087-001	Sampled:	04/14/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	30 J	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	0.16 J	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	2.3	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	24	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	0.19 J	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	180,000	6,000	2,000	500.0	222325	04/16/15	04/20/15	EPA 6020
Chromium	ND	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	0.35 J	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/20/15	EPA 6020
Iron	1,300	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	170,000	5,000	1,200	500.0	222325	04/16/15	04/20/15	EPA 6020
Manganese	2,700	61	20	500.0	222325	04/16/15	04/20/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	0.80 J	1.0	0.23	5.000	222325	04/16/15	04/20/15	EPA 6020
Nickel	2.2	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	1,200	100	30	10.00	222325	04/16/15	04/23/15	EPA 6020
Selenium	1.1	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/20/15	EPA 6020
Sodium	150,000	50,000	1,200	500.0	222325	04/16/15	04/20/15	EPA 6020
Thallium	0.042 J	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	1.5	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150414PZ8	Units:	ug/L
Lab ID:	266087-002	Sampled:	04/14/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	0.26 J	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	1.5	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	84	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	0.10 J	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	48,000	50	13	5.000	222325	04/16/15	04/17/15	EPA 6020
Chromium	1.0	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/20/15	EPA 6020
Iron	ND	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	0.076 J	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	41,000	50	6.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Manganese	0.73 J	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	0.45 J	1.0	0.23	5.000	222325	04/16/15	04/20/15	EPA 6020
Nickel	0.96 J	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	690	100	30	10.00	222325	04/16/15	04/23/15	EPA 6020
Selenium	0.92 J	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/20/15	EPA 6020
Sodium	64,000	500	12	5.000	222325	04/16/15	04/20/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	5.0	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150414PZ8D	Units:	ug/L
Lab ID:	266087-003	Sampled:	04/14/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	0.18 J	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	1.3	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	84	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	47,000	50	13	5.000	222325	04/16/15	04/17/15	EPA 6020
Chromium	1.2	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/20/15	EPA 6020
Iron	ND	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	41,000	50	6.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Manganese	0.41 J	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	0.63 J	1.0	0.23	5.000	222325	04/16/15	04/20/15	EPA 6020
Nickel	0.80 J	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	890	100	30	10.00	222325	04/16/15	04/27/15	EPA 6020
Selenium	0.67 J	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/20/15	EPA 6020
Sodium	64,000	500	12	5.000	222325	04/16/15	04/20/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	5.0	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150414B195	Units:	ug/L
Lab ID:	266087-004	Sampled:	04/14/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	0.14 J	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	1.3	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	23	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	0.17 J	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	76,000	50	13	5.000	222325	04/16/15	04/17/15	EPA 6020
Chromium	0.62 J	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	0.69 J	1.0	0.26	5.000	222325	04/16/15	04/20/15	EPA 6020
Iron	ND	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	0.085 J	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	57,000	50	6.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Manganese	0.30 J	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Mercury	4.8	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	2.6	1.0	0.23	5.000	222325	04/16/15	04/20/15	EPA 6020
Nickel	1.1	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	580	100	30	10.00	222325	04/16/15	04/23/15	EPA 6020
Selenium	0.54 J	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/20/15	EPA 6020
Sodium	89,000	500	12	5.000	222325	04/16/15	04/20/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	5.0	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150414450	Units:	ug/L
Lab ID:	266087-006	Sampled:	04/14/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	9.8 J	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	0.18 J	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	1.6	1.0	0.18	5.000	222325	04/16/15	04/20/15	EPA 6020
Barium	91	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	0.14 J	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	64,000	50	13	5.000	222325	04/16/15	04/17/15	EPA 6020
Chromium	1.0	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	0.53 J	1.0	0.26	5.000	222325	04/16/15	04/20/15	EPA 6020
Iron	ND	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	52,000	50	6.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Manganese	1.4	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	1.3	1.0	0.23	5.000	222325	04/16/15	04/20/15	EPA 6020
Nickel	1.6	1.0	0.17	5.000	222325	04/16/15	04/20/15	EPA 6020
Potassium	1,800	100	30	10.00	222325	04/16/15	04/23/15	EPA 6020
Selenium	0.46 J	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/20/15	EPA 6020
Sodium	55,000	500	12	5.000	222325	04/16/15	04/20/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	3.9	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150414ER	Units:	ug/L
Lab ID:	266087-007	Sampled:	04/14/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	ND	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	ND	50	13	5.000	222325	04/16/15	04/17/15	EPA 6020
Chromium	ND	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/20/15	EPA 6020
Iron	ND	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	7.9 J	50	6.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Manganese	ND	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	0.76 J	1.0	0.23	5.000	222325	04/16/15	04/20/15	EPA 6020
Nickel	ND	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	99 J	100	30	10.00	222325	04/16/15	04/23/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/20/15	EPA 6020
Sodium	ND	500	12	5.000	222325	04/16/15	04/20/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	0.71 J	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150414B163	Units:	ug/L
Lab ID:	266087-009	Sampled:	04/14/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	1.8	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	14	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	5.8	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	280,000	6,000	2,000	500.0	222325	04/16/15	04/20/15	EPA 6020
Chromium	0.23 J	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	5.5	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/20/15	EPA 6020
Iron	330	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	220,000	5,000	1,200	500.0	222325	04/16/15	04/20/15	EPA 6020
Manganese	20,000	61	20	500.0	222325	04/16/15	04/20/15	EPA 6020
Mercury	0.053 J	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	1.1	1.0	0.23	5.000	222325	04/16/15	04/20/15	EPA 6020
Nickel	210	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	13,000	500	150	50.00	222325	04/16/15	04/27/15	EPA 6020
Selenium	0.22 J	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/20/15	EPA 6020
Sodium	200,000	50,000	1,200	500.0	222325	04/16/15	04/20/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	2.5	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	6.9 J	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Type:	BLANK	Diln Fac:	5.000
Lab ID:	QC784570	Batch#:	222325
Matrix:	Filtrate	Prepared:	04/16/15
Units:	ug/L		

Analyte	Result	RL	MDL	Analyzed
Aluminum	ND	50	8.6	04/17/15
Antimony	ND	1.0	0.12	04/17/15
Arsenic	ND	1.0	0.14	04/17/15
Barium	ND	1.0	0.18	04/17/15
Beryllium	ND	1.0	0.091	04/17/15
Cadmium	ND	1.0	0.14	04/17/15
Calcium	ND	50	13	04/17/15
Chromium	ND	1.0	0.11	04/17/15
Cobalt	ND	1.0	0.056	04/17/15
Copper	0.32 J	1.0	0.26	04/20/15
Iron	ND	50	16	04/17/15
Lead	ND	1.0	0.074	04/17/15
Magnesium	ND	50	6.6	04/17/15
Manganese	ND	1.0	0.11	04/17/15
Molybdenum	0.43 J	1.0	0.23	04/20/15
Nickel	ND	1.0	0.34	04/17/15
Potassium	44 J	50	15	04/17/15
Selenium	0.53 J	1.0	0.20	04/17/15
Silver	ND	1.0	0.094	04/20/15
Sodium	ND	500	12	04/20/15
Thallium	ND	1.0	0.033	04/20/15
Vanadium	0.61 J	1.0	0.11	04/17/15
Zinc	ND	12	4.1	04/17/15

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Matrix:	Filtrate	Batch#:	222325
Units:	ug/L	Prepared:	04/16/15
Diln Fac:	5.000		

Type: BS Lab ID: QC784571

Analyte	Spiked	Result	%REC	Limits	Analyzed
Aluminum	10,000	10,750	108	80-124	04/17/15
Antimony	100.0	100.5	100	80-120	04/17/15
Arsenic	100.0	103.7	104	80-120	04/17/15
Barium	100.0	103.5	103	80-120	04/17/15
Beryllium	100.0	111.7	112	80-120	04/17/15
Cadmium	100.0	104.2	104	80-120	04/17/15
Calcium	10,000	10,330	103	80-124	04/20/15
Chromium	100.0	104.7	105	80-121	04/17/15
Cobalt	100.0	103.7	104	80-123	04/17/15
Copper	100.0	107.7	108	80-130	04/20/15
Iron	10,000	10,390	104	80-133	04/17/15
Lead	100.0	108.3	108	80-122	04/17/15
Magnesium	10,000	11,000	110	80-123	04/17/15
Manganese	100.0	103.1	103	80-125	04/17/15
Molybdenum	100.0	103.6	104	80-120	04/20/15
Nickel	100.0	105.5	106	80-129	04/17/15
Potassium	10,000	10,560	106	80-123	04/17/15
Selenium	100.0	101.9	102	80-126	04/17/15
Silver	100.0	104.4	104	79-120	04/20/15
Sodium	10,000	9,585	96	80-126	04/20/15
Thallium	50.00	50.05	100	80-120	04/20/15
Vanadium	100.0	101.8	102	80-120	04/17/15
Zinc	100.0	99.10	99	80-130	04/17/15

Type: BSD Lab ID: QC784572

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Aluminum	10,000	10,440	104	80-124	3	20	04/17/15
Antimony	100.0	97.65	98	80-120	3	20	04/17/15
Arsenic	100.0	103.8	104	80-120	0	20	04/17/15
Barium	100.0	99.00	99	80-120	4	20	04/17/15
Beryllium	100.0	106.1	106	80-120	5	20	04/17/15
Cadmium	100.0	98.90	99	80-120	5	20	04/17/15
Calcium	10,000	8,820	88	80-124	16	20	04/20/15
Chromium	100.0	101.6	102	80-121	3	20	04/17/15
Cobalt	100.0	103.1	103	80-123	1	20	04/17/15
Copper	100.0	111.0	111	80-130	3	20	04/20/15
Iron	10,000	10,340	103	80-133	1	20	04/17/15
Lead	100.0	104.3	104	80-122	4	20	04/17/15
Magnesium	10,000	10,640	106	80-123	3	20	04/17/15
Manganese	100.0	102.9	103	80-125	0	20	04/17/15
Molybdenum	100.0	101.2	101	80-120	2	20	04/20/15
Nickel	100.0	104.1	104	80-129	1	23	04/17/15
Potassium	10,000	10,200	102	80-123	4	20	04/17/15
Selenium	100.0	101.0	101	80-126	1	20	04/17/15
Silver	100.0	100.8	101	79-120	4	20	04/20/15
Sodium	10,000	10,460	105	80-126	9	20	04/20/15
Thallium	50.00	48.49	97	80-120	3	20	04/20/15
Vanadium	100.0	101.8	102	80-120	0	20	04/17/15
Zinc	100.0	101.2	101	80-130	2	20	04/17/15

RPD= Relative Percent Difference

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150414B197R	Batch#:	222325
MSS Lab ID:	266087-001	Sampled:	04/14/15
Matrix:	Filtrate	Received:	04/14/15
Units:	ug/L	Prepared:	04/16/15

Type: MS Lab ID: QC784573

Analyte	MSS Result	Spiked	Result	%REC	Limits	Diln Fac	Analyzed
Aluminum	30.08	10,000	10,950	109	80-123	5.000	04/17/15
Antimony	0.1640	100.0	105.1	105	75-120	5.000	04/17/15
Arsenic	2.336	100.0	112.3	110	80-120	5.000	04/17/15
Barium	23.53	100.0	130.6	107	80-122	5.000	04/17/15
Beryllium	0.1850	100.0	112.5	112	80-121	5.000	04/17/15
Cadmium	<0.1395	100.0	108.0	108	80-120	5.000	04/17/15
Calcium	184,700	10,000	169,100 >LR	-156 NM	65-136	5.000	04/20/15
Chromium	<0.1145	100.0	105.8	106	80-122	5.000	04/17/15
Cobalt	0.3465	100.0	104.6	104	80-121	5.000	04/17/15
Copper	<0.2604	100.0	97.35	97	76-124	5.000	04/20/15
Iron	1,322	10,000	11,680	104	80-132	5.000	04/17/15
Lead	<0.07440	100.0	106.9	107	80-120	5.000	04/17/15
Magnesium	166,300	10,000	145,000 >LR	-213 NM	74-129	5.000	04/20/15
Manganese	2,674	100.0	2,326 >LR	-349 NM	80-125	5.000	04/20/15
Molybdenum	0.8025	100.0	102.4	102	80-120	5.000	04/20/15
Nickel	2.209	100.0	104.5	102	79-126	5.000	04/17/15
Potassium	1,160	10,000	10,750	96	80-124	10.00	04/23/15
Selenium	1.071	100.0	45.78	45 *	77-125	5.000	04/17/15
Silver	<0.09399	100.0	99.55	100	66-120	5.000	04/20/15
Sodium	151,600	10,000	155,700 >LR	41 NM	71-129	5.000	04/20/15
Thallium	0.04200	50.00	52.75	105	80-120	5.000	04/17/15
Vanadium	1.537	100.0	108.8	107	80-121	5.000	04/17/15
Zinc	<4.068	100.0	103.0	103	75-126	5.000	04/17/15

*= Value outside of QC limits; see narrative

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150414B197R	Batch#:	222325
MSS Lab ID:	266087-001	Sampled:	04/14/15
Matrix:	Filtrate	Received:	04/14/15
Units:	ug/L	Prepared:	04/16/15

Type: MSD Lab ID: QC784574

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Diln	Fac	Analyzed
Aluminum	10,000	10,160	101	80-123	7	22	5.000		04/17/15
Antimony	100.0	98.95	99	75-120	6	20	5.000		04/17/15
Arsenic	100.0	105.7	103	80-120	6	26	5.000		04/17/15
Barium	100.0	119.7	96	80-122	9	28	5.000		04/17/15
Beryllium	100.0	105.1	105	80-121	7	23	5.000		04/17/15
Cadmium	100.0	99.65	100	80-120	8	21	5.000		04/17/15
Calcium	10,000	174,700 >LR	-100 NM	65-136	NC	37	5.000		04/20/15
Chromium	100.0	102.7	103	80-122	3	30	5.000		04/17/15
Cobalt	100.0	102.6	102	80-121	2	25	5.000		04/17/15
Copper	100.0	101.8	102	76-124	4	29	5.000		04/20/15
Iron	10,000	11,490	102	80-132	2	27	5.000		04/17/15
Lead	100.0	99.75	100	80-120	7	20	5.000		04/17/15
Magnesium	10,000	148,400 >LR	-179 NM	74-129	NC	27	5.000		04/20/15
Manganese	100.0	2,437 >LR	-238 NM	80-125	NC	25	5.000		04/20/15
Molybdenum	100.0	106.7	106	80-120	4	20	5.000		04/20/15
Nickel	100.0	103.2	101	79-126	1	30	5.000		04/17/15
Potassium	10,000	11,550	104	80-124	7	35	10.00		04/23/15
Selenium	100.0	43.55	42 *	77-125	5	28	5.000		04/17/15
Silver	100.0	101.6	102	66-120	2	29	5.000		04/20/15
Sodium	10,000	161,300 >LR	98 NM	71-129	NC	28	5.000		04/20/15
Thallium	50.00	50.35	101	80-120	5	20	5.000		04/17/15
Vanadium	100.0	104.5	103	80-121	4	31	5.000		04/17/15
Zinc	100.0	98.35	98	75-126	5	27	5.000		04/17/15

*= Value outside of QC limits; see narrative

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150414B197R	Units:	ug/L
Type:	Serial Dilution	Batch#:	222325
MSS Lab ID:	266087-001	Sampled:	04/14/15
Lab ID:	QC784575	Received:	04/14/15
Matrix:	Filtrate		

Analyte	MSS Result	MSS RL	Result	RL	% Diff	Lim	Diln	Fac	Analyzed
Aluminum	30.08	50.00	ND	250.0	NC	10	25.00		04/17/15
Antimony	0.1640	1.000	2.270 J	2.500	NC	10	25.00		04/17/15
Arsenic	2.336	1.000	1.760 J	2.500	NC	10	25.00		04/17/15
Barium	23.53	1.000	23.27	2.628	1	10	25.00		04/17/15
Beryllium	0.1850	1.000	ND	2.500	NC	10	25.00		04/17/15
Cadmium	ND	1.000	ND	2.500	NC	10	25.00		04/17/15
Calcium	184,700	6,011	180,300	30,050	2	10	2,500		04/20/15
Chromium	ND	1.000	ND	2.500	NC	10	25.00		04/17/15
Cobalt	0.3465	1.000	ND	2.500	NC	10	25.00		04/17/15
Copper	ND	1.000	ND	5.000	NC	10	25.00		04/20/15
Iron	1,322	50.00	1,395	250.0	6	10	25.00		04/17/15
Lead	ND	1.000	ND	2.500	NC	10	25.00		04/17/15
Magnesium	166,300	5,000	149,600	25,000	10	10	2,500		04/20/15
Manganese	2,674	60.83	2,640	304.2	1	10	2,500		04/20/15
Molybdenum	0.8025	1.000	ND	5.000	NC	10	25.00		04/20/15
Nickel	2.209	1.016	ND	5.078	NC	10	25.00		04/17/15
Potassium	1,160	100.0	2,594	500.0	NC	10	50.00		04/23/15
Selenium	1.071	1.000	ND	2.980	NC	10	25.00		04/21/15
Silver	ND	1.000	ND	2.500	NC	10	25.00		04/20/15
Sodium	151,600	50,000	111,900 J	250,000	26 *	10	2,500		04/20/15
Thallium	0.04200	1.000	0.3475 J	1.250	NC	10	25.00		04/17/15
Vanadium	1.537	1.000	ND	2.500	NC	10	25.00		04/20/15
Zinc	ND	12.21	ND	61.03	NC	10	25.00		04/17/15

*= Value outside of QC limits; see narrative

J= Estimated value

NC= Not Calculated

ND= Not Detected at or above MDL

RL= Reporting Limit

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150414B197R	Units:	ug/L
Type:	Post Digest Spike	Batch#:	222325
MSS Lab ID:	266087-001	Sampled:	04/14/15
Lab ID:	QC784576	Received:	04/14/15
Matrix:	Filtrate		

Analyte	MSS Result	Spiked	Result	%REC	Limits	Diln	Fac	Analyzed
Aluminum	30.08	25,000	25,230	101	75-125	5.000		04/17/15
Antimony	0.1640	250.0	242.5	97	75-125	5.000		04/17/15
Arsenic	2.336	250.0	261.9	104	75-125	5.000		04/17/15
Barium	23.53	250.0	267.4	98	75-125	5.000		04/17/15
Beryllium	0.1850	250.0	263.7	105	75-125	5.000		04/17/15
Cadmium	<0.1395	250.0	245.4	98	75-125	5.000		04/17/15
Calcium	184,700	2,500,000	2,683,000	100	75-125	500.0		04/20/15
Chromium	<0.1145	250.0	251.3	101	75-125	5.000		04/17/15
Cobalt	0.3465	250.0	246.7	99	75-125	5.000		04/17/15
Copper	<0.2604	250.0	259.7	104	75-125	5.000		04/20/15
Iron	1,322	25,000	23,340	88	75-125	5.000		04/17/15
Lead	<0.07440	250.0	253.2	101	75-125	5.000		04/17/15
Magnesium	166,300	2,500,000	2,671,000	100	75-125	500.0		04/20/15
Manganese	2,674	25,000	28,910	105	75-125	500.0		04/20/15
Molybdenum	0.8025	250.0	255.2	102	75-125	5.000		04/20/15
Nickel	2.209	250.0	247.8	98	75-125	5.000		04/17/15
Potassium	1,160	50,000	51,490	101	75-125	10.00		04/23/15
Selenium	1.071	250.0	222.0	88	75-125	5.000		04/17/15
Silver	<0.09399	250.0	251.7	101	75-125	5.000		04/20/15
Sodium	151,600	2,500,000	2,728,000	103	75-125	500.0		04/20/15
Thallium	0.04200	125.0	124.4	99	75-125	5.000		04/17/15
Vanadium	1.537	250.0	253.7	101	75-125	5.000		04/17/15
Zinc	<4.068	250.0	236.6	95	75-125	5.000		04/17/15

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	222394
Lab ID:	QC784841	Prepared:	04/20/15
Matrix:	Filtrate	Analyzed:	04/20/15
Units:	ug/L		

Result	RL	MDL
ND	0.20	0.021

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals			
Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	222394
Matrix:	Filtrate	Prepared:	04/20/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC784843	2.500	2.708	108	80-120		
BSD	QC784844	2.500	2.824	113	80-120	4	24

RPD= Relative Percent Difference

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	222394
Field ID:	20150414B163	Sampled:	04/14/15
MSS Lab ID:	266087-009	Received:	04/14/15
Matrix:	Filtrate	Prepared:	04/20/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC784845	0.05296	2.500	2.644	104	60-130		
MSD	QC784846		2.500	2.697	106	60-130	2	34

RPD= Relative Percent Difference

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266087	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Units:	ug/L
Field ID:	20150414B163	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	222394
MSS Lab ID:	266087-009	Sampled:	04/14/15
Lab ID:	QC784847	Received:	04/14/15
Matrix:	Filtrate	Analyzed:	04/20/15

MSS Result	MSS RL	Result	RL	% Diff	Lim
0.05296	0.2000	ND	1.000	NC	10

NC= Not Calculated
 ND= Not Detected at or above MDL
 RL= Reporting Limit

REPORTING SUMMARY FOR 266087 METALS Filtrate
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	A	S	A	B	B	C	C	C	C	F	P	M	M	H	M	N	K	S	A	N	T	V	Z
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	O	I	E	G	A	L	N	
266087-001	MET26	04/17/15	12:57	5.0	+	+	+	+	+	+	+	+	+	+					+	+			+	+	+	
266087-001	MET16	04/20/15	16:42	500.0						+					+	+							+			
266087-001	MET54	04/20/15	17:11	1.0														+								
266087-001	MET16	04/20/15	21:21	5.0									+						+			+				
266087-001	MET26	04/21/15	13:23	5.0																						
266087-001	MET26	04/22/15	13:09	5.0																						
266087-001	MET26	04/23/15	12:33	10.0																	+					
266087-002	MET26	04/17/15	13:30	5.0	+	+	+	+	+	+	+	+	+	+	+	+			+	+			+	+	+	
266087-002	MET54	04/20/15	17:20	1.0															+							
266087-002	MET16	04/20/15	22:32	5.0									+							+			+	+		
266087-002	MET26	04/21/15	14:46	5.0																						
266087-002	MET26	04/22/15	13:31	5.0																						
266087-002	MET26	04/23/15	13:20	10.0																		+				
266087-003	MET26	04/17/15	13:35	5.0	+	+	+	+	+	+	+	+	+	+	+	+			+	+			+	+	+	
266087-003	MET54	04/20/15	17:21	1.0																+						
266087-003	MET16	04/20/15	22:58	5.0									+							+			+	+		
266087-003	MET26	04/21/15	14:55	5.0																						
266087-003	MET26	04/22/15	13:36	5.0																						
266087-003	MET26	04/23/15	13:30	10.0																						
266087-003	MET26	04/24/15	11:39	10.0																						
266087-003	MET26	04/27/15	12:51	10.0																						
266087-003	MET26	04/27/15	12:56	50.0																						
266087-004	MET26	04/17/15	13:40	5.0	+	+	+	+	+	+	+	+	+	+	+	+			+	+			+	+	+	
266087-004	MET54	04/20/15	17:22	1.0																+						
266087-004	MET16	04/20/15	23:31	5.0									+							+			+	+		
266087-004	MET26	04/21/15	16:02	5.0																						
266087-004	MET26	04/22/15	13:41	5.0																						
266087-004	MET26	04/23/15	13:40	10.0																			+			
266087-006	MET26	04/17/15	13:59	5.0	+	+		+	+	+	+	+	+	+	+	+					+			+	+	+
266087-006	MET54	04/20/15	17:23	1.0																+						
266087-006	MET16	04/20/15	23:44	5.0			+						+							+	+		+	+		
266087-006	MET26	04/21/15	16:12	5.0																						
266087-006	MET26	04/22/15	13:45	5.0																						
266087-006	MET26	04/23/15	13:49	10.0																						
266087-007	MET26	04/17/15	14:04	5.0	+	+	+	+	+	+	+	+	+	+	+	+			+	+			+	+	+	
266087-007	MET54	04/20/15	17:24	1.0																+						
266087-007	MET16	04/20/15	23:50	5.0									+							+			+	+		
266087-007	MET26	04/21/15	16:21	5.0																						
266087-007	MET26	04/22/15	13:50	5.0																						
266087-007	MET26	04/23/15	13:58	10.0																						
266087-009	MET26	04/17/15	14:08	5.0	+	+	+	+	+	+	+	+	+	+	+	+			+	+			+	+	+	
266087-009	MET54	04/20/15	17:05	1.0																+						
266087-009	MET16	04/20/15	17:27	500.0						+					+	+							+			
266087-009	MET16	04/20/15	23:56	5.0									+							+			+			
266087-009	MET26	04/21/15	16:31	5.0																						
266087-009	MET26	04/22/15	14:09	5.0																						
266087-009	MET26	04/23/15	14:22	10.0																						

REPORTING SUMMARY FOR 266087 METALS Filtrate
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	A	S	A	B	B	C	C	C	C	F	P	M	M	H	M	N	K	S	A	N	T	V	Z	
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	O	I	E	G	A	L	N		
266087-009	MET26	04/24/15	12:03	50.0																							
266087-009	MET26	04/27/15	13:01	50.0																	+						
QC784570	MET26	04/17/15	12:29	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
QC784570	MET16	04/20/15	14:56	5.0									+							+			+	+	+		
QC784571	MET26	04/17/15	12:33	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
QC784571	MET16	04/20/15	15:03	5.0						+			+							+			+	+	+		
QC784572	MET26	04/17/15	12:38	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
QC784572	MET16	04/20/15	15:09	5.0						+			+							+			+	+	+		
QC784573	MET26	04/17/15	13:02	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
QC784573	MET16	04/20/15	21:34	5.0						+			+			+	+	+	+	+			+	+	+		
QC784573	MET26	04/21/15	13:32	5.0																							
QC784573	MET26	04/22/15	13:13	5.0																							
QC784573	MET26	04/23/15	12:43	10.0																	+						
QC784574	MET26	04/17/15	13:07	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
QC784574	MET16	04/20/15	21:47	5.0						+			+			+	+	+	+	+			+	+	+		
QC784574	MET26	04/21/15	13:42	5.0																							
QC784574	MET26	04/22/15	13:18	5.0																							
QC784574	MET26	04/23/15	12:52	10.0																		+					
QC784575	MET26	04/17/15	13:11	25.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
QC784575	MET16	04/20/15	17:08	2500						+					+	+	+	+	+	+			+	+	+		
QC784575	MET16	04/20/15	22:00	25.0									+							+			+	+	+		
QC784575	MET26	04/21/15	13:52	25.0																		+					
QC784575	MET26	04/22/15	13:22	25.0																							
QC784575	MET26	04/23/15	13:02	50.0																		+					
QC784575	MET26	04/24/15	11:30	50.0																							
QC784575	MET26	04/27/15	12:47	50.0																							
QC784576	MET26	04/17/15	13:16	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
QC784576	MET16	04/20/15	17:14	500.0						+					+	+	+	+	+	+			+	+	+		
QC784576	MET16	04/20/15	22:07	5.0									+							+			+	+	+		
QC784576	MET26	04/21/15	14:01	5.0																							
QC784576	MET26	04/22/15	13:27	5.0																							
QC784576	MET26	04/23/15	13:11	10.0																		+					
QC784841	MET54	04/20/15	17:00	1.0																	+						
QC784842	MET54	04/20/15	17:02	1.0																	+						
QC784843	MET54	04/20/15	17:03	1.0																	+						
QC784844	MET54	04/20/15	17:04	1.0																	+						
QC784845	MET54	04/20/15	17:06	1.0																	+						
QC784845	MET54	04/20/15	17:33	1.0																	+						
QC784846	MET54	04/20/15	17:07	1.0																							
QC784846	MET54	04/20/15	17:34	1.0																	+						

REPORTING SUMMARY FOR 266087 METALS Filtrate
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	A	S	A	B	B	C	C	C	C	C	F	P	M	M	H	M	N	K	S	A	N	T	V	Z
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	O	I	E	G	A	L	N		
QC784847	MET54	04/20/15	17:08 5.0																								

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015154524

Instrument : MET26
 Method : EPA 6020

Begun : 04/17/15 07:24
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d17h00001	X	RINSE			04/17/15 07:24	1.0	1	
002	15d17h00002	TUN				04/17/15 07:28	1.0	2	
003	15d17h00003	X	RINSE			04/17/15 07:33	1.0	1	
004	15d17h00004	ICALBLK	CALBLANK			04/17/15 07:38	1.0	1	
005	15d17h00005	ICAL				04/17/15 07:43	1.0	3 1	
006	15d17h00006	ICAL				04/17/15 07:47	1.0	4 1	
007	15d17h00007	ICAL				04/17/15 07:52	1.0	5 1	
008	15d17h00008	ICAL				04/17/15 07:57	1.0	6 1	
009	15d17h00009	ICAL				04/17/15 08:01	1.0	7 1	
010	15d17h00010	ICAL				04/17/15 08:08	1.0	8 1	
011	15d17h00011	X	RINSE			04/17/15 08:13	1.0	1	
012	15d17h00012	ICV				04/17/15 08:19	1.0	9 1	
013	15d17h00013	XCRI				04/17/15 08:24	1.0	10 1	
014	15d17h00014	XICB				04/17/15 08:29	1.0	1	
015	15d17h00015	ICB				04/17/15 08:34	1.0	1	
016	15d17h00016	CRI				04/17/15 08:38	1.0	10 1	
017	15d17h00017	ICSA				04/17/15 08:43	1.0	11 1	8:CA=280000
018	15d17h00018	ICSAB				04/17/15 08:48	1.0	12 1	13:CA=290000
019	15d17h00019	X	RINSE			04/17/15 08:53	1.0	1	
020	15d17h00020	X	RINSE			04/17/15 09:00	1.0	1	
021	15d17h00021	X	RINSE			04/17/15 09:05	1.0	1	
022	15d17h00022	X	RINSE			04/17/15 09:10	1.0	1	
023	15d17h00023	X	RINSE			04/17/15 09:15	1.0	1	
024	15d17h00024	BLANK	QC784300	Filtrate	222258	04/17/15 09:19	5.0	1	
025	15d17h00025	BLANK	QC784301	Filtrate	222258	04/17/15 09:24	5.0	1	
026	15d17h00026	BS	QC784302	Filtrate	222258	04/17/15 09:29	5.0	1	
027	15d17h00027	BSD	QC784303	Filtrate	222258	04/17/15 09:33	5.0	1	
028	15d17h00028	X	RINSE			04/17/15 09:38	1.0	1	
029	15d17h00029	BLANK	QC784300	Filtrate	222258	04/17/15 09:43	5.0	1	
030	15d17h00030	BLANK	QC784301	Filtrate	222258	04/17/15 09:48	5.0	1	
031	15d17h00031	CCV				04/17/15 09:53	1.0	13 1	
032	15d17h00032	X	XCCB			04/17/15 09:58	1.0	1	
033	15d17h00033	CCB				04/17/15 10:03	1.0	1	
034	15d17h00034	MSS	265932-004	Filtrate	222258	04/17/15 10:07	5.0	1	4:NA=850000
035	15d17h00035	MS	QC784304	Filtrate	222258	04/17/15 10:12	5.0	1	4:NA=870000
036	15d17h00036	MSD	QC784305	Filtrate	222258	04/17/15 10:17	5.0	1	4:NA=840000
037	15d17h00037	MSS	266019-005	Filtrate	222258	04/17/15 10:21	5.0	1	3:NA=33000
038	15d17h00038	MS	QC784306	Filtrate	222258	04/17/15 10:26	5.0	1	4:NA=34000
039	15d17h00039	MSD	QC784307	Filtrate	222258	04/17/15 10:31	5.0	1	4:NA=38000
040	15d17h00040	SER	QC784308	Filtrate	222258	04/17/15 10:35	25.0	1	
041	15d17h00041	PDS	QC784309	Filtrate	222258	04/17/15 10:40	5.0	14 15 16 1	1:NA=46000
042	15d17h00042	MSS	266019-005	Filtrate	222258	04/17/15 10:45	500.0	1	
043	15d17h00043	SER	QC784308	Filtrate	222258	04/17/15 10:50	2500	1	
044	15d17h00044	CCV				04/17/15 10:55	1.0	13 1	
045	15d17h00045	X	XCCB			04/17/15 10:59	1.0	1	
046	15d17h00046	CCB				04/17/15 11:04	1.0	1	
047	15d17h00047	PDS	QC784309	Filtrate	222258	04/17/15 11:09	500.0	14 15 16 1	
048	15d17h00048	SAMPLE	265932-001	Filtrate	222258	04/17/15 11:14	5.0	1	4:NA=160000
049	15d17h00049	SAMPLE	265932-003	Filtrate	222258	04/17/15 11:19	5.0	1	7:NA=310000
050	15d17h00050	SAMPLE	265932-003	Filtrate	222258	04/17/15 11:23	500.0	1	
051	15d17100001	X	RINSE			04/17/15 11:41	1.0	1	
052	15d17100002	SAMPLE	265939-001	Filtrate	222258	04/17/15 11:46	5.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015154524

Instrument : MET26
 Method : EPA 6020

Begun : 04/17/15 07:24
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d17100003	SAMPLE	265994-001	Filtrate	222258	04/17/15 11:50	5.0	1	4:NA=580000
054	15d17100004	CCV				04/17/15 11:55	1.0	13 1	
055	15d17100005	X	XCCB			04/17/15 12:00	1.0	1	
056	15d17100006	CCB				04/17/15 12:05	1.0	1	
057	15d17100007	ICSA				04/17/15 12:09	1.0	11 1	8:CA=270000
058	15d17100008	ICSAB				04/17/15 12:14	1.0	12 1	11:CA=270000
059	15d17100009	X	RINSE			04/17/15 12:19	1.0	1	
060	15d17100010	X	RINSE			04/17/15 12:24	1.0	1	
061	15d17100011	BLANK	QC784570	Filtrate	222325	04/17/15 12:29	5.0	1	
062	15d17100012	BS	QC784571	Filtrate	222325	04/17/15 12:33	5.0	1	
063	15d17100013	BSD	QC784572	Filtrate	222325	04/17/15 12:38	5.0	1	
064	15d17100014	CCV				04/17/15 12:43	1.0	13 1	
065	15d17100015	X	XCCB			04/17/15 12:48	1.0	1	
066	15d17100016	CCB				04/17/15 12:53	1.0	1	
067	15d17100017	MSS	266087-001	Filtrate	222325	04/17/15 12:57	5.0	1	4:NA=33000
068	15d17100018	MS	QC784573	Filtrate	222325	04/17/15 13:02	5.0	1	4:NA=35000
069	15d17100019	MSD	QC784574	Filtrate	222325	04/17/15 13:07	5.0	1	4:NA=33000
070	15d17100020	SER	QC784575	Filtrate	222325	04/17/15 13:11	25.0	1	
071	15d17100021	PDS	QC784576	Filtrate	222325	04/17/15 13:16	5.0	14 15 16 1	
072	15d17100022	SAMPLE	266068-003	Filtrate	222325	04/17/15 13:21	5.0	1	
073	15d17100023	SAMPLE	266068-005	Filtrate	222325	04/17/15 13:25	5.0	1	
074	15d17100024	SAMPLE	266087-002	Filtrate	222325	04/17/15 13:30	5.0	1	
075	15d17100025	SAMPLE	266087-003	Filtrate	222325	04/17/15 13:35	5.0	1	
076	15d17100026	SAMPLE	266087-004	Filtrate	222325	04/17/15 13:40	5.0	1	1:NA=20000
077	15d17100027	CCV				04/17/15 13:44	1.0	13 1	
078	15d17100028	X	XCCB			04/17/15 13:49	1.0	1	
079	15d17100029	CCB				04/17/15 13:54	1.0	1	
080	15d17100030	SAMPLE	266087-006	Filtrate	222325	04/17/15 13:59	5.0	1	
081	15d17100031	SAMPLE	266087-007	Filtrate	222325	04/17/15 14:04	5.0	1	
082	15d17100032	SAMPLE	266087-009	Filtrate	222325	04/17/15 14:08	5.0	1	4:CA=51000
083	15d17100033	SAMPLE	266091-002	Filtrate	222325	04/17/15 14:13	5.0	1	4:NA=130000
084	15d17100034	SAMPLE	266091-004	Filtrate	222325	04/17/15 14:18	5.0	1	1:NA=22000
085	15d17100035	SAMPLE	266091-005	Filtrate	222325	04/17/15 14:22	5.0	1	1:NA=21000
086	15d17100036	SAMPLE	266091-006	Filtrate	222325	04/17/15 14:27	5.0	1	4:NA=1500000
087	15d17100037	SAMPLE	266091-007	Filtrate	222325	04/17/15 14:32	5.0	1	4:NA=1500000
088	15d17100038	SAMPLE	266091-008	Filtrate	222325	04/17/15 14:37	5.0	1	
089	15d17100039	SAMPLE	266091-009	Filtrate	222325	04/17/15 14:41	5.0	1	1:NA=67000
090	15d17100040	CCV				04/17/15 14:46	1.0	13 1	
091	15d17100041	X	XCCB			04/17/15 14:51	1.0	1	
092	15d17100042	CCB				04/17/15 14:56	1.0	1	
093	15d17100043	SAMPLE	266091-010	Filtrate	222325	04/17/15 15:01	5.0	1	4:NA=38000
094	15d17100044	SAMPLE	266091-012	Filtrate	222325	04/17/15 15:06	5.0	1	
095	15d17100045	CCV				04/17/15 15:10	1.0	13 1	
096	15d17100046	X	XCCB			04/17/15 15:15	1.0	1	
097	15d17100047	CCB				04/17/15 15:20	1.0	1	
098	15d17100048	ICSA				04/17/15 15:25	1.0	11 1	8:CA=270000
099	15d17100049	ICSAB				04/17/15 15:30	1.0	12 1	8:CA=260000
100	15d17100050	X	RINSE			04/17/15 15:34	1.0	1	
101	15d17100051	X	RINSE			04/17/15 15:39	1.0	1	
102	15d17100052	CCV				04/17/15 15:44	1.0	13 1	
103	15d17100053	X	XCCB			04/17/15 15:49	1.0	1	
104	15d17100054	CCB				04/17/15 15:54	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015154524

Instrument : MET26 Begun : 04/17/15 07:24
 Method : EPA 6020 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d17100055	ICSA				04/17/15 15:59	1.0	11 1	8:FE=310000
106	15d17100056	ICSAB				04/17/15 16:03	1.0	12 1	10:CA=270000
107	15d17100057	X	RINSE			04/17/15 16:08	1.0	1	
108	15d17100058	X	RINSE			04/17/15 16:13	1.0	1	
109	15d17100059	X	RINSE			04/17/15 16:18	1.0	1	
110	15d17100060	X	RINSE			04/17/15 16:23	1.0	1	
111	15d17100061	X	RINSE			04/17/15 16:28	1.0	1	
112	15d17100062	X	RINSE			04/17/15 16:33	1.0	1	
113	15d17100063	X	RINSE			04/17/15 16:38	1.0	1	
114	15d17100064	X	RINSE			04/17/15 16:43	1.0	1	

CRT 04/20/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 106.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015154524

Date : 04/17/15
 Sequence : MET26 15d17h00

Reference : 15d17h00004
 Analyzed : 04/17/15 07:38

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	112485	303675	34509	236448	62158	17130	651653	701152	596632	1014322
		LOWER LIMIT	33746	91103	10353	70934	18647	5139	195496	210346	178990	304297
		UPPER LIMIT	134982	364410	41411	283738	74590	20556	781984	841382	715958	1217186
015	ICB		112798	304346	34452	227026	60973	17081	652261	702636	594809	1028178
017	ICSA		88192	265280	30598	217113	56542	17688	523441	540154	523288	863868
018	ICSAB		81483	246209	28720	203592	54188	16654	497556	513748	493160	851042
024	BLANK	QC784300	94489	264147	30993	195592	51813	14966	572480	620157	525477	893813
025	BLANK	QC784301	96229	268635	31212	204068	53756	15107	578016	628444	533112	904132
026	BS	QC784302	95964	270797	31082	207251	54388	15388	575582	623902	529443	909846
027	BSD	QC784303	95637	266392	31073	205652	54091	15204	571099	618537	526152	904112
029	BLANK	QC784300	96886	268117	31274	205781	53738	15097	574871	627472	531511	905569
030	BLANK	QC784301	96466	265119	31347	205233	54181	15200	574781	624029	527240	900439
031	CCV		91728	260876	30735	203168	53232	14885	552065	592639	516810	884753
033	CCB		99089	270340	31286	207872	54872	15394	587009	643260	536906	921958
034	MSS	265932-004	77715	243196	26363	182227	45336	12486	486115	490906	467504	806867
035	MS	QC784304	76631	240502	26918	186218	45929	13016	485595	495267	474565	814949
036	MSD	QC784305	77856	258282	28807	185006	46651	13390	508174	512906	496566	851271
037	MSS	266019-005	82760	247349	28414	192269	50362	13692	529646	568971	492772	832066
038	MS	QC784306	87751	252413	28300	196724	50891	13882	537998	574033	501757	865451
039	MSD	QC784307	85512	247208	27518	187125	49441	13673	523097	560564	491691	858980
040	SER	QC784308	89007	250884	28146	190305	51371	14101	546326	587927	502164	863583
041	PDS	QC784309	88065	253655	25983	187635	49159	13037	525784	559838	492228	861312
042	MSS	266019-005	90456	252297	26412	156442	44825	13710	549633	598645	501021	873699
043	SER	QC784308	90899	249805	28212	190121	50768	14088	545566	590770	499463	847526
044	CCV		93358	266746	29456	193961	50538	14379	560890	594935	525504	900811
046	CCB		89545	236910	28736	198498	51559	14048	520158	568444	473412	823316
047	PDS	QC784309	94039	261125	27648	191314	50265	13727	549851	590035	509368	885275
048	SAMPLE	265932-001	79664	228497	26178	178264	45889	12706	473339	494890	449693	783032
049	SAMPLE	265932-003	78302	240966	26279	182054	46338	13556	481848	193422 *	623720	817793
050	SAMPLE	265932-003	90899	249325	27489	187762	49941	13632	539862	591243	498135	874300
053	SAMPLE	265994-001	104056	313046	37755	232121	60438	17157	602004	614079	578095	951060
054	CCV		124661	350831	38996	260418	68103	19110	697984	808461	667266	1114439
056	CCB		126865	342737	39544	264029	68914	18929	704819	741117	652440	1101653
057	ICSA		106798	318293	35926	246420	62906	19851	603096	672824	605162	1018321
058	ICSAB		93084	284927	33537	234611	60783	18738	551622	614378	548142	925968
061	BLANK	QC784570	101750	289765	35232	218881	58507	16399	601238	653678	561012	944940
062	BS	QC784571	98821	279328	35274	229409	58967	16382	579608	636130	539306	917004
063	BSD	QC784572	101601	287185	35254	228328	58475	16493	595950	649635	553211	947442
064	CCV		97091	280900	34488	223517	56920	16064	568044	617933	538491	923700
066	CCB		103150	290740	35445	229085	59016	16459	607782	661375	561626	956307
067	MSS	266087-001	92962	269979	33179	222874	56552	15582	547365	577923	515226	880525
068	MS	QC784573	90042	257602	33391	215912	54505	15649	518028	564389	493107	845034
069	MSD	QC784574	100833	288546	33539	215902	55094	15947	578486	617874	548238	943948
070	SER	QC784575	100012	281859	33880	221352	58731	16327	584101	628501	540748	919280
071	PDS	QC784576	95285	275884	32978	239959	58471	15261	544018	597986	519984	895329
072	SAMPLE	266068-003	106438	292033	33934	225035	58284	16145	600131	665480	554877	950949
073	SAMPLE	266068-005	107740	295520	33778	223409	58000	16181	608720	673262	560806	964831
074	SAMPLE	266087-002	104958	291553	34733	232446	59098	16581	598064	645452	553759	952094
075	SAMPLE	266087-003	101260	291238	33577	220172	56943	15951	586581	637450	544959	936986
076	SAMPLE	266087-004	103104	285924	33620	222676	57828	16244	592574	637923	546312	948422
077	CCV		110506	297679	36444	231228	59379	17021	610595	662364	572477	989569

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015154524

Date : 04/17/15
 Sequence : MET26 15d17h00

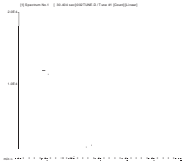
Reference : 15d17h00004
 Analyzed : 04/17/15 07:38

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
079	CCB		114255	305587	34450	248060	63273	16519	636580	691490	585027	1020517
080	SAMPLE	266087-006	106768	298072	33642	218455	57415	16113	596759	648757	552661	963678
081	SAMPLE	266087-007	112017	308332	34159	221308	57216	16020	633704	687432	585243	1005656
082	SAMPLE	266087-009	104622	294807	32655	213567	55224	15744	593599	638623	557319	964018
083	SAMPLE	266091-002	106014	293388	32172	221271	55616	15467	572817	590576	554173	946606
084	SAMPLE	266091-004	126463	324823	32284	221347	58574	16241	657056	710675	606547	1051871
085	SAMPLE	266091-005	122591	321198	33486	240199	63393	16787	652610	704048	602390	1045448
086	SAMPLE	266091-006	125320	350071	36227	234189	58616	17151	651284	602057	643936	1030363
087	SAMPLE	266091-007	124927	384207 *	42035 *	278379	67286	19127	709563	634797	705034	1112220
088	SAMPLE	266091-008	96443	299819	37270	260461	65841	17063	633358	672811	588679	999944
089	SAMPLE	266091-009	88994	285343	35545	232361	59142	16396	580909	621123	547442	929504
090	CCV		96280	297098	35951	234568	59344	16979	611549	646705	580399	997753
092	CCB		93910	280447	34627	225620	58154	16291	588058	636474	547785	918549
093	SAMPLE	266091-010	89818	270511	33180	215785	55667	15637	553117	588479	521248	886789
094	SAMPLE	266091-012	94865	285257	34257	220301	57196	16188	597067	642372	555717	936111
095	CCV		96154	292348	36116	230327	58798	16845	594809	631091	567207	958412
097	CCB		101569	294784	35870	238735	61572	17012	619023	663783	572295	959423
098	ICSA		85811	277038	33481	225242	57577	18561	531669	546905	534717	899151
099	ICSAB		85059	273326	31969	219557	56939	17899	533339	549791	536271	900695
102	CCV		92489	279245	32022	232426	58910	15482	579458	613252	545460	935336
104	CCB		95103	279544	33329	220071	57403	15726	592389	642183	548361	933170
105	ICSA		73507	237425	29495	157606	43654	16363	460903	478843	464079	786901
106	ICSAB		77170	246259	28916	198630	51503	16070	490189	504716	485907	835026

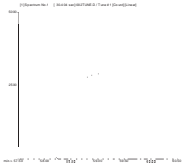
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D17h00.B\002TUNE.D
 Date Acquired: Apr 17 2015 07:28 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

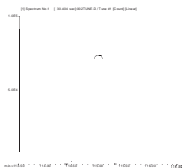
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	10839	10967	10969	11195	10773	0.23	5.00	
59 Co	16781	16626	16799	16605	16526	1.51	5.00	
115 In	366874	366447	372198	370343	374536	1.12	5.00	
205 Tl	21859	21868	21778	21811	21485	1.50	5.00	



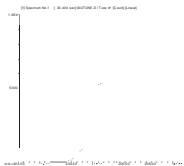
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266087 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015154524001
 Units : ug/L
 Date : 17-APR-2015 07:38
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d17h00005	1015154524005	17-APR-2015 07:43	S27043, S26751	
L2	15d17h00006	1015154524006	17-APR-2015 07:47	S27044, S26751	
L3	15d17h00007	1015154524007	17-APR-2015 07:52	S27045, S26751	
L4	15d17h00008	1015154524008	17-APR-2015 07:57	S27046, S26751	
L5	15d17h00009	1015154524009	17-APR-2015 08:01	S27041, S26751	
L6	15d17h00010	1015154524010	17-APR-2015 08:08	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0054	0.0055	0.0055	0.0046	0.0045	0.0045	BLNK	-0.5249	221.861		0.0050	1.000	0.995	
Antimony	A	0.0030	0.0030	0.0029	0.0028	0.0029	0.0029	BLNK	-0.0191	350.085		0.0029	1.000	0.995	
Barium	A	7.3E-4	6.1E-4	6.9E-4	6.7E-4	6.9E-4	6.8E-4	BLNK	-0.0145	1464.36		6.8E-4	1.000	0.995	
Beryllium	A	0.0038	0.0037	0.0038	0.0038	0.0038	0.0039	BLNK	-0.0153	257.404		0.0038	1.000	0.995	
Cadmium	A	8.4E-4	7.8E-4	7.2E-4	7.4E-4	7.4E-4	7.3E-4	BLNK	-0.0047	1365.09		7.6E-4	1.000	0.995	
Calcium	A	6.3E-4	3.0E-4	2.3E-4	1.9E-4	1.8E-4	1.7E-4	BLNK	-27.198	5938.57		2.8E-4	0.998	0.995	
Lead	A	0.0159	0.0083	0.0076	0.0068	0.0065	0.0063	BLNK	-0.1420	157.027		0.0086	1.000	0.995	
Magnesium	A	0.0068	0.0050	0.0046	0.0038	0.0037	0.0036	BLNK	-6.3703	274.163		0.0046	1.000	0.995	
Molybdenum	A	0.0035	0.0023	0.0023	0.0021	0.0021	0.0021	BLNK	-0.0771	465.697		0.0024	1.000	0.995	
Potassium	A	0.1047	0.0262	0.0159	0.0060	0.0051	0.0050	BLNK	-205.98	201.745		0.0272	1.000	0.995	
Silver	A	0.0041	0.0033	0.0035	0.0034	0.0034	0.0033	BLNK	-0.0056	298.062		0.0035	1.000	0.995	
Thallium	A	0.0083	0.0072	0.0070	0.0069	0.0071	0.0072	BLNK	-0.0091	139.942		0.0073	1.000	0.995	
Arsenic	E	0.0091	0.0060	0.0057	0.0053	0.0052	0.0050	BLNK	-0.1185	198.292		0.0061	1.000	0.995	
Chromium	E	0.0633	0.0311	0.0257	0.0223	0.0216	0.0204	BLNK	-0.1998	48.5186		0.0307	0.999	0.995	
Cobalt	E	0.0440	0.0371	0.0351	0.0332	0.0324	0.0304	BLNK	-0.0338	32.4714		0.0354	0.999	0.995	
Copper	E	0.7928	0.1665	0.0923	0.0302	0.0233	0.0215	BLNK	-4.4859	47.0674		0.1878	0.999	0.995	
Manganese	E	0.0328	0.0175	0.0165	0.0149	0.0146	0.0139	BLNK	-0.1575	71.3080		0.0184	0.999	0.995	
Nickel	E	0.0196	0.0120	0.0108	0.0091	0.0086	0.0080	BLNK	-0.1449	122.765		0.0114	0.999	0.995	
Sodium	E	0.0234	0.0089	0.0067	0.0049	0.0043	0.0040	BLNK	-47.266	247.777		0.0087	0.999	0.995	
Vanadium	E	0.0607	0.0267	0.0232	0.0182	0.0179	0.0171	BLNK	-0.2712	57.9786		0.0273	0.999	0.995	
Zinc	E		0.0158	0.0056	0.0046	0.0043	0.0040	BLNK	-0.2807	246.665		0.0069	0.998	0.995	
Iron	H	0.0130	0.0089	0.0084	0.0066	0.0065	0.0062	BLNK	-8.2896	159.480		0.0083	1.000	0.995	
Selenium	H	0.0011	9.8E-4	0.0011	9.9E-4	9.6E-4	9.4E-4	BLNK	-0.0152	1061.23		0.0010	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	15	50.000	20	100.00	21	1000.0	3	10000	0	20000	0
Antimony	A	0.1000	-15	0.5000	2	1.0000	-2	10.000	-1	100.00	0	200.00	0
Barium	A	0.1000	-8	0.5000	-14	1.0000	0	10.000	-1	100.00	1	200.00	0
Beryllium	A	0.1000	-17	0.5000	-7	1.0000	-4	10.000	-3	100.00	-1	200.00	0
Cadmium	A	0.1000	10	0.5000	6	1.0000	-2	10.000	1	100.00	1	200.00	0
Calcium	A	10.000	5	50.000	23	100.00	10	1000.0	8	10000	8	20000	-2
Lead	A	0.1000	8	0.5000	2	1.0000	6	10.000	5	100.00	2	200.00	-1
Magnesium	A	10.000	23	50.000	24	100.00	20	1000.0	5	10000	0	20000	0
Molybdenum	A	0.1000	-15	0.5000	-7	1.0000	-1	10.000	-3	100.00	0	200.00	0
Potassium	A	10.000	-49	50.000	17	100.00	15	1000.0	1	10000	1	20000	0
Silver	A	0.1000	18	0.5000	-1	1.0000	5	10.000	3	100.00	2	200.00	0
Thallium	A	0.0500	-2	0.2500	-2	0.5000	-4	5.0000	-3	50.000	-1	100.00	0
Arsenic	E	0.1000	-39	0.5000	-4	1.0000	1	10.000	4	100.00	3	200.00	-1
Chromium	E	0.1000	8	0.5000	11	1.0000	5	10.000	6	100.00	5	200.00	-1
Cobalt	E	0.1000	9	0.5000	14	1.0000	11	10.000	7	100.00	5	200.00	-1
Copper	E	0.1000	-854	0.5000	-213	1.0000	-114	10.000	-3	100.00	5	200.00	-1
Manganese	E	0.1000	-23	0.5000	-7	1.0000	2	10.000	5	100.00	4	200.00	-1
Nickel	E	0.1000	-4	0.5000	19	1.0000	18	10.000	10	100.00	6	200.00	-1
Sodium	E	10.000	6	50.000	26	100.00	19	1000.0	18	10000	5	20000	-1
Vanadium	E	0.1000	-19	0.5000	1	1.0000	7	10.000	3	100.00	4	200.00	-1
Zinc	E			0.5000	233	1.0000	11	10.000	10	100.00	6	200.00	-2
Iron	H	10.000	25	50.000	25	100.00	26	1000.0	4	10000	3	20000	-1
Selenium	H	0.1000	6	0.5000	1	1.0000	13	10.000	5	100.00	2	200.00	-1

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015154524001

Cal Date : 17-APR-2015

ICV 1015154524012 (15d17h00012 17-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10120	ug/L	1	10	
Antimony	A	100.0	101.4	ug/L	1	10	
Barium	A	100.0	101.3	ug/L	1	10	
Beryllium	A	100.0	101.0	ug/L	1	10	
Cadmium	A	100.0	101.3	ug/L	1	10	
Calcium	A	10000	10810	ug/L	8	10	
Lead	A	100.0	101.7	ug/L	2	10	
Magnesium	A	10000	10160	ug/L	2	10	
Molybdenum	A	100.0	100.7	ug/L	1	10	
Potassium	A	10000	10120	ug/L	1	10	
Silver	A	100.0	102.0	ug/L	2	10	
Thallium	A	50.00	50.01	ug/L	0	10	
Arsenic	E	100.0	103.8	ug/L	4	10	
Chromium	E	100.0	103.7	ug/L	4	10	
Cobalt	E	100.0	104.4	ug/L	4	10	
Copper	E	100.0	103.7	ug/L	4	10	
Manganese	E	100.0	103.8	ug/L	4	10	
Nickel	E	100.0	105.2	ug/L	5	10	
Sodium	E	10000	10500	ug/L	5	10	
Vanadium	E	100.0	103.5	ug/L	4	10	
Zinc	E	100.0	106.4	ug/L	6	10	
Iron	H	10000	10120	ug/L	1	10	
Selenium	H	100.0	100.2	ug/L	0	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524015 File : 15d17h00015 Time : 17-APR-2015 08:34
 Cal : 1015154524001 Caldate : 17-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	---	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	112798	0.28
Scandium	A	303675	304346	0.22
Scandium	E	34509	34452	-0.17
Scandium	H	236448	227026	-3.98
Germanium	H	62158	60973	-1.91
Germanium	E	17130	17081	-0.29
Indium	A	651653	652261	0.09
Bismuth	A	701152	702636	0.21
Yttrium	A	596632	594809	-0.31
Terbium	A	1014322	1028178	1.37

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524054 File : 15d17100004 Time : 17-APR-2015 11:55
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0050	0.0045	10000	10060	ug/L	1	10	
Antimony	A	0.0029	0.0029	100.0	100.4	ug/L	0	10	
Barium	A	6.8E-4	6.9E-4	100.0	101.1	ug/L	1	10	
Beryllium	A	0.0038	0.0039	100.0	99.81	ug/L	0	10	
Cadmium	A	7.6E-4	7.4E-4	100.0	100.8	ug/L	1	10	
Calcium	A	2.8E-4	1.8E-4	10000	10640	ug/L	6	10	
Lead	A	0.0086	0.0064	100.0	99.95	ug/L	0	10	
Magnesium	A	0.0046	0.0037	10000	10190	ug/L	2	10	
Molybdenum	A	0.0024	0.0021	100.0	98.43	ug/L	-2	10	
Potassium	A	0.0272	0.0051	10000	9993	ug/L	0	10	
Silver	A	0.0035	0.0033	100.0	97.16	ug/L	-3	10	
Thallium	A	0.0073	0.0063	50.00	44.04	ug/L	-12	10	c- ***
Arsenic	E	0.0061	0.0051	100.0	102.0	ug/L	2	10	
Chromium	E	0.0307	0.0217	100.0	105.3	ug/L	5	10	
Cobalt	E	0.0354	0.0328	100.0	106.4	ug/L	6	10	
Copper	E	0.1878	0.0274	100.0	124.3	ug/L	24	10	c+ ***
Manganese	E	0.0184	0.0147	100.0	104.6	ug/L	5	10	
Nickel	E	0.0114	0.0087	100.0	106.8	ug/L	7	10	
Sodium	E	0.0087	0.0044	10000	10940	ug/L	9	10	
Vanadium	E	0.0273	0.0181	100.0	104.9	ug/L	5	10	
Zinc	E	0.0069	0.0043	100.0	105.0	ug/L	5	10	
Iron	H	0.0083	0.0065	10000	10370	ug/L	4	10	
Selenium	H	0.0010	9.5E-4	100.0	101.3	ug/L	1	10	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	124661	10.82
Scandium	A	303675	350831	15.53
Scandium	E	34509	38996	13.00
Scandium	H	236448	260418	10.14
Germanium	H	62158	68103	9.56
Germanium	E	17130	19110	11.56
Indium	A	651653	697984	7.11
Bismuth	A	701152	808461	15.30
Yttrium	A	596632	667266	11.84
Terbium	A	1014322	1114439	9.87

+ = high bias - = low bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015154524056
Cal : 1015154524001

File : 15d17100006
Caldate : 17-APR-2015

IDF : 1.0
Time : 17-APR-2015 12:05

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	10.27	10.00	10.00	ug/L	CCB ***
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.05060]	0.1000	---	ug/L	!CCB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	0.6992	0.1000	0.05000	ug/L	CCB ***
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	19.29	0.1000	0.5000	ug/L	CCB ***
Manganese	E	[0.06900]	0.1000	0.05000	ug/L	!CCB
Nickel	E	0.1369	0.1000	0.2000	ug/L	CCB ***
Sodium	E	41.17	10.00	15.00	ug/L	CCB ***
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	126865	12.78
Scandium	A	303675	342737	12.86
Scandium	E	34509	39544	14.59
Scandium	H	236448	264029	11.66
Germanium	H	62158	68914	10.87
Germanium	E	17130	18929	10.50
Indium	A	651653	704819	8.16
Bismuth	A	701152	741117	5.70
Yttrium	A	596632	652440	9.35
Terbium	A	1014322	1101653	8.61

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524057 File : 15d17100007 Time : 17-APR-2015 12:09
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4461	0.1000	ug/L	
Barium	A	1.759	0.1000	ug/L	
Beryllium	A	[0.03020]	0.1000	ug/L	
Cadmium	A	4.113	0.1000	ug/L	
Lead	A	0.1947	0.1000	ug/L	
Silver	A	3.971	0.1000	ug/L	
Thallium	A	[0.01430]	0.05000	ug/L	
Arsenic	E	0.6011	0.1000	ug/L	
Chromium	E	0.9012	0.1000	ug/L	
Cobalt	E	1.149	0.1000	ug/L	
Copper	E	19.57	0.1000	ug/L	
Manganese	E	7.253	0.1000	ug/L	
Nickel	E	1.435	0.1000	ug/L	
Vanadium	E	0.2058	0.1000	ug/L	
Zinc	E	3.514	0.5000	ug/L	
Selenium	H	0.1684	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	95320	ug/L	95
Calcium	A	300000	266300	ug/L	89
Magnesium	A	100000	94150	ug/L	94
Molybdenum	A	2000	1860	ug/L	93
Potassium	A	100000	93790	ug/L	94
Sodium	E	250000	246800	ug/L	99
Phosphorus	E	100000	100600	ug/L	101
Iron	H	250000	234100	ug/L	94

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	106798	-5.06
Scandium	A	303675	318293	4.81
Scandium	E	34509	35926	4.11
Scandium	H	236448	246420	4.22
Germanium	H	62158	62906	1.20
Germanium	E	17130	19851	15.88
Indium	A	651653	603096	-7.45
Bismuth	A	701152	672824	-4.04
Yttrium	A	596632	605162	1.43
Terbium	A	1014322	1018321	0.39

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015154524058 File : 15d17100008
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 17-APR-2015 12:14

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	99480	ug/L	-1		
Cadmium	A	100.0	101.7	ug/L	2	20	
Calcium	A	300000	274800	ug/L	-8		
Magnesium	A	100000	97960	ug/L	-2		
Molybdenum	A	2000	1914	ug/L	-4		
Potassium	A	100000	97270	ug/L	-3		
Silver	A	50.00	49.37	ug/L	-1	20	
Arsenic	E	100.0	90.67	ug/L	-9	20	
Chromium	E	200.0	199.9	ug/L	0	20	
Cobalt	E	200.0	194.5	ug/L	-3	20	
Copper	E	200.0	207.8	ug/L	4	20	
Manganese	E	200.0	203.1	ug/L	2	20	
Nickel	E	200.0	190.9	ug/L	-5	20	
Sodium	E	250000	253100	ug/L	1		
Vanadium	E	200.0	203.2	ug/L	2	20	
Zinc	E	100.0	90.18	ug/L	-10	20	
Iron	H	250000	233400	ug/L	-7		
Selenium	H	100.0	94.65	ug/L	-5	20	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	236448	234611	-0.78
Scandium	A	303675	284927	-6.17
Scandium	E	34509	33537	-2.82
Germanium	H	62158	60783	-2.21
Germanium	E	17130	18738	9.39
Indium	A	651653	551622	-15.35
Yttrium	A	596632	548142	-8.13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524064 File : 15d17100014 Time : 17-APR-2015 12:43
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0050	0.0046	10000	10210	ug/L	2	10	
Antimony	A	0.0029	0.0029	100.0	100.1	ug/L	0	10	
Barium	A	6.8E-4	6.9E-4	100.0	100.3	ug/L	0	10	
Beryllium	A	0.0038	0.0041	100.0	106.7	ug/L	7	10	
Cadmium	A	7.6E-4	7.4E-4	100.0	100.8	ug/L	1	10	
Calcium	A	2.8E-4	1.8E-4	10000	10620	ug/L	6	10	
Lead	A	0.0086	0.0065	100.0	102.3	ug/L	2	10	
Magnesium	A	0.0046	0.0038	10000	10390	ug/L	4	10	
Molybdenum	A	0.0024	0.0021	100.0	99.09	ug/L	-1	10	
Potassium	A	0.0272	0.0051	10000	10060	ug/L	1	10	
Silver	A	0.0035	0.0034	100.0	102.3	ug/L	2	10	
Thallium	A	0.0073	0.0070	50.00	49.03	ug/L	-2	10	
Arsenic	E	0.0061	0.0052	100.0	103.5	ug/L	4	10	
Chromium	E	0.0307	0.0211	100.0	102.1	ug/L	2	10	
Cobalt	E	0.0354	0.0310	100.0	100.8	ug/L	1	10	
Copper	E	0.1878	0.0254	100.0	115.0	ug/L	15	10	c+ ***
Manganese	E	0.0184	0.0144	100.0	102.3	ug/L	2	10	
Nickel	E	0.0114	0.0083	100.0	101.7	ug/L	2	10	
Sodium	E	0.0087	0.0045	10000	11080	ug/L	11	10	c+ ***
Vanadium	E	0.0273	0.0177	100.0	102.4	ug/L	2	10	
Zinc	E	0.0069	0.0041	100.0	99.88	ug/L	0	10	
Iron	H	0.0083	0.0065	10000	10280	ug/L	3	10	
Selenium	H	0.0010	9.7E-4	100.0	102.7	ug/L	3	10	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	97091	-13.69
Scandium	A	303675	280900	-7.50
Scandium	E	34509	34488	-0.06
Scandium	H	236448	223517	-5.47
Germanium	H	62158	56920	-8.43
Germanium	E	17130	16064	-6.22
Indium	A	651653	568044	-12.83
Bismuth	A	701152	617933	-11.87
Yttrium	A	596632	538491	-9.74
Terbium	A	1014322	923700	-8.93

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015154524066
Cal : 1015154524001

File : 15d17100016
Caldate : 17-APR-2015

IDF : 1.0
Time : 17-APR-2015 12:53

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	0.1421	0.1000	---	ug/L	CCB ***
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	0.3252	0.1000	0.05000	ug/L	CCB ***
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	13.35	0.1000	0.5000	ug/L	CCB ***
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	28.49	10.00	15.00	ug/L	CCB ***
Vanadium	E	0.1039	0.1000	0.05000	ug/L	CCB ***
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	103150	-8.30
Scandium	A	303675	290740	-4.26
Scandium	E	34509	35445	2.71
Scandium	H	236448	229085	-3.11
Germanium	H	62158	59016	-5.05
Germanium	E	17130	16459	-3.92
Indium	A	651653	607782	-6.73
Bismuth	A	701152	661375	-5.67
Yttrium	A	596632	561626	-5.87
Terbium	A	1014322	956307	-5.72

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524077 File : 15d17100027 Time : 17-APR-2015 13:44
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0050	0.0047	10000	10370	ug/L	4	10	
Antimony	A	0.0029	0.0029	100.0	101.9	ug/L	2	10	
Barium	A	6.8E-4	6.9E-4	100.0	101.5	ug/L	2	10	
Beryllium	A	0.0038	0.0039	100.0	99.73	ug/L	0	10	
Cadmium	A	7.6E-4	7.5E-4	100.0	101.8	ug/L	2	10	
Calcium	A	2.8E-4	1.8E-4	10000	10830	ug/L	8	10	
Lead	A	0.0086	0.0066	100.0	103.3	ug/L	3	10	
Magnesium	A	0.0046	0.0038	10000	10520	ug/L	5	10	
Molybdenum	A	0.0024	0.0022	100.0	100.1	ug/L	0	10	
Potassium	A	0.0272	0.0052	10000	10280	ug/L	3	10	
Silver	A	0.0035	0.0034	100.0	102.8	ug/L	3	10	
Thallium	A	0.0073	0.0071	50.00	49.56	ug/L	-1	10	
Arsenic	E	0.0061	0.0050	100.0	99.80	ug/L	0	10	
Chromium	E	0.0307	0.0202	100.0	97.62	ug/L	-2	10	
Cobalt	E	0.0354	0.0302	100.0	97.97	ug/L	-2	10	
Copper	E	0.1878	0.0228	100.0	102.9	ug/L	3	10	
Manganese	E	0.0184	0.0137	100.0	97.27	ug/L	-3	10	
Nickel	E	0.0114	0.0080	100.0	97.65	ug/L	-2	10	
Sodium	E	0.0087	0.0042	10000	10370	ug/L	4	10	
Vanadium	E	0.0273	0.0169	100.0	97.90	ug/L	-2	10	
Zinc	E	0.0069	0.0040	100.0	97.61	ug/L	-2	10	
Iron	H	0.0083	0.0063	10000	10050	ug/L	1	10	
Selenium	H	0.0010	9.5E-4	100.0	100.5	ug/L	1	10	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	110506	-1.76
Scandium	A	303675	297679	-1.97
Scandium	E	34509	36444	5.61
Scandium	H	236448	231228	-2.21
Germanium	H	62158	59379	-4.47
Germanium	E	17130	17021	-0.64
Indium	A	651653	610595	-6.30
Bismuth	A	701152	662364	-5.53
Yttrium	A	596632	572477	-4.05
Terbium	A	1014322	989569	-2.44

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015154524079
Cal : 1015154524001

File : 15d17100029
Caldate : 17-APR-2015

IDF : 1.0
Time : 17-APR-2015 13:54

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.06360]	0.1000	---	ug/L	!CCB
Potassium	A	11.23	10.00	10.00	ug/L	CCB ***
Silver	A	0.2894	0.1000	0.05000	ug/L	CCB ***
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	4.194	0.1000	0.5000	ug/L	CCB ***
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	21.52	10.00	15.00	ug/L	CCB ***
Vanadium	E	[0.08050]	0.1000	0.05000	ug/L	!CCB
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	114255	1.57
Scandium	A	303675	305587	0.63
Scandium	E	34509	34450	-0.17
Scandium	H	236448	248060	4.91
Germanium	H	62158	63273	1.79
Germanium	E	17130	16519	-3.57
Indium	A	651653	636580	-2.31
Bismuth	A	701152	691490	-1.38
Yttrium	A	596632	585027	-1.95
Terbium	A	1014322	1020517	0.61

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524090 File : 15d17100040 Time : 17-APR-2015 14:46
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0050	0.0045	10000	9974	ug/L	0	10	
Antimony	A	0.0029	0.0029	100.0	100.8	ug/L	1	10	
Barium	A	6.8E-4	6.7E-4	100.0	98.40	ug/L	-2	10	
Beryllium	A	0.0038	0.0043	100.0	110.1	ug/L	10	10	
Cadmium	A	7.6E-4	7.2E-4	100.0	98.54	ug/L	-1	10	
Calcium	A	2.8E-4	1.8E-4	10000	10450	ug/L	5	10	
Lead	A	0.0086	0.0063	100.0	98.22	ug/L	-2	10	
Magnesium	A	0.0046	0.0037	10000	10060	ug/L	1	10	
Molybdenum	A	0.0024	0.0021	100.0	96.55	ug/L	-3	10	
Potassium	A	0.0272	0.0050	10000	9947	ug/L	-1	10	
Silver	A	0.0035	0.0034	100.0	100.1	ug/L	0	10	
Thallium	A	0.0073	0.0070	50.00	48.94	ug/L	-2	10	
Arsenic	E	0.0061	0.0053	100.0	104.6	ug/L	5	10	
Chromium	E	0.0307	0.0206	100.0	99.95	ug/L	0	10	
Cobalt	E	0.0354	0.0306	100.0	99.36	ug/L	-1	10	
Copper	E	0.1878	0.0261	100.0	118.5	ug/L	19	10	c+ ***
Manganese	E	0.0184	0.0141	100.0	100.3	ug/L	0	10	
Nickel	E	0.0114	0.0081	100.0	99.69	ug/L	0	10	
Sodium	E	0.0087	0.0044	10000	10820	ug/L	8	10	
Vanadium	E	0.0273	0.0173	100.0	99.91	ug/L	0	10	
Zinc	E	0.0069	0.0040	100.0	99.50	ug/L	0	10	
Iron	H	0.0083	0.0062	10000	9929	ug/L	-1	10	
Selenium	H	0.0010	9.4E-4	100.0	100.2	ug/L	0	10	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	96280	-14.41
Scandium	A	303675	297098	-2.17
Scandium	E	34509	35951	4.18
Scandium	H	236448	234568	-0.80
Germanium	H	62158	59344	-4.53
Germanium	E	17130	16979	-0.88
Indium	A	651653	611549	-6.15
Bismuth	A	701152	646705	-7.77
Yttrium	A	596632	580399	-2.72
Terbium	A	1014322	997753	-1.63

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015154524092
Cal : 1015154524001

File : 15d17100042
Caldate : 17-APR-2015

IDF : 1.0
Time : 17-APR-2015 14:56

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.06930]	0.1000	---	ug/L	!CCB
Potassium	A	18.94	10.00	10.00	ug/L	CCB ***
Silver	A	0.1651	0.1000	0.05000	ug/L	CCB ***
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	19.60	0.1000	0.5000	ug/L	CCB ***
Manganese	E	0.1649	0.1000	0.05000	ug/L	CCB ***
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	145.5	10.00	15.00	ug/L	CCB ***
Vanadium	E	[0.09770]	0.1000	0.05000	ug/L	!CCB
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	93910	-16.51
Scandium	A	303675	280447	-7.65
Scandium	E	34509	34627	0.34
Scandium	H	236448	225620	-4.58
Germanium	H	62158	58154	-6.44
Germanium	E	17130	16291	-4.90
Indium	A	651653	588058	-9.76
Bismuth	A	701152	636474	-9.22
Yttrium	A	596632	547785	-8.19
Terbium	A	1014322	918549	-9.44

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015154524098 File : 15d17100048
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26727, S26751

IDF : 1.0
 Time : 17-APR-2015 15:25

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4631	0.1000	ug/L	
Barium	A	1.750	0.1000	ug/L	
Beryllium	A	[0.04130]	0.1000	ug/L	
Cadmium	A	4.628	0.1000	ug/L	
Lead	A	0.2006	0.1000	ug/L	
Silver	A	0.8894	0.1000	ug/L	
Thallium	A	[0.02190]	0.05000	ug/L	
Arsenic	E	0.6771	0.1000	ug/L	
Chromium	E	0.7896	0.1000	ug/L	
Cobalt	E	1.093	0.1000	ug/L	
Copper	E	15.32	0.1000	ug/L	
Manganese	E	7.153	0.1000	ug/L	
Nickel	E	1.156	0.1000	ug/L	
Vanadium	E	0.2548	0.1000	ug/L	
Zinc	E	3.223	0.5000	ug/L	
Selenium	H	0.1118	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	95270	ug/L	95
Calcium	A	300000	266700	ug/L	89
Magnesium	A	100000	93840	ug/L	94
Molybdenum	A	2000	1853	ug/L	93
Potassium	A	100000	94950	ug/L	95
Sodium	E	250000	241500	ug/L	97
Phosphorus	E	100000	103400	ug/L	103
Iron	H	250000	223900	ug/L	90

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	85811	-23.71
Scandium	A	303675	277038	-8.77
Scandium	E	34509	33481	-2.98
Scandium	H	236448	225242	-4.74
Germanium	H	62158	57577	-7.37
Germanium	E	17130	18561	8.35
Indium	A	651653	531669	-18.41
Bismuth	A	701152	546905	-22.00
Yttrium	A	596632	534717	-10.38
Terbium	A	1014322	899151	-11.35

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015154524099 File : 15d17100049
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 17-APR-2015 15:30

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	93810	ug/L	-6		
Cadmium	A	100.0	97.88	ug/L	-2	20	
Calcium	A	300000	262800	ug/L	-12		
Magnesium	A	100000	92340	ug/L	-8		
Molybdenum	A	2000	1830	ug/L	-8		
Potassium	A	100000	93390	ug/L	-7		
Silver	A	50.00	47.28	ug/L	-5	20	
Arsenic	E	100.0	90.15	ug/L	-10	20	
Chromium	E	200.0	190.8	ug/L	-5	20	
Cobalt	E	200.0	185.4	ug/L	-7	20	
Copper	E	200.0	193.8	ug/L	-3	20	
Manganese	E	200.0	195.6	ug/L	-2	20	
Nickel	E	200.0	181.9	ug/L	-9	20	
Sodium	E	250000	240500	ug/L	-4		
Vanadium	E	200.0	195.4	ug/L	-2	20	
Zinc	E	100.0	87.58	ug/L	-12	20	
Iron	H	250000	225500	ug/L	-10		
Selenium	H	100.0	91.33	ug/L	-9	20	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	236448	219557	-7.14
Scandium	A	303675	273326	-9.99
Scandium	E	34509	31969	-7.36
Germanium	H	62158	56939	-8.40
Germanium	E	17130	17899	4.49
Indium	A	651653	533339	-18.16
Yttrium	A	596632	536271	-10.12

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895158996

Instrument : MET16
 Method : EPA 6020

Begun : 04/20/15 09:56
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d20j00001	X	RINSE			04/20/15 09:56	1.0	1	
002	15d20j00002	TUN				04/20/15 10:03	1.0	2	
003	15d20j00003	X	RINSE			04/20/15 10:07	1.0	1	
004	15d20j00004	ICALBLK	CALBLANK			04/20/15 10:14	1.0	1	
005	15d20j00005	ICAL				04/20/15 10:20	1.0	3 1	
006	15d20j00006	ICAL				04/20/15 10:27	1.0	4 1	
007	15d20j00007	ICAL				04/20/15 10:33	1.0	5 1	
008	15d20j00008	ICAL				04/20/15 10:39	1.0	6 1	
009	15d20j00009	ICAL				04/20/15 10:46	1.0	7 1	
010	15d20j00010	ICAL				04/20/15 10:52	1.0	8 1	
011	15d20j00011	X	RINSE			04/20/15 10:59	1.0	1	
012	15d20j00012	ICV				04/20/15 11:05	1.0	9 1	
013	15d20j00013	XICV				04/20/15 11:12	1.0	9 1	
014	15d20j00014	XICV				04/20/15 11:18	1.0	9 1	
015	15d20j00015	XCRI				04/20/15 11:25	1.0	10 1	
016	15d20j00016	CRI				04/20/15 11:31	1.0	10 1	
017	15d20j00017	XICB				04/20/15 11:38	1.0	1	
018	15d20j00018	XICB				04/20/15 11:44	1.0	1	
019	15d20j00019	ICB				04/20/15 11:51	1.0	1	
020	15d20j00020	XCRI				04/20/15 11:57	1.0	10 1	
021	15d20j00021	ICSA				04/20/15 12:04	1.0	11 1	8:CA=290000
022	15d20j00022	ICSAB				04/20/15 12:10	1.0	12 1	11:CA=300000
023	15d20j00023	X	RINSE			04/20/15 12:17	1.0	1	
024	15d20j00024	X	RINSE			04/20/15 12:24	1.0	1	
025	15d20j00025	X	RINSE			04/20/15 12:30	1.0	1	
026	15d20j00026	X	RINSE			04/20/15 12:37	1.0	1	
027	15d20j00027	X	RINSE			04/20/15 12:43	1.0	1	
028	15d20j00028	BLANK	QC784823	Soil	222389	04/20/15 12:50	25.0	1	
029	15d20j00029	BS	QC784824	Soil	222389	04/20/15 12:56	25.0	1	
030	15d20j00030	BSD	QC784825	Soil	222389	04/20/15 13:02	25.0	1	
031	15d20j00031	MSS	266160-001	Soil	222389	04/20/15 13:09	25.0	1	1:MN=230
032	15d20j00032	MS	QC784826	Soil	222389	04/20/15 13:15	25.0	1	1:MN=220
033	15d20j00033	MSD	QC784827	Soil	222389	04/20/15 13:21	25.0	1	1:MN=230
034	15d20j00034	MSS	266160-001	Soil	222389	04/20/15 13:28	2500	1	
035	15d20j00035	CCV				04/20/15 13:34	1.0	13 1	
036	15d20j00036	X	XCCB			04/20/15 13:41	1.0	1	
037	15d20j00037	CCB				04/20/15 13:47	1.0	1	
038	15d20j00038	ICSA				04/20/15 13:54	1.0	11 1	8:CA=300000
039	15d20j00039	ICSAB				04/20/15 14:02	1.0	12 1	8:CA=300000
040	15d20j00040	X	RINSE			04/20/15 14:09	1.0	1	
041	15d20j00041	X	RINSE			04/20/15 14:15	1.0	1	
042	15d20j00042	X	RINSE			04/20/15 14:24	1.0	1	
043	15d20j00043	BLANK	QC784300	Filtrate	222258	04/20/15 14:31	5.0	1	
044	15d20j00044	BLANK	QC784301	Filtrate	222258	04/20/15 14:37	5.0	1	
045	15d20j00045	XBS	QC784302	Filtrate	222258	04/20/15 14:43	5.0	1	
046	15d20j00046	X	RINSE			04/20/15 14:50	1.0	1	
047	15d20j00047	BLANK	QC784570	Filtrate	222325	04/20/15 14:56	5.0	1	
048	15d20j00048	BS	QC784571	Filtrate	222325	04/20/15 15:03	5.0	1	
049	15d20j00049	BSD	QC784572	Filtrate	222325	04/20/15 15:09	5.0	1	
050	15d20j00050	CCV				04/20/15 15:15	1.0	13 1	
051	15d20j00051	X	XCCB			04/20/15 15:22	1.0	1	
052	15d20j00052	CCB				04/20/15 15:28	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895158996

Instrument : MET16
 Method : EPA 6020

Begun : 04/20/15 09:56
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d20j00053	SAMPLE	265932-001	Filtrate	222258	04/20/15 15:35	500.0	1	
054	15d20j00054	BS	QC784302	Filtrate	222258	04/20/15 15:45	5.0	1	
055	15d20j00055	BSD	QC784303	Filtrate	222258	04/20/15 15:51	5.0	1	
056	15d20j00056	SAMPLE	265932-003	Filtrate	222258	04/20/15 15:58	500.0	1	
057	15d20j00057	MSS	265932-004	Filtrate	222258	04/20/15 16:04	500.0	1	
058	15d20j00058	SAMPLE	266019-003	Filtrate	222258	04/20/15 16:10	500.0	1	
059	15d20j00059	MSS	266019-005	Filtrate	222258	04/20/15 16:17	500.0	1	
060	15d20j00060	SER	QC784308	Filtrate	222258	04/20/15 16:23	2500	1	
061	15d20j00061	PDS	QC784309	Filtrate	222258	04/20/15 16:29	500.0	14 15 16 1	
062	15d20j00062	X	RINSE			04/20/15 16:36	1.0	1	
063	15d20j00063	MSS	266087-001	Filtrate	222325	04/20/15 16:42	500.0	1	
064	15d20j00064	CCV				04/20/15 16:49	1.0	13 1	
065	15d20j00065	X	XCCB			04/20/15 16:55	1.0	1	
066	15d20j00066	CCB				04/20/15 17:02	1.0	1	
067	15d20j00067	SER	QC784575	Filtrate	222325	04/20/15 17:08	2500	1	
068	15d20j00068	PDS	QC784576	Filtrate	222325	04/20/15 17:14	500.0	14 15 16 1	
069	15d20j00069	SAMPLE	266091-004	Filtrate	222325	04/20/15 17:21	500.0	1	
070	15d20j00070	SAMPLE	266087-009	Filtrate	222325	04/20/15 17:27	500.0	1	
071	15d20j00071	SAMPLE	266091-002	Filtrate	222325	04/20/15 17:34	500.0	1	
072	15d20j00072	SAMPLE	266091-009	Filtrate	222325	04/20/15 17:40	500.0	1	
073	15d20j00073	SAMPLE	266091-010	Filtrate	222325	04/20/15 17:47	500.0	1	
074	15d20j00074	X	RINSE			04/20/15 17:53	1.0	1	
075	15d20j00075	BLANK	QC784945	Filtrate	222114	04/20/15 17:59	5.0	1	
076	15d20j00076	CCV				04/20/15 18:06	1.0	13 1	
077	15d20j00077	X	XCCB			04/20/15 18:12	1.0	1	
078	15d20j00078	CCB				04/20/15 18:19	1.0	1	
079	15d20j00079	MSS	265932-004	Filtrate	222258	04/20/15 18:25	5.0	1	4:NA=780000
080	15d20j00080	X	RINSE			04/20/15 18:32	1.0	1	
081	15d20j00081	MS	QC784304	Filtrate	222258	04/20/15 18:38	5.0	1	4:NA=720000
082	15d20j00082	X	RINSE			04/20/15 18:45	1.0	1	
083	15d20j00083	MSD	QC784305	Filtrate	222258	04/20/15 18:51	5.0	1	4:NA=740000
084	15d20j00084	X	RINSE			04/20/15 18:58	1.0	1	
085	15d20j00085	MSS	266019-005	Filtrate	222258	04/20/15 19:05	5.0	1	4:NA=34000
086	15d20j00086	X	RINSE			04/20/15 19:11	1.0	1	
087	15d20j00087	MS	QC784306	Filtrate	222258	04/20/15 19:18	5.0	1	4:NA=33000
088	15d20j00088	X	RINSE			04/20/15 19:24	1.0	1	
089	15d20j00089	MSD	QC784307	Filtrate	222258	04/20/15 19:30	5.0	1	4:NA=34000
090	15d20j00090	X	RINSE			04/20/15 19:37	1.0	1	
091	15d20j00091	SER	QC784308	Filtrate	222258	04/20/15 19:43	25.0	1	
092	15d20j00092	X	RINSE			04/20/15 19:50	1.0	1	
093	15d20j00093	PDS	QC784309	Filtrate	222258	04/20/15 19:56	5.0	14 15 16 1	1:NA=36000
094	15d20j00094	X	RINSE			04/20/15 20:03	1.0	1	
095	15d20j00095	SAMPLE	265932-001	Filtrate	222258	04/20/15 20:09	5.0	1	4:NA=170000
096	15d20j00096	X	RINSE			04/20/15 20:16	1.0	1	
097	15d20j00097	SAMPLE	265932-003	Filtrate	222258	04/20/15 20:22	5.0	1	7:NA=300000
098	15d20j00098	CCV				04/20/15 20:29	1.0	13 1	
099	15d20j00099	X	XCCB			04/20/15 20:36	1.0	1	
100	15d20j00100	CCB				04/20/15 20:42	1.0	1	
101	15d20j00101	X	RINSE			04/20/15 20:49	1.0	1	
102	15d20j00102	SAMPLE	265994-001	Filtrate	222258	04/20/15 20:55	5.0	1	4:NA=590000
103	15d20j00103	X	RINSE			04/20/15 21:02	1.0	1	
104	15d20j00104	SAMPLE	266019-003	Filtrate	222258	04/20/15 21:08	5.0	1	4:CA=37000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895158996

Instrument : MET16
 Method : EPA 6020

Begun : 04/20/15 09:56
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
105	15d20j00105	X	RINSE			04/20/15 21:15	1.0	1
106	15d20j00106	MSS	266087-001	Filtrate	222325	04/20/15 21:21	5.0	1 4:CA=34000
107	15d20j00107	X	RINSE			04/20/15 21:28	1.0	1
108	15d20j00108	MS	QC784573	Filtrate	222325	04/20/15 21:34	5.0	1 4:CA=34000
109	15d20j00109	X	RINSE			04/20/15 21:41	1.0	1
110	15d20j00110	MSD	QC784574	Filtrate	222325	04/20/15 21:47	5.0	1 4:CA=35000
111	15d20j00111	X	RINSE			04/20/15 21:54	1.0	1
112	15d20j00112	SER	QC784575	Filtrate	222325	04/20/15 22:00	25.0	1
113	15d20j00113	PDS	QC784576	Filtrate	222325	04/20/15 22:07	5.0	14 15 16 1
114	15d20j00114	X	RINSE			04/20/15 22:13	1.0	1
115	15d20j00115	SAMPLE	266068-003	Filtrate	222325	04/20/15 22:19	5.0	1
116	15d20j00116	SAMPLE	266068-005	Filtrate	222325	04/20/15 22:26	5.0	1
117	15d20j00117	SAMPLE	266087-002	Filtrate	222325	04/20/15 22:32	5.0	1
118	15d20j00118	CCV				04/20/15 22:39	1.0	13 1
119	15d20j00119	X	XCCB			04/20/15 22:45	1.0	1
120	15d20j00120	CCB				04/20/15 22:52	1.0	1
121	15d20j00121	SAMPLE	266087-003	Filtrate	222325	04/20/15 22:58	5.0	1
122	15d20j00122	ICSA				04/20/15 23:04	1.0	11 1 8:CA=300000
123	15d20j00123	ICSAB				04/20/15 23:11	1.0	12 1 11:CA=310000
124	15d20j00124	X	RINSE			04/20/15 23:18	1.0	1
125	15d20j00125	X	RINSE			04/20/15 23:24	1.0	1
126	15d20j00126	SAMPLE	266087-004	Filtrate	222325	04/20/15 23:31	5.0	1
127	15d20j00127	X	RINSE			04/20/15 23:37	1.0	1
128	15d20j00128	SAMPLE	266087-006	Filtrate	222325	04/20/15 23:44	5.0	1
129	15d20j00129	SAMPLE	266087-007	Filtrate	222325	04/20/15 23:50	5.0	1
130	15d20j00130	SAMPLE	266087-009	Filtrate	222325	04/20/15 23:56	5.0	1 4:CA=57000
131	15d20j00131	X	RINSE			04/21/15 00:03	1.0	1
132	15d20j00132	SAMPLE	266091-002	Filtrate	222325	04/21/15 00:09	5.0	1 4:CA=130000
133	15d20j00133	X	RINSE			04/21/15 00:16	1.0	1
134	15d20j00134	SAMPLE	266091-004	Filtrate	222325	04/21/15 00:22	5.0	1 1:NA=20000
135	15d20j00135	SAMPLE	266091-005	Filtrate	222325	04/21/15 00:29	5.0	1 1:NA=21000
136	15d20j00136	SAMPLE	266091-006	Filtrate	222325	04/21/15 00:35	5.0	1 4:NA=1500000
137	15d20j00137	SAMPLE	266091-007	Filtrate	222325	04/21/15 00:42	5.0	1 4:NA=1500000
138	15d20j00138	CCV				04/21/15 00:49	1.0	13 1
139	15d20j00139	X	XCCB			04/21/15 00:55	1.0	1
140	15d20j00140	CCB				04/21/15 01:02	1.0	1
141	15d20j00141	SAMPLE	266091-008	Filtrate	222325	04/21/15 01:08	5.0	1
142	15d20j00142	SAMPLE	266091-009	Filtrate	222325	04/21/15 01:15	5.0	1 1:NA=64000
143	15d20j00143	X	RINSE			04/21/15 01:21	1.0	1
144	15d20j00144	SAMPLE	266091-010	Filtrate	222325	04/21/15 01:28	5.0	1 4:NA=31000
145	15d20j00145	X	RINSE			04/21/15 01:34	1.0	1
146	15d20j00146	SAMPLE	266091-012	Filtrate	222325	04/21/15 01:41	5.0	1
147	15d20j00147	X	RINSE			04/21/15 01:47	1.0	1
148	15d20j00148	CCV				04/21/15 01:54	1.0	13 1
149	15d20j00149	X	XCCB			04/21/15 02:00	1.0	1
150	15d20j00150	CCB				04/21/15 02:07	1.0	1
151	15d20j00151	ICSA				04/21/15 02:13	1.0	11 1 8:CA=290000
152	15d20j00152	ICSAB				04/21/15 02:20	1.0	12 1 11:CA=300000
153	15d20j00153	X	RINSE			04/21/15 02:26	1.0	1
154	15d20j00154	X	RINSE			04/21/15 02:33	1.0	1
155	15d20j00155	X	RINSE			04/21/15 02:39	1.0	1
156	15d20j00156	X	RINSE			04/21/15 02:46	1.0	1

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895158996

Date : 04/20/15
 Sequence : MET16 15d20j00

Reference : 15d20j00004
 Analyzed : 04/20/15 10:14

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	1236548	1232744	39135	113610	24397	19858	1791695	2228668	1708777	3181686
		LOWER LIMIT	370964	369823	11741	34083	7319	5957	537509	668600	512633	954506
		UPPER LIMIT	1483858	1479293	46962	136332	29276	23830	2150034	2674402	2050532	3818023
019	ICB		1217173	1333501	40844	86614	19117	21722	1882086	2247870	1810035	3274589
021	ICSA		978094	1177257	41755	114822	18009	18536	1400122	1525446	1520649	2603140
022	ICSAB		1016695	1145136	37010	101027	19446	17734	1391981	1523546	1510625	2601560
028	BLANK	QC784823	1128304	1208324	38782	94994	20524	20669	1797910	2230237	1727566	3223742
029	BS	QC784824	1132820	1170838	39692	88890	20107	20496	1766585	2199918	1698809	3191710
030	BSD	QC784825	1160792	1213788	39783	101766	21691	20753	1807526	2234193	1736437	3231182
031	MSS	266160-001	1095370	1193247	39852	109631	22321	19852	1714763	2156562	1706205	3152006
032	MS	QC784826	1111373	1220211	40175	103795	21818	20300	1713468	2113858	1730238	3125150
033	MSD	QC784827	1108303	1250103	39712	96300	20759	20320	1734268	2129771	1748435	3159891
034	MSS	266160-001	1123479	1154847	38522	95470	21660	20846	1781868	2206248	1697725	3161603
035	CCV		1148028	1219498	41001	107153	21802	20898	1727313	2071191	1700907	3132181
037	CCB		1112574	1181138	36861	99221	21509	20084	1758224	2183152	1677816	3143881
038	ICSA		997450	1119182	38674	109832	20015	17946	1332893	1466993	1444600	2491415
039	ICSAB		1066847	1172969	40105	105797	20460	18039	1361082	1479739	1487682	2548302
043	BLANK	QC784300	1191510	1180895	38328	95254	20805	20268	1745478	2159231	1675549	3111367
044	BLANK	QC784301	1162555	1176306	38690	95462	20796	20158	1726661	2153123	1668251	3107742
047	BLANK	QC784570	1121226	1152329	37917	98509	22016	20294	1711524	2145250	1626343	3070405
048	BS	QC784571	1124861	1165050	38909	112656	23060	19724	1688043	2104475	1622411	3064781
049	BSD	QC784572	1167379	1399982	37430	105381	23183	19898	1787840	2223007	1711925	3243007
050	CCV		1122961	1198997	39712	107542	23587	19899	1646257	2006810	1616798	3023780
052	CCB		1136304	1129225	38028	101010	22224	20108	1698192	2124272	1624053	3024444
053	SAMPLE	265932-001	1123237	1138109	36586	106437	23175	20028	1713846	2150700	1617276	3071308
054	BS	QC784302	1110780	1171370	39642	113803	21553	19863	1677452	2113164	1609671	3047347
055	BSD	QC784303	1084740	1157851	40173	101484	20596	19725	1675958	2103157	1602599	3048171
056	SAMPLE	265932-003	1143453	1155586	38145	86916	20241	20242	1705102	2127904	1628558	3068095
057	MSS	265932-004	1169106	1189314	38370	92430	20865	20543	1733707	2126692	1653637	3098103
058	SAMPLE	266019-003	1243964	1290433	38649	92944	20921	20545	1863811	2331425	1772702	3345338
059	MSS	266019-005	1144510	1136736	38038	90700	20667	20326	1714979	2172869	1624866	3086936
060	SER	QC784308	1155935	1163180	38368	94166	20225	20177	1739038	2202831	1643103	3121248
061	PDS	QC784309	1156647	1193685	40696	102883	20226	19869	1680096	2089656	1622897	3070495
063	MSS	266087-001	1157742	1140969	38423	86493	19372	20672	1731757	2191482	1638853	3094502
064	CCV		1127545	1180810	39676	95652	18862	19961	1652210	2013070	1615367	3022681
066	CCB		1159560	1171688	38203	82056	18125	20581	1751832	2206393	1660085	3126433
067	SER	QC784575	1135751	1162001	39804	80844	16655	20626	1745743	2208051	1654342	3122676
068	PDS	QC784576	1145632	1212851	39359	73854	15650	20302	1705948	2092289	1655978	3092417
069	SAMPLE	266091-004	1144883	1173176	38925	68614	15862	20902	1759373	2206015	1670861	3146588
070	SAMPLE	266087-009	1153377	1199236	38655	66954	14846	20908	1785149	2220172	1690259	3177107
071	SAMPLE	266091-002	1137565	1137167	38635	70033	14820	20747	1754428	2169403	1663890	3132891
072	SAMPLE	266091-009	1143015	1175764	39904	73939	14816	20811	1757540	2198105	1656853	3122980
073	SAMPLE	266091-010	1137458	1152009	39189	69092	14680	20615	1763209	2216786	1665805	3142132
075	BLANK	QC784945	1184090	1205351	39428	69883	14482	20988	1830078	2299116	1734513	3266801
076	CCV		1081795	1153613	43278	79162	14543	20439	1610089	1941645	1569349	2907136
078	CCB		1139120	1172804	39868	66435	14175	21398	1795062	2225649	1698772	3172540
079	MSS	265932-004	1171663	1283570	42459	68087	12356	19697	1532567	1536360	1652471	2668142
081	MS	QC784304	1214232	1360217	47743 *	70480	11304	20484	1515758	1521888	1641568	2661657
083	MSD	QC784305	1185535	1226339	44571	69114	12094	19748	1418396	1417686	1539956	2479406
085	MSS	266019-005	1248977	1222285	41092	66789	13522	21001	1658492	1884082	1657672	2933833
087	MS	QC784306	1213179	1246064	40521	62057	12560	20619	1653135	1886193	1659818	2940022

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895158996

Date : 04/20/15
 Sequence : MET16 15d20j00

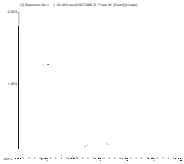
Reference : 15d20j00004
 Analyzed : 04/20/15 10:14

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
089	MSD	QC784307	1185622	1217423	40327	60275	12090	20684	1628623	1861819	1634001	2895809
091	SER	QC784308	1228718	1220661	39937	60967	12690	20999	1730275	2034227	1686706	3020937
093	PDS	QC784309	1134036	1222311	39639	60842	11764	19486	1612319	1842026	1621300	2870038
095	SAMPLE	265932-001	1199693	1272250	39026	55831	11198	19671	1628294	1760427	1678551	2871514
097	SAMPLE	265932-003	1124693	1279446	42253	60669	11187	20235	1542955	1641838	2167972 *	2781638
098	CCV		1259154	1303893	44635	54684	10730	22692	1797484	2057304	1793768	3164796
100	CCB		1247240	1260930	42135	49397	10278	22428	1839106	2161198	1793136	3166295
102	SAMPLE	265994-001	1306497	1422616	47051 *	56977	10271	22077	1687839	1664852	1797030	2868288
104	SAMPLE	266019-003	1339740	1429674	44854	53519	10369	22704	1856967	2028471	1890421	3222243
106	MSS	266087-001	1293982	1407471	44951	50936	9900	22719	1841086	2007632	1861951	3174929
108	MS	QC784573	924275	1006099	33281	40309	7846	17136	1376326	1568120	1374762	2447087
110	MSD	QC784574	945353	1035016	34428	37026	7480	17932	1424489	1636456	1429156	2542537
112	SER	QC784575	1072986	1125502	35613	41539	8877	19520	1616655	1887365	1579828	2815440
113	PDS	QC784576	1046290	1192017	37185	40788	8056	18809	1578769	1760841	1604303	2793660
115	SAMPLE	266068-003	978184	1013837	34041	36667	7721	18532	1534186	1844085	1476166	2694547
116	SAMPLE	266068-005	1045073	1116569	34709	37270	7664	18798	1640797	1956178	1587329	2872556
117	SAMPLE	266087-002	1179487	1243995	40818	43116	8952	21811	1798901	2082439	1764167	3164076
118	CCV		1151875	1296213	43503	47791	8334	20879	1720747	1973517	1714099	3040206
120	CCB		1169425	1196598	39505	35218	7214 *	21098	1761628	2073276	1706766	3043570
121	SAMPLE	266087-003	1069036	1122561	37028	35781	7161 *	19653	1638404	1919119	1593771	2901484
122	ICSA		1028471	1241204	41241	39460	6000 *	18893	1429897	1480817	1587808	2589842
123	ICSAB		1047316	1214437	40101	31363 *	5429 *	19422	1431146	1465940	1586131	2581670
126	SAMPLE	266087-004	1197008	1248092	41328	38319	7977	22172	1762928	1991695	1743363	3057517
128	SAMPLE	266087-006	1131626	1206010	39439	42488	8520	20750	1688178	1926576	1669277	2958296
129	SAMPLE	266087-007	1121849	1186956	39119	40236	7988	20780	1734466	2011299	1692614	2989781
130	SAMPLE	266087-009	1137517	1216102	40165	41651	8665	21082	1681175	1815989	1707836	2885138
132	SAMPLE	266091-002	1092955	1227590	39946	34443	6507 *	19974	1534854	1601620	1624374	2690666
134	SAMPLE	266091-004	1118271	1201253	39265	34933	6977 *	20705	1676583	1886282	1659940	2879945
135	SAMPLE	266091-005	924154	959158	32644	30086 *	6262 *	17784	1382590	1591793	1361296	2401039
136	SAMPLE	266091-006	1237109	1335582	41186	26834 *	4474 *	19030	1391531	1137809	1601288	2172568
137	SAMPLE	266091-007	1345840	1469789	44352	31366 *	5163 *	20046	1475070	1167623	1715626	2256263
138	CCV		1503911 *	1552926 *	50798 *	44840	8315	24797 *	1828239	1826199	1926573	2989398
140	CCB		1376223	1401427	44992	42446	8828	23627	1834256	1923978	1855698	2961684
141	SAMPLE	266091-008	1299510	1340230	43165	40856	8250	22571	1764539	1864515	1782945	2873472
142	SAMPLE	266091-009	1214392	1301014	41168	40337	8331	21531	1657014	1717512	1706444	2738513
144	SAMPLE	266091-010	1242558	1353413	43067	39493	8012	22293	1717912	1766207	1776486	2853392
146	SAMPLE	266091-012	1167154	1207153	38246	35474	7304 *	20520	1633312	1752725	1638753	2673933
148	CCV		1112344	1250553	41614	39626	6845 *	20341	1548376	1633689	1592959	2606753
150	CCB		1139817	1189460	38815	31892 *	6786 *	20928	1642431	1787713	1643995	2705591
151	ICSA		926266	1162057	39870	35238	5527 *	18781	1267898	1226225	1440078	2183733
152	ICSAB		912848	1090331	35464	23814 *	4302 *	17757	1215005	1168370	1378718	2086925

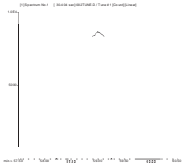
MET16 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D20J00.B\002TUNE.D
 Date Acquired: Apr 20 2015 10:03 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

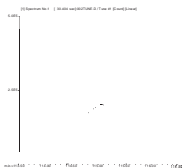
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	112505	113508	114245	114218	113449	1.23	5.00	
59 Co	46391	47097	47462	47566	47442	0.85	5.00	
115 In	1046001	1035800	1053209	1052917	1052613	0.33	5.00	
205 Tl	96134	95628	95941	96401	95513	0.64	5.00	



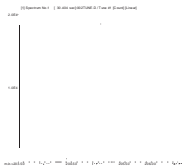
7 Li
Mass Calib.
 Actual: 7.05
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 59.00
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266087 METALS Filtrate: EPA 6020

Inst : MET16
 Calnum : 895158996001
 Units : ug/L
 Date : 20-APR-2015 10:14
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d20j00005	895158996005	20-APR-2015 10:20	S27043, S26751	
L2	15d20j00006	895158996006	20-APR-2015 10:27	S27044, S26751	
L3	15d20j00007	895158996007	20-APR-2015 10:33	S27045, S26751	
L4	15d20j00008	895158996008	20-APR-2015 10:39	S27046, S26751	
L5	15d20j00009	895158996009	20-APR-2015 10:46	S27041, S26751	
L6	15d20j00010	895158996010	20-APR-2015 10:52	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0062	0.0064	0.0065	0.0064	0.0066	0.0062	BLNK	-0.3031	160.167		0.0064	0.999	0.995	
Antimony	A	0.0028	0.0025	0.0025	0.0025	0.0025	0.0025	BLNK	-0.0116	399.368		0.0026	1.000	0.995	
Barium	A	7.5E-4	6.3E-4	6.2E-4	6.2E-4	6.1E-4	6.0E-4	BLNK	-0.0062	1658.77		6.4E-4	1.000	0.995	
Beryllium	A	0.0024	0.0021	0.0021	0.0022	0.0021	0.0021	BLNK	-0.0071	473.250		0.0022	1.000	0.995	
Cadmium	A	6.6E-4	6.9E-4	6.9E-4	6.8E-4	6.7E-4	6.5E-4	BLNK	-0.0062	1524.31		6.7E-4	1.000	0.995	
Calcium	A	4.9E-4	2.1E-4	1.9E-4	1.7E-4	1.8E-4	1.7E-4	BLNK	-7.0137	5731.62		2.4E-4	0.999	0.995	
Lead	A	0.0080	0.0068	0.0069	0.0066	0.0064	0.0061	BLNK	-0.0202	162.012		0.0068	1.000	0.995	
Magnesium	A	0.0079	0.0057	0.0055	0.0055	0.0056	0.0052	BLNK	-3.1666	189.955		0.0059	0.998	0.995	
Molybdenum	A	0.0019	0.0018	0.0019	0.0018	0.0018	0.0018	BLNK	-0.0211	552.741		0.0018	1.000	0.995	
Potassium	A	0.0774	0.0208	0.0134	0.0067	0.0062	0.0058	BLNK	-123.52	171.587		0.0217	0.999	0.995	
Silver	A	0.0032	0.0030	0.0030	0.0030	0.0029	0.0029	BLNK	-0.0076	347.734		0.0030	1.000	0.995	
Thallium	A	0.0069	0.0066	0.0067	0.0068	0.0069	0.0070	BLNK	-0.0060	143.842		0.0068	1.000	0.995	
Arsenic	E	0.0056	0.0043	0.0045	0.0043	0.0042	0.0041	BLNK	-0.0405	241.306		0.0045	1.000	0.995	
Chromium	E	0.0406	0.0289	0.0287	0.0266	0.0250	0.0251	BLNK	-0.0380	39.8944		0.0292	1.000	0.995	
Cobalt	E	0.0495	0.0428	0.0457	0.0420	0.0388	0.0385	BLNK	-0.0066	25.9150		0.0429	1.000	0.995	
Copper	E	0.1829	0.0848	0.0721	0.0611	0.0571	0.0552	BLNK	-0.2415	18.0204		0.0855	1.000	0.995	
Manganese	E	0.0167	0.0140	0.0143	0.0135	0.0127	0.0127	BLNK	-0.0062	78.7610		0.0140	1.000	0.995	
Nickel	E	0.0214	0.0129	0.0130	0.0114	0.0103	0.0102	BLNK	-0.0710	98.2074		0.0132	1.000	0.995	
Sodium	E	0.0602	0.0167	0.0128	0.0078	0.0076	0.0076	BLNK	-62.779	132.034		0.0188	1.000	0.995	
Vanadium	E	0.0552	0.0261	0.0242	0.0204	0.0193	0.0195	BLNK	-0.1707	51.4208		0.0275	1.000	0.995	
Zinc	E		0.0137	0.0109	0.0084	0.0078	0.0075	BLNK	-0.2335	132.072		0.0097	1.000	0.995	
Iron	H	0.0115	0.0089	0.0099	0.0097	0.0086	0.0087	BLNK	-2.5033	115.022		0.0095	1.000	0.995	
Selenium	H	0.0023	0.0019	0.0018	0.0020	0.0018	0.0018	BLNK	-0.0060	548.775		0.0019	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	-3	50.000	2	100.00	4	1000.0	3	10000	6	20000	-1
Antimony	A	0.1000	1	0.5000	-3	1.0000	-2	10.000	1	100.00	1	200.00	0
Barium	A	0.1000	19	0.5000	3	1.0000	3	10.000	3	100.00	1	200.00	0
Beryllium	A	0.1000	4	0.5000	0	1.0000	0	10.000	2	100.00	1	200.00	0
Cadmium	A	0.1000	-6	0.5000	3	1.0000	4	10.000	4	100.00	2	200.00	0
Calcium	A	10.000	109	50.000	6	100.00	2	1000.0	-1	10000	6	20000	-1
Lead	A	0.1000	9	0.5000	6	1.0000	9	10.000	6	100.00	3	200.00	-1
Magnesium	A	10.000	19	50.000	2	100.00	1	1000.0	4	10000	6	20000	-2
Molybdenum	A	0.1000	-13	0.5000	-3	1.0000	0	10.000	1	100.00	1	200.00	0
Potassium	A	10.000	-7	50.000	10	100.00	6	1000.0	2	10000	6	20000	-1
Silver	A	0.1000	3	0.5000	3	1.0000	3	10.000	3	100.00	2	200.00	0
Thallium	A	0.0500	-12	0.2500	-7	0.5000	-5	5.0000	-3	50.000	-1	100.00	0
Arsenic	E	0.1000	-6	0.5000	-4	1.0000	5	10.000	3	100.00	1	200.00	0
Chromium	E	0.1000	24	0.5000	8	1.0000	11	10.000	6	100.00	0	200.00	0
Cobalt	E	0.1000	22	0.5000	10	1.0000	18	10.000	9	100.00	0	200.00	0
Copper	E	0.1000	-12	0.5000	4	1.0000	6	10.000	8	100.00	3	200.00	-1
Manganese	E	0.1000	26	0.5000	9	1.0000	12	10.000	6	100.00	0	200.00	0
Nickel	E	0.1000	39	0.5000	13	1.0000	20	10.000	11	100.00	1	200.00	0
Sodium	E	10.000	67	50.000	-5	100.00	6	1000.0	-4	10000	0	20000	0
Vanadium	E	0.1000	13	0.5000	0	1.0000	7	10.000	3	100.00	-1	200.00	0
Zinc	E			0.5000	34	1.0000	21	10.000	9	100.00	3	200.00	-1
Iron	H	10.000	7	50.000	-2	100.00	11	1000.0	11	10000	-1	20000	0
Selenium	H	0.1000	21	0.5000	2	1.0000	0	10.000	7	100.00	0	200.00	0

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16
Calnum : 895158996001

Cal Date : 20-APR-2015

ICV 895158996012 (15d20j00012 20-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	9953	ug/L	0	10	
Antimony	A	100.0	102.0	ug/L	2	10	
Barium	A	100.0	100.9	ug/L	1	10	
Beryllium	A	100.0	101.2	ug/L	1	10	
Cadmium	A	100.0	101.2	ug/L	1	10	
Calcium	A	10000	10090	ug/L	1	10	
Lead	A	100.0	102.4	ug/L	2	10	
Magnesium	A	10000	10000	ug/L	0	10	
Molybdenum	A	100.0	100.2	ug/L	0	10	
Potassium	A	10000	10030	ug/L	0	10	
Silver	A	100.0	100.7	ug/L	1	10	
Thallium	A	50.00	48.73	ug/L	-3	10	
Arsenic	E	100.0	100.7	ug/L	1	10	
Chromium	E	100.0	101.5	ug/L	2	10	
Cobalt	E	100.0	102.5	ug/L	3	10	
Copper	E	100.0	102.6	ug/L	3	10	
Manganese	E	100.0	102.0	ug/L	2	10	
Nickel	E	100.0	103.1	ug/L	3	10	
Sodium	E	10000	10130	ug/L	1	10	
Vanadium	E	100.0	101.3	ug/L	1	10	
Zinc	E	100.0	102.9	ug/L	3	10	
Iron	H	10000	9834	ug/L	-2	10	
Selenium	H	100.0	104.4	ug/L	4	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996019 File : 15d20j00019 Time : 20-APR-2015 11:51
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1217173	-1.57
Scandium	A	1232744	1333501	8.17
Scandium	E	39135	40844	4.37
Scandium	H	113610	86614	-23.76
Germanium	H	24397	19117	-21.64
Germanium	E	19858	21722	9.39
Indium	A	1791695	1882086	5.04
Bismuth	A	2228668	2247870	0.86
Yttrium	A	1708777	1810035	5.93
Terbium	A	3181686	3274589	2.92

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996035 File : 15d20j00035 Time : 20-APR-2015 13:34
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0065	10000	10350	ug/L	4	10	
Antimony	A	0.0026	0.0026	100.0	102.4	ug/L	2	10	
Barium	A	6.4E-4	6.1E-4	100.0	100.5	ug/L	1	10	
Beryllium	A	0.0022	0.0021	100.0	100.4	ug/L	0	10	
Cadmium	A	6.7E-4	6.6E-4	100.0	101.0	ug/L	1	10	
Calcium	A	2.4E-4	1.8E-4	10000	10410	ug/L	4	10	
Lead	A	0.0068	0.0064	100.0	103.5	ug/L	4	10	
Magnesium	A	0.0059	0.0055	10000	10440	ug/L	4	10	
Molybdenum	A	0.0018	0.0018	100.0	100.7	ug/L	1	10	
Potassium	A	0.0217	0.0061	10000	10340	ug/L	3	10	
Silver	A	0.0030	0.0029	100.0	100.5	ug/L	1	10	
Thallium	A	0.0068	0.0068	50.00	49.24	ug/L	-2	10	
Arsenic	E	0.0045	0.0042	100.0	100.7	ug/L	1	10	
Chromium	E	0.0292	0.0261	100.0	103.9	ug/L	4	10	
Cobalt	E	0.0429	0.0403	100.0	104.5	ug/L	5	10	
Copper	E	0.0855	0.0562	100.0	101.0	ug/L	1	10	
Manganese	E	0.0140	0.0135	100.0	106.2	ug/L	6	10	
Nickel	E	0.0132	0.0107	100.0	105.2	ug/L	5	10	
Sodium	E	0.0188	0.0078	10000	10240	ug/L	2	10	
Vanadium	E	0.0275	0.0202	100.0	103.5	ug/L	4	10	
Zinc	E	0.0097	0.0079	100.0	104.0	ug/L	4	10	
Iron	H	0.0095	0.0086	10000	9842	ug/L	-2	10	
Selenium	H	0.0019	0.0018	100.0	98.98	ug/L	-1	10	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1148028	-7.16
Scandium	A	1232744	1219498	-1.07
Scandium	E	39135	41001	4.77
Scandium	H	113610	107153	-5.68
Germanium	H	24397	21802	-10.64
Germanium	E	19858	20898	5.24
Indium	A	1791695	1727313	-3.59
Bismuth	A	2228668	2071191	-7.07
Yttrium	A	1708777	1700907	-0.46
Terbium	A	3181686	3132181	-1.56

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996037 File : 15d20j00037 Time : 20-APR-2015 13:47
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1112574	-10.03
Scandium	A	1232744	1181138	-4.19
Scandium	E	39135	36861	-5.81
Scandium	H	113610	99221	-12.67
Germanium	H	24397	21509	-11.84
Germanium	E	19858	20084	1.14
Indium	A	1791695	1758224	-1.87
Bismuth	A	2228668	2183152	-2.04
Yttrium	A	1708777	1677816	-1.81
Terbium	A	3181686	3143881	-1.19

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996038 File : 15d20j00038 Time : 20-APR-2015 13:54
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.5235	0.1000	ug/L	
Barium	A	1.948	0.1000	ug/L	
Beryllium	A	[0.02270]	0.1000	ug/L	
Cadmium	A	2.140	0.1000	ug/L	
Lead	A	0.2241	0.1000	ug/L	
Silver	A	[0.07160]	0.1000	ug/L	
Thallium	A	[0.01740]	0.05000	ug/L	
Arsenic	E	0.7117	0.1000	ug/L	
Chromium	E	0.8594	0.1000	ug/L	
Cobalt	E	1.081	0.1000	ug/L	
Copper	E	1.111	0.1000	ug/L	
Manganese	E	7.076	0.1000	ug/L	
Nickel	E	1.080	0.1000	ug/L	
Vanadium	E	0.1045	0.1000	ug/L	
Zinc	E	1.774	0.5000	ug/L	
Selenium	H	0.1617	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	99580	ug/L	100
Calcium	A	300000	302900	ug/L	101
Magnesium	A	100000	97830	ug/L	98
Molybdenum	A	2000	2079	ug/L	104
Potassium	A	100000	99910	ug/L	100
Sodium	E	250000	241800	ug/L	97
Phosphorus	E	100000	97080	ug/L	97
Iron	H	250000	226800	ug/L	91

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	997450	-19.34
Scandium	A	1232744	1119182	-9.21
Scandium	E	39135	38674	-1.18
Scandium	H	113610	109832	-3.33
Germanium	H	24397	20015	-17.96
Germanium	E	19858	17946	-9.63
Indium	A	1791695	1332893	-25.61
Bismuth	A	2228668	1466993	-34.18
Yttrium	A	1708777	1444600	-15.46
Terbium	A	3181686	2491415	-21.70

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895158996039 File : 15d20j00039
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 20-APR-2015 14:02

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	101100	ug/L	1		
Cadmium	A	100.0	100.9	ug/L	1	20	
Calcium	A	300000	304100	ug/L	1		
Magnesium	A	100000	98640	ug/L	-1		
Molybdenum	A	2000	2074	ug/L	4		
Potassium	A	100000	100200	ug/L	0		
Silver	A	50.00	49.37	ug/L	-1	20	
Arsenic	E	100.0	106.3	ug/L	6	20	
Chromium	E	200.0	190.2	ug/L	-5	20	
Cobalt	E	200.0	181.8	ug/L	-9	20	
Copper	E	200.0	186.3	ug/L	-7	20	
Manganese	E	200.0	198.4	ug/L	-1	20	
Nickel	E	200.0	175.3	ug/L	-12	20	
Sodium	E	250000	240700	ug/L	-4		
Vanadium	E	200.0	195.0	ug/L	-2	20	
Zinc	E	100.0	90.24	ug/L	-10	20	
Iron	H	250000	237700	ug/L	-5		
Selenium	H	100.0	97.39	ug/L	-3	20	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	113610	105797	-6.88
Scandium	A	1232744	1172969	-4.85
Scandium	E	39135	40105	2.48
Germanium	H	24397	20460	-16.14
Germanium	E	19858	18039	-9.16
Indium	A	1791695	1361082	-24.03
Yttrium	A	1708777	1487682	-12.94

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996050.1 File : 15d20j00050 Time : 20-APR-2015 15:15
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0063	10000	10150	ug/L	2	10	
Antimony	A	0.0026	0.0026	100.0	103.3	ug/L	3	10	
Barium	A	6.4E-4	6.1E-4	100.0	100.6	ug/L	1	10	
Beryllium	A	0.0022	0.0021	100.0	98.13	ug/L	-2	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	102.1	ug/L	2	10	
Calcium	A	2.4E-4	1.8E-4	10000	10160	ug/L	2	10	
Lead	A	0.0068	0.0064	100.0	104.4	ug/L	4	10	
Magnesium	A	0.0059	0.0054	10000	10260	ug/L	3	10	
Molybdenum	A	0.0018	0.0018	100.0	101.3	ug/L	1	10	
Potassium	A	0.0217	0.0060	10000	10090	ug/L	1	10	
Silver	A	0.0030	0.0029	100.0	100.8	ug/L	1	10	
Thallium	A	0.0068	0.0069	50.00	49.83	ug/L	0	10	
Arsenic	E	0.0045	0.0042	100.0	100.2	ug/L	0	10	
Chromium	E	0.0292	0.0254	100.0	101.3	ug/L	1	10	
Cobalt	E	0.0429	0.0395	100.0	102.5	ug/L	3	10	
Copper	E	0.0855	0.0554	100.0	99.61	ug/L	0	10	
Manganese	E	0.0140	0.0133	100.0	105.1	ug/L	5	10	
Nickel	E	0.0132	0.0104	100.0	102.3	ug/L	2	10	
Sodium	E	0.0188	0.0077	10000	10140	ug/L	1	10	
Vanadium	E	0.0275	0.0198	100.0	101.6	ug/L	2	10	
Zinc	E	0.0097	0.0078	100.0	103.1	ug/L	3	10	
Iron	H	0.0095	0.0090	10000	10360	ug/L	4	10	
Selenium	H	0.0019	0.0018	100.0	96.47	ug/L	-4	10	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1122961	-9.19
Scandium	A	1232744	1198997	-2.74
Scandium	E	39135	39712	1.47
Scandium	H	113610	107542	-5.34
Germanium	H	24397	23587	-3.32
Germanium	E	19858	19899	0.21
Indium	A	1791695	1646257	-8.12
Bismuth	A	2228668	2006810	-9.95
Yttrium	A	1708777	1616798	-5.38
Terbium	A	3181686	3023780	-4.96

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996052.1 File : 15d20j00052 Time : 20-APR-2015 15:28
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1136304	-8.11
Scandium	A	1232744	1129225	-8.40
Scandium	E	39135	38028	-2.83
Scandium	H	113610	101010	-11.09
Germanium	H	24397	22224	-8.91
Germanium	E	19858	20108	1.26
Indium	A	1791695	1698192	-5.22
Bismuth	A	2228668	2124272	-4.68
Yttrium	A	1708777	1624053	-4.96
Terbium	A	3181686	3024444	-4.94

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996064.1 File : 15d20j00064 Time : 20-APR-2015 16:49
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0064	10000	10310	ug/L	3	10	
Antimony	A	0.0026	0.0026	100.0	103.3	ug/L	3	10	
Barium	A	6.4E-4	6.1E-4	100.0	100.8	ug/L	1	10	
Beryllium	A	0.0022	0.0021	100.0	99.50	ug/L	0	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	102.6	ug/L	3	10	
Calcium	A	2.4E-4	1.8E-4	10000	10260	ug/L	3	10	
Lead	A	0.0068	0.0065	100.0	105.0	ug/L	5	10	
Magnesium	A	0.0059	0.0055	10000	10430	ug/L	4	10	
Molybdenum	A	0.0018	0.0018	100.0	100.9	ug/L	1	10	
Potassium	A	0.0217	0.0060	10000	10180	ug/L	2	10	
Silver	A	0.0030	0.0029	100.0	100.7	ug/L	1	10	
Thallium	A	0.0068	0.0069	50.00	49.75	ug/L	0	10	
Arsenic	E	0.0045	0.0042	100.0	101.1	ug/L	1	10	
Chromium	E	0.0292	0.0256	100.0	102.1	ug/L	2	10	
Cobalt	E	0.0429	0.0395	100.0	102.3	ug/L	2	10	
Copper	E	0.0855	0.0554	100.0	99.53	ug/L	0	10	
Manganese	E	0.0140	0.0135	100.0	106.2	ug/L	6	10	
Nickel	E	0.0132	0.0104	100.0	102.0	ug/L	2	10	
Sodium	E	0.0188	0.0079	10000	10350	ug/L	4	10	
Vanadium	E	0.0275	0.0199	100.0	102.0	ug/L	2	10	
Zinc	E	0.0097	0.0079	100.0	104.2	ug/L	4	10	
Iron	H	0.0095	0.0085	10000	9780	ug/L	-2	10	
Selenium	H	0.0019	0.0019	100.0	104.0	ug/L	4	10	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1127545	-8.82
Scandium	A	1232744	1180810	-4.21
Scandium	E	39135	39676	1.38
Scandium	H	113610	95652	-15.81
Germanium	H	24397	18862	-22.69
Germanium	E	19858	19961	0.52
Indium	A	1791695	1652210	-7.79
Bismuth	A	2228668	2013070	-9.67
Yttrium	A	1708777	1615367	-5.47
Terbium	A	3181686	3022681	-5.00

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996066.1 File : 15d20j00066 Time : 20-APR-2015 17:02
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1159560	-6.23
Scandium	A	1232744	1171688	-4.95
Scandium	E	39135	38203	-2.38
Scandium	H	113610	82056	-27.77
Germanium	H	24397	18125	-25.71
Germanium	E	19858	20581	3.64
Indium	A	1791695	1751832	-2.22
Bismuth	A	2228668	2206393	-1.00
Yttrium	A	1708777	1660085	-2.85
Terbium	A	3181686	3126433	-1.74

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895158996076 File : 15d20j00076 IDF : 1.0
 Cal : 895158996001 Caldate : 20-APR-2015 Time : 20-APR-2015 18:06
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0064	0.0067	10000	10740	ug/L	7	10	
Antimony	A	0.0026	0.0028	100.0	109.9	ug/L	10	10	
Barium	A	6.4E-4	6.5E-4	100.0	108.1	ug/L	8	10	
Beryllium	A	0.0022	0.0022	100.0	104.5	ug/L	5	10	
Cadmium	A	6.7E-4	7.2E-4	100.0	109.1	ug/L	9	10	
Calcium	A	2.4E-4	1.9E-4	10000	10810	ug/L	8	10	
Lead	A	0.0068	0.0069	100.0	111.6	ug/L	12	10	c+ ***
Magnesium	A	0.0059	0.0057	10000	10860	ug/L	9	10	
Molybdenum	A	0.0018	0.0019	100.0	107.7	ug/L	8	10	
Potassium	A	0.0217	0.0063	10000	10670	ug/L	7	10	
Silver	A	0.0030	0.0031	100.0	107.0	ug/L	7	10	
Thallium	A	0.0068	0.0073	50.00	52.53	ug/L	5	10	
Arsenic	E	0.0045	0.0042	100.0	101.3	ug/L	1	10	
Chromium	E	0.0292	0.0239	100.0	95.32	ug/L	-5	10	
Cobalt	E	0.0429	0.0370	100.0	95.95	ug/L	-4	10	
Copper	E	0.0855	0.0550	100.0	98.85	ug/L	-1	10	
Manganese	E	0.0140	0.0126	100.0	99.54	ug/L	0	10	
Nickel	E	0.0132	0.0097	100.0	95.36	ug/L	-5	10	
Sodium	E	0.0188	0.0073	10000	9513	ug/L	-5	10	
Vanadium	E	0.0275	0.0185	100.0	95.14	ug/L	-5	10	
Zinc	E	0.0097	0.0080	100.0	104.8	ug/L	5	10	
Iron	H	0.0095	0.0082	10000	9398	ug/L	-6	10	
Selenium	H	0.0019	0.0020	100.0	110.1	ug/L	10	10	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1081795	-12.51
Scandium	A	1232744	1153613	-6.42
Scandium	E	39135	43278	10.59
Scandium	H	113610	79162	-30.32
Germanium	H	24397	14543	-40.39
Germanium	E	19858	20439	2.93
Indium	A	1791695	1610089	-10.14
Bismuth	A	2228668	1941645	-12.88
Yttrium	A	1708777	1569349	-8.16
Terbium	A	3181686	2907136	-8.63

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996078 File : 15d20j00078 Time : 20-APR-2015 18:19
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1139120	-7.88
Scandium	A	1232744	1172804	-4.86
Scandium	E	39135	39868	1.87
Scandium	H	113610	66435	-41.52
Germanium	H	24397	14175	-41.90
Germanium	E	19858	21398	7.76
Indium	A	1791695	1795062	0.19
Bismuth	A	2228668	2225649	-0.14
Yttrium	A	1708777	1698772	-0.59
Terbium	A	3181686	3172540	-0.29

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996098 File : 15d20j00098 Time : 20-APR-2015 20:29
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0064	0.0065	10000	10410	ug/L	4	10	
Antimony	A	0.0026	0.0026	100.0	104.0	ug/L	4	10	
Barium	A	6.4E-4	6.3E-4	100.0	105.1	ug/L	5	10	
Beryllium	A	0.0022	0.0021	100.0	97.55	ug/L	-2	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	101.8	ug/L	2	10	
Calcium	A	2.4E-4	1.8E-4	10000	10490	ug/L	5	10	
Lead	A	0.0068	0.0063	100.0	102.4	ug/L	2	10	
Magnesium	A	0.0059	0.0055	10000	10450	ug/L	5	10	
Molybdenum	A	0.0018	0.0018	100.0	100.4	ug/L	0	10	
Potassium	A	0.0217	0.0062	10000	10530	ug/L	5	10	
Silver	A	0.0030	0.0029	100.0	101.7	ug/L	2	10	
Thallium	A	0.0068	0.0069	50.00	49.69	ug/L	-1	10	
Arsenic	E	0.0045	0.0043	100.0	102.8	ug/L	3	10	
Chromium	E	0.0292	0.0258	100.0	102.9	ug/L	3	10	
Cobalt	E	0.0429	0.0399	100.0	103.4	ug/L	3	10	
Copper	E	0.0855	0.0554	100.0	99.68	ug/L	0	10	
Manganese	E	0.0140	0.0134	100.0	105.6	ug/L	6	10	
Nickel	E	0.0132	0.0106	100.0	104.2	ug/L	4	10	
Sodium	E	0.0188	0.0077	10000	10150	ug/L	2	10	
Vanadium	E	0.0275	0.0201	100.0	103.3	ug/L	3	10	
Zinc	E	0.0097	0.0078	100.0	103.2	ug/L	3	10	
Iron	H	0.0095	0.0095	10000	10970	ug/L	10	10	
Selenium	H	0.0019	0.0022	100.0	121.5	ug/L	22	10	c+ ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1259154	1.83
Scandium	A	1232744	1303893	5.77
Scandium	E	39135	44635	14.05
Scandium	H	113610	54684	-51.87
Germanium	H	24397	10730	-56.02
Germanium	E	19858	22692	14.27
Indium	A	1791695	1797484	0.32
Bismuth	A	2228668	2057304	-7.69
Yttrium	A	1708777	1793768	4.97
Terbium	A	3181686	3164796	-0.53

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996100 File : 15d20j00100 Time : 20-APR-2015 20:42
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	0.1031	0.1000	0.1000	ug/L	CCB ***
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1247240	0.86
Scandium	A	1232744	1260930	2.29
Scandium	E	39135	42135	7.67
Scandium	H	113610	49397	-56.52
Germanium	H	24397	10278	-57.87
Germanium	E	19858	22428	12.94
Indium	A	1791695	1839106	2.65
Bismuth	A	2228668	2161198	-3.03
Yttrium	A	1708777	1793136	4.94
Terbium	A	3181686	3166295	-0.48

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996118 File : 15d20j00118 Time : 20-APR-2015 22:39
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0064	0.0061	10000	9710	ug/L	-3	10	
Antimony	A	0.0026	0.0026	100.0	104.7	ug/L	5	10	
Barium	A	6.4E-4	6.4E-4	100.0	105.6	ug/L	6	10	
Beryllium	A	0.0022	0.0021	100.0	98.99	ug/L	-1	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	102.0	ug/L	2	10	
Calcium	A	2.4E-4	1.7E-4	10000	9876	ug/L	-1	10	
Lead	A	0.0068	0.0064	100.0	103.2	ug/L	3	10	
Magnesium	A	0.0059	0.0051	10000	9748	ug/L	-3	10	
Molybdenum	A	0.0018	0.0018	100.0	100.7	ug/L	1	10	
Potassium	A	0.0217	0.0058	10000	9867	ug/L	-1	10	
Silver	A	0.0030	0.0029	100.0	101.3	ug/L	1	10	
Thallium	A	0.0068	0.0070	50.00	50.00	ug/L	0	10	
Arsenic	E	0.0045	0.0043	100.0	103.2	ug/L	3	10	
Chromium	E	0.0292	0.0242	100.0	96.67	ug/L	-3	10	
Cobalt	E	0.0429	0.0376	100.0	97.45	ug/L	-3	10	
Copper	E	0.0855	0.0553	100.0	99.46	ug/L	-1	10	
Manganese	E	0.0140	0.0127	100.0	99.72	ug/L	0	10	
Nickel	E	0.0132	0.0099	100.0	97.41	ug/L	-3	10	
Sodium	E	0.0188	0.0072	10000	9441	ug/L	-6	10	
Vanadium	E	0.0275	0.0189	100.0	96.96	ug/L	-3	10	
Zinc	E	0.0097	0.0078	100.0	103.0	ug/L	3	10	
Iron	H	0.0095	0.0086	10000	9924	ug/L	-1	10	
Selenium	H	0.0019	0.0023	100.0	124.7	ug/L	25	10	c+ ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1151875	-6.85
Scandium	A	1232744	1296213	5.15
Scandium	E	39135	43503	11.16
Scandium	H	113610	47791	-57.93
Germanium	H	24397	8334	-65.84
Germanium	E	19858	20879	5.14
Indium	A	1791695	1720747	-3.96
Bismuth	A	2228668	1973517	-11.45
Yttrium	A	1708777	1714099	0.31
Terbium	A	3181686	3040206	-4.45

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996120 File : 15d20j00120 Time : 20-APR-2015 22:52
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	i- ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1169425	-5.43
Scandium	A	1232744	1196598	-2.93
Scandium	E	39135	39505	0.95
Scandium	H	113610	35218	-69.00
Germanium	H	24397	7214	-70.43 *
Germanium	E	19858	21098	6.24
Indium	A	1791695	1761628	-1.68
Bismuth	A	2228668	2073276	-6.97
Yttrium	A	1708777	1706766	-0.12
Terbium	A	3181686	3043570	-4.34

--low bias i=ISTD failure

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996122 File : 15d20j00122 Time : 20-APR-2015 23:04
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4876	0.1000	ug/L	
Barium	A	2.000	0.1000	ug/L	
Beryllium	A	[0.02270]	0.1000	ug/L	
Cadmium	A	2.182	0.1000	ug/L	
Lead	A	0.2220	0.1000	ug/L	
Silver	A	[0.07980]	0.1000	ug/L	
Thallium	A	[0.01870]	0.05000	ug/L	
Arsenic	E	0.7274	0.1000	ug/L	
Chromium	E	0.8149	0.1000	ug/L	
Cobalt	E	1.088	0.1000	ug/L	
Copper	E	1.121	0.1000	ug/L	
Manganese	E	6.940	0.1000	ug/L	
Nickel	E	1.107	0.1000	ug/L	
Vanadium	E	[0.08030]	0.1000	ug/L	
Zinc	E	1.783	0.5000	ug/L	
Selenium	H	0.4931	0.1000	ug/L	i- ***

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	96080	ug/L	96
Calcium	A	300000	298700	ug/L	100
Magnesium	A	100000	92970	ug/L	93
Molybdenum	A	2000	2051	ug/L	103
Potassium	A	100000	98800	ug/L	99
Sodium	E	250000	232300	ug/L	93
Phosphorus	E	100000	97160	ug/L	97
Iron	H	250000	232400	ug/L	93

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1028471	-16.83
Scandium	A	1232744	1241204	0.69
Scandium	E	39135	41241	5.38
Scandium	H	113610	39460	-65.27
Germanium	H	24397	6000	-75.41 *
Germanium	E	19858	18893	-4.86
Indium	A	1791695	1429897	-20.19
Bismuth	A	2228668	1480817	-33.56
Yttrium	A	1708777	1587808	-7.08
Terbium	A	3181686	2589842	-18.60

--low bias i=ISTD failure

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895158996123 File : 15d20j00123
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 20-APR-2015 23:11

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	98820	ug/L	-1		
Cadmium	A	100.0	100.3	ug/L	0	20	
Calcium	A	300000	305500	ug/L	2		
Magnesium	A	100000	95830	ug/L	-4		
Molybdenum	A	2000	2037	ug/L	2		
Potassium	A	100000	101700	ug/L	2		
Silver	A	50.00	49.39	ug/L	-1	20	
Arsenic	E	100.0	109.3	ug/L	9	20	
Chromium	E	200.0	202.1	ug/L	1	20	
Cobalt	E	200.0	194.3	ug/L	-3	20	
Copper	E	200.0	186.1	ug/L	-7	20	
Manganese	E	200.0	210.8	ug/L	5	20	
Nickel	E	200.0	188.6	ug/L	-6	20	
Sodium	E	250000	245400	ug/L	-2		
Vanadium	E	200.0	208.7	ug/L	4	20	
Zinc	E	100.0	90.27	ug/L	-10	20	
Iron	H	250000	277600	ug/L	11		i- ***
Selenium	H	100.0	143.2	ug/L	43	20	ab+ i- ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	113610	31363	-72.39 *
Scandium	A	1232744	1214437	-1.49
Scandium	E	39135	40101	2.47
Germanium	H	24397	5429	-77.75 *
Germanium	E	19858	19422	-2.20
Indium	A	1791695	1431146	-20.12
Yttrium	A	1708777	1586131	-7.18

+ = high bias -- = low bias ab = ICSAB i = ISTD failure

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996138 File : 15d20j00138 Time : 21-APR-2015 00:49
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0064	10000	10190	ug/L	2	10	i+ ***
Antimony	A	0.0026	0.0026	100.0	105.2	ug/L	5	10	
Barium	A	6.4E-4	6.8E-4	100.0	112.6	ug/L	13	10	c+ ***
Beryllium	A	0.0022	0.0020	100.0	95.45	ug/L	-5	10	i+ ***
Cadmium	A	6.7E-4	6.7E-4	100.0	101.8	ug/L	2	10	
Calcium	A	2.4E-4	1.8E-4	10000	10060	ug/L	1	10	i+ ***
Lead	A	0.0068	0.0059	100.0	95.40	ug/L	-5	10	
Magnesium	A	0.0059	0.0053	10000	10130	ug/L	1	10	i+ ***
Molybdenum	A	0.0018	0.0018	100.0	99.22	ug/L	-1	10	
Potassium	A	0.0217	0.0062	10000	10570	ug/L	6	10	i+ ***
Silver	A	0.0030	0.0030	100.0	103.6	ug/L	4	10	
Thallium	A	0.0068	0.0069	50.00	49.38	ug/L	-1	10	
Arsenic	E	0.0045	0.0046	100.0	110.1	ug/L	10	10	i+ ***
Chromium	E	0.0292	0.0254	100.0	101.1	ug/L	1	10	i+ ***
Cobalt	E	0.0429	0.0395	100.0	102.3	ug/L	2	10	i+ ***
Copper	E	0.0855	0.0571	100.0	102.7	ug/L	3	10	i+ ***
Manganese	E	0.0140	0.0129	100.0	101.7	ug/L	2	10	i+ ***
Nickel	E	0.0132	0.0104	100.0	102.5	ug/L	3	10	i+ ***
Sodium	E	0.0188	0.0076	10000	9912	ug/L	-1	10	i+ ***
Vanadium	E	0.0275	0.0202	100.0	103.5	ug/L	4	10	i+ ***
Zinc	E	0.0097	0.0078	100.0	102.3	ug/L	2	10	i+ ***
Iron	H	0.0095	0.0095	10000	10910	ug/L	9	10	
Selenium	H	0.0019	0.0023	100.0	124.9	ug/L	25	10	c+ ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1503911	21.62 *
Scandium	A	1232744	1552926	25.97 *
Scandium	E	39135	50798	29.80 *
Scandium	H	113610	44840	-60.53
Germanium	H	24397	8315	-65.92
Germanium	E	19858	24797	24.87 *
Indium	A	1791695	1828239	2.04
Bismuth	A	2228668	1826199	-18.06
Yttrium	A	1708777	1926573	12.75
Terbium	A	3181686	2989398	-6.04

+ = high bias c = CCV i = ISTD failure

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996140 File : 15d20j00140 Time : 21-APR-2015 01:02
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	[6.674]	10.00	5.000	ug/L	!CCB
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	38.49	10.00	---	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	64.37	10.00	100.0	ug/L	CCB ***
Vanadium	E	[0.05130]	0.1000	0.05000	ug/L	!CCB
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1376223	11.30
Scandium	A	1232744	1401427	13.68
Scandium	E	39135	44992	14.97
Scandium	H	113610	42446	-62.64
Germanium	H	24397	8828	-63.82
Germanium	E	19858	23627	18.98
Indium	A	1791695	1834256	2.38
Bismuth	A	2228668	1923978	-13.67
Yttrium	A	1708777	1855698	8.60
Terbium	A	3181686	2961684	-6.91

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996151 File : 15d20j00151 Time : 21-APR-2015 02:13
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.5149	0.1000	ug/L	
Barium	A	2.069	0.1000	ug/L	
Beryllium	A	[0.02150]	0.1000	ug/L	
Cadmium	A	2.183	0.1000	ug/L	
Lead	A	0.2098	0.1000	ug/L	
Silver	A	[0.07320]	0.1000	ug/L	
Thallium	A	[0.01660]	0.05000	ug/L	
Arsenic	E	0.7562	0.1000	ug/L	
Chromium	E	0.8362	0.1000	ug/L	
Cobalt	E	1.109	0.1000	ug/L	
Copper	E	1.163	0.1000	ug/L	
Manganese	E	6.891	0.1000	ug/L	
Nickel	E	1.100	0.1000	ug/L	
Vanadium	E	0.1064	0.1000	ug/L	
Zinc	E	1.831	0.5000	ug/L	
Selenium	H	0.4149	0.1000	ug/L	i- ***

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94060	ug/L	94
Calcium	A	300000	293600	ug/L	98
Magnesium	A	100000	90930	ug/L	91
Molybdenum	A	2000	2052	ug/L	103
Potassium	A	100000	99190	ug/L	99
Sodium	E	250000	225400	ug/L	90
Phosphorus	E	100000	102300	ug/L	102
Iron	H	250000	235100	ug/L	94

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	926266	-25.09
Scandium	A	1232744	1162057	-5.73
Scandium	E	39135	39870	1.88
Scandium	H	113610	35238	-68.98
Germanium	H	24397	5527	-77.35 *
Germanium	E	19858	18781	-5.42
Indium	A	1791695	1267898	-29.23
Bismuth	A	2228668	1226225	-44.98
Yttrium	A	1708777	1440078	-15.72
Terbium	A	3181686	2183733	-31.37

--low bias i=ISTD failure

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266087 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895158996152 File : 15d20j00152
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 21-APR-2015 02:20

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	98040	ug/L	-2		
Cadmium	A	100.0	100.5	ug/L	1	20	
Calcium	A	300000	304400	ug/L	1		
Magnesium	A	100000	94680	ug/L	-5		
Molybdenum	A	2000	2058	ug/L	3		
Potassium	A	100000	102900	ug/L	3		
Silver	A	50.00	51.20	ug/L	2	20	
Arsenic	E	100.0	114.6	ug/L	15	20	
Chromium	E	200.0	205.4	ug/L	3	20	
Cobalt	E	200.0	198.7	ug/L	-1	20	
Copper	E	200.0	186.9	ug/L	-7	20	
Manganese	E	200.0	209.2	ug/L	5	20	
Nickel	E	200.0	194.1	ug/L	-3	20	
Sodium	E	250000	238500	ug/L	-5		
Vanadium	E	200.0	214.2	ug/L	7	20	
Zinc	E	100.0	91.27	ug/L	-9	20	
Iron	H	250000	278300	ug/L	11		i- ***
Selenium	H	100.0	134.3	ug/L	34	20	ab+ i- ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	113610	23814	-79.04 *
Scandium	A	1232744	1090331	-11.55
Scandium	E	39135	35464	-9.38
Germanium	H	24397	4302	-82.37 *
Germanium	E	19858	17757	-10.58
Indium	A	1791695	1215005	-32.19
Yttrium	A	1708777	1378718	-19.32

+ = high bias -- = low bias ab = ICSAB i = ISTD failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d21f00001	X	RINSE			04/21/15 05:46	1.0	1	
002	15d21f00002	TUN				04/21/15 05:50	1.0	2	
003	15d21f00003	X	RINSE			04/21/15 05:55	1.0	1	
004	15d21f00004	ICALBLK	CALBLANK			04/21/15 06:00	1.0	1	
005	15d21f00005	ICAL				04/21/15 06:05	1.0	3 1	
006	15d21f00006	ICAL				04/21/15 06:09	1.0	4 1	
007	15d21f00007	ICAL				04/21/15 06:14	1.0	5 1	
008	15d21f00008	ICAL				04/21/15 06:19	1.0	6 1	
009	15d21f00009	ICAL				04/21/15 06:24	1.0	7 1	
010	15d21f00010	ICAL				04/21/15 06:28	1.0	8 1	
011	15d21f00011	X	RINSE			04/21/15 06:33	1.0	1	
012	15d21f00012	XICV				04/21/15 06:48	1.0	9 1	
013	15d21f00013	ICV				04/21/15 06:53	1.0	9 1	
014	15d21f00014	XCRI				04/21/15 06:57	1.0	10 1	
015	15d21f00015	XICB				04/21/15 07:03	1.0	1	
016	15d21f00016	ICB				04/21/15 07:08	1.0	1	
017	15d21f00017	CRI				04/21/15 07:12	1.0	10 1	
018	15d21f00018	ICSA				04/21/15 07:17	1.0	11 1	8:CA=290000
019	15d21f00019	ICSAB				04/21/15 07:22	1.0	12 1	8:CA=280000
020	15d21f00020	X	RINSE			04/21/15 07:27	1.0	1	
021	15d21f00021	X	RINSE			04/21/15 07:40	1.0	1	
022	15d21f00022	X	RINSE			04/21/15 07:45	1.0	1	
023	15d21f00023	X	RINSE			04/21/15 07:50	1.0	1	
024	15d21f00024	X	RINSE			04/21/15 07:54	1.0	1	
025	15d21f00025	BLANK	QC784864	Water	222400	04/21/15 07:59	5.0	1	
026	15d21f00026	BS	QC784865	Water	222400	04/21/15 08:04	5.0	1	
027	15d21f00027	BSD	QC784866	Water	222400	04/21/15 08:09	5.0	1	
028	15d21f00028	MSS	266138-002	Water	222400	04/21/15 08:13	5.0	1	1:NA=73000
029	15d21f00029	MS	QC784867	Water	222400	04/21/15 08:18	5.0	1	
030	15d21f00030	MSD	QC784868	Water	222400	04/21/15 08:23	5.0	1	
031	15d21f00031	MSS	266138-002	Water	222400	04/21/15 08:28	5.0	1	1:NA=72000
032	15d21f00032	SAMPLE	266173-001	Water	222400	04/21/15 08:32	5.0	1	
033	15d21f00033	SAMPLE	266173-002	Water	222400	04/21/15 08:37	5.0	1	6:CA=44000
034	15d21f00034	CCV				04/21/15 08:42	1.0	13 1	
035	15d21f00035	X	XCCB			04/21/15 09:01	1.0	1	
036	15d21f00036	CCB				04/21/15 09:05	1.0	1	
037	15d21f00037	BLANK	QC784864	Water	222400	04/21/15 09:10	5.0	1	
038	15d21f00038	SAMPLE	266173-002	Water	222400	04/21/15 09:15	500.0	1	
039	15d21f00039	CCV				04/21/15 09:20	1.0	13 1	
040	15d21f00040	X	XCCB			04/21/15 09:25	1.0	1	
041	15d21f00041	CCB				04/21/15 09:30	1.0	1	
042	15d21f00042	ICSA				04/21/15 09:35	1.0	11 1	8:CA=290000
043	15d21f00043	ICSAB				04/21/15 09:39	1.0	12 1	11:CA=280000
044	15d21f00044	X	RINSE			04/21/15 09:44	1.0	1	
045	15d21f00045	X	RINSE			04/21/15 09:49	1.0	1	
046	15d21f00046	MS	QC784304	Filtrate	222258	04/21/15 09:54	5.0	1	4:NA=720000
047	15d21f00047	X	RINSE			04/21/15 09:59	1.0	1	
048	15d21f00048	MSD	QC784305	Filtrate	222258	04/21/15 10:03	5.0	1	4:NA=720000
049	15d21f00049	X	RINSE			04/21/15 10:08	1.0	1	
050	15d21f00050	MS	QC784304	Filtrate	222258	04/21/15 10:13	50.0	1	2:NA=77000
051	15d21f00051	X	RINSE			04/21/15 10:18	1.0	1	
052	15d21f00052	MSD	QC784305	Filtrate	222258	04/21/15 10:23	50.0	1	3:NA=67000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d21f00053	X	RINSE			04/21/15 10:28	1.0	1	
054	15d21f00054	CCV				04/21/15 10:32	1.0	13 1	
055	15d21f00055	X	XCCB			04/21/15 10:37	1.0	1	
056	15d21f00056	CCB				04/21/15 10:42	1.0	1	
057	15d21f00057	MSS	266019-005	Filtrate	222258	04/21/15 10:47	5.0	1	3:NA=30000
058	15d21f00058	X	RINSE			04/21/15 10:52	1.0	1	
059	15d21f00059	MS	QC784306	Filtrate	222258	04/21/15 10:57	5.0	1	4:NA=31000
060	15d21f00060	X	RINSE			04/21/15 11:02	1.0	1	
061	15d21f00061	MSD	QC784307	Filtrate	222258	04/21/15 11:06	5.0	1	4:NA=30000
062	15d21f00062	X	RINSE			04/21/15 11:11	1.0	1	
063	15d21f00063	SER	QC784308	Filtrate	222258	04/21/15 11:16	25.0	1	
064	15d21f00064	X	RINSE			04/21/15 11:21	1.0	1	
065	15d21f00065	PDS	QC784309	Filtrate	222258	04/21/15 11:26	5.0	14 15 16 1	1:NA=34000
066	15d21f00066	X	RINSE			04/21/15 11:31	1.0	1	
067	15d21f00067	SAMPLE	266019-003	Filtrate	222258	04/21/15 11:35	5.0	1	4:CA=35000
068	15d21f00068	X	RINSE			04/21/15 11:40	1.0	1	
069	15d21f00069	CCV				04/21/15 11:45	1.0	13 1	
070	15d21f00070	X	XCCB			04/21/15 11:50	1.0	1	
071	15d21f00071	CCB				04/21/15 11:55	1.0	1	
072	15d21f00072	MSS	266019-005	Filtrate	222258	04/21/15 12:00	5.0	1	4:NA=31000
073	15d21f00073	X	RINSE			04/21/15 12:05	1.0	1	
074	15d21f00074	MS	QC784306	Filtrate	222258	04/21/15 12:10	5.0	1	3:NA=32000
075	15d21f00075	X	RINSE			04/21/15 12:15	1.0	1	
076	15d21f00076	MSD	QC784307	Filtrate	222258	04/21/15 12:20	5.0	1	4:NA=32000
077	15d21f00077	X	RINSE			04/21/15 12:24	1.0	1	
078	15d21f00078	MSS	266019-005	Filtrate	222258	04/21/15 12:29	5.0	1	3:NA=31000
079	15d21f00079	X	RINSE			04/21/15 12:34	1.0	1	
080	15d21f00080	SER	QC784308	Filtrate	222258	04/21/15 12:39	25.0	1	
081	15d21f00081	X	RINSE			04/21/15 12:44	1.0	1	
082	15d21f00082	PDS	QC784309	Filtrate	222258	04/21/15 12:49	5.0	14 15 16 1	1:NA=34000
083	15d21f00083	X	RINSE			04/21/15 12:53	1.0	1	
084	15d21f00084	SAMPLE	266019-003	Filtrate	222258	04/21/15 12:58	5.0	1	4:CA=33000
085	15d21f00085	X	RINSE			04/21/15 13:03	1.0	1	
086	15d21f00086	CCV				04/21/15 13:08	1.0	13 1	
087	15d21f00087	X	XCCB			04/21/15 13:13	1.0	1	
088	15d21f00088	CCB				04/21/15 13:18	1.0	1	
089	15d21f00089	MSS	266087-001	Filtrate	222325	04/21/15 13:23	5.0	1	4:CA=35000
090	15d21f00090	X	RINSE			04/21/15 13:28	1.0	1	
091	15d21f00091	MS	QC784573	Filtrate	222325	04/21/15 13:32	5.0	1	4:CA=34000
092	15d21f00092	X	RINSE			04/21/15 13:37	1.0	1	
093	15d21f00093	MSD	QC784574	Filtrate	222325	04/21/15 13:42	5.0	1	4:CA=35000
094	15d21f00094	X	RINSE			04/21/15 13:47	1.0	1	
095	15d21f00095	SER	QC784575	Filtrate	222325	04/21/15 13:52	25.0	1	
096	15d21f00096	X	RINSE			04/21/15 13:57	1.0	1	
097	15d21f00097	PDS	QC784576	Filtrate	222325	04/21/15 14:01	5.0	14 15 16 1	
098	15d21f00098	X	RINSE			04/21/15 14:06	1.0	1	
099	15d21f00099	X	RINSE			04/21/15 14:11	1.0	1	
100	15d21f00100	X	RINSE			04/21/15 14:16	1.0	1	
101	15d21f00101	BLANK	QC784945	Filtrate	222114	04/21/15 14:21	5.0	1	
102	15d21f00102	X	RINSE			04/21/15 14:26	1.0	1	
103	15d21f00103	CCV				04/21/15 14:31	1.0	13 1	
104	15d21f00104	X	XCCB			04/21/15 14:36	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d21f00105	CCB				04/21/15 14:41	1.0	1	
106	15d21f00106	SAMPLE	266087-002	Filtrate	222325	04/21/15 14:46	5.0	1	
107	15d21f00107	X	RINSE			04/21/15 14:50	1.0	1	
108	15d21f00108	SAMPLE	266087-003	Filtrate	222325	04/21/15 14:55	5.0	1	
109	15d21f00109	X	RINSE			04/21/15 15:00	1.0	1	
110	15d21f00110	SAMPLE	265899-005	Filtrate	222114	04/21/15 15:08	50.0	1	2:NA=120000
111	15d21f00111	X	RINSE			04/21/15 15:13	1.0	1	
112	15d21f00112	SAMPLE	265899-006	Filtrate	222114	04/21/15 15:18	50.0	1	1:NA=28000
113	15d21f00113	X	RINSE			04/21/15 15:23	1.0	1	
114	15d21f00114	CCV				04/21/15 15:28	1.0	13 1	
115	15d21f00115	X	XCCB			04/21/15 15:33	1.0	1	
116	15d21f00116	CCB				04/21/15 15:38	1.0	1	
117	15d21f00117	ICSA				04/21/15 15:42	1.0	11 1	8:CA=300000
118	15d21f00118	ICSAB				04/21/15 15:47	1.0	12 1	10:CA=290000
119	15d21f00119	X	RINSE			04/21/15 15:52	1.0	1	
120	15d21f00120	X	RINSE			04/21/15 15:57	1.0	1	
121	15d21f00121	SAMPLE	266087-004	Filtrate	222325	04/21/15 16:02	5.0	1	
122	15d21f00122	X	RINSE			04/21/15 16:07	1.0	1	
123	15d21f00123	SAMPLE	266087-006	Filtrate	222325	04/21/15 16:12	5.0	1	
124	15d21f00124	X	RINSE			04/21/15 16:16	1.0	1	
125	15d21f00125	SAMPLE	266087-007	Filtrate	222325	04/21/15 16:21	5.0	1	
126	15d21f00126	X	RINSE			04/21/15 16:26	1.0	1	
127	15d21f00127	SAMPLE	266087-009	Filtrate	222325	04/21/15 16:31	5.0	1	4:CA=55000
128	15d21f00128	X	RINSE			04/21/15 16:36	1.0	1	
129	15d21f00129	CCV				04/21/15 16:41	1.0	13 1	
130	15d21f00130	X	XCCB			04/21/15 16:46	1.0	1	
131	15d21f00131	CCB				04/21/15 16:56	1.0	1	
132	15d21f00132	SAMPLE	266091-004	Filtrate	222325	04/21/15 17:01	500.0	1	
133	15d21f00133	SAMPLE	266091-005	Filtrate	222325	04/21/15 17:06	500.0	1	
134	15d21f00134	SAMPLE	266091-006	Filtrate	222325	04/21/15 17:10	500.0	1	
135	15d21f00135	SAMPLE	266091-007	Filtrate	222325	04/21/15 17:15	500.0	1	
136	15d21f00136	CCV				04/21/15 17:20	1.0	13 1	
137	15d21f00137	X	XCCB			04/21/15 17:25	1.0	1	
138	15d21f00138	CCB				04/21/15 17:30	1.0	1	
139	15d21f00139	SAMPLE	266091-002	Filtrate	222325	04/21/15 17:35	5.0	1	4:CA=130000
140	15d21f00140	X	RINSE			04/21/15 17:39	1.0	1	
141	15d21f00141	SAMPLE	266091-004	Filtrate	222325	04/21/15 17:44	5.0	1	1:NA=21000
142	15d21f00142	X	RINSE			04/21/15 17:49	1.0	1	
143	15d21f00143	SAMPLE	266091-005	Filtrate	222325	04/21/15 17:54	5.0	1	1:NA=20000
144	15d21f00144	X	RINSE			04/21/15 17:59	1.0	1	
145	15d21f00145	SAMPLE	266091-008	Filtrate	222325	04/21/15 18:04	5.0	1	
146	15d21f00146	X	RINSE			04/21/15 18:09	1.0	1	
147	15d21f00147	SAMPLE	266091-009	Filtrate	222325	04/21/15 18:14	5.0	1	1:NA=63000
148	15d21f00148	X	RINSE			04/21/15 18:19	1.0	1	
149	15d21f00149	SAMPLE	266091-010	Filtrate	222325	04/21/15 18:23	5.0	1	4:NA=32000
150	15d21f00150	X	RINSE			04/21/15 18:28	1.0	1	
151	15d21f00151	SAMPLE	266091-012	Filtrate	222325	04/21/15 18:33	5.0	1	
152	15d21f00152	X	RINSE			04/21/15 18:38	1.0	1	
153	15d21f00153	CCV				04/21/15 18:57	1.0	13 1	
154	15d21f00154	X	XCCB			04/21/15 19:01	1.0	1	
155	15d21f00155	CCB				04/21/15 19:06	1.0	1	
156	15d21f00156	ICSA				04/21/15 19:11	1.0	11 1	8:CA=280000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
157	15d21f00157	ICSAB				04/21/15 19:16	1.0	12 1	9:CA=340000
158	15d21f00158	X	RINSE			04/21/15 19:21	1.0	1	
159	15d21f00159	X	RINSE			04/21/15 19:26	1.0	1	
160	15d21f00160	X	RINSE			04/21/15 19:31	1.0	1	
161	15d21f00161	X	RINSE			04/21/15 19:36	1.0	1	
162	15d21f00162	CCV				04/21/15 19:41	1.0	13 1	
163	15d21f00163	X	XCCB			04/21/15 19:45	1.0	1	
164	15d21f00164	CCB				04/21/15 19:50	1.0	1	
165	15d21f00165	ICSA				04/21/15 19:55	1.0	11 1	8:CA=280000
166	15d21f00166	XICSAB				04/21/15 20:00	1.0	12 1	8:CA=380000
167	15d21f00167	ICSAB				04/21/15 20:05	1.0	12 1	9:CA=290000
168	15d21f00168	X	RINSE			04/21/15 20:09	1.0	1	
169	15d21f00169	X	RINSE			04/21/15 20:14	1.0	1	
170	15d21f00170	X	RINSE			04/21/15 20:19	1.0	1	
171	15d21f00171	X	RINSE			04/21/15 20:24	1.0	1	
172	15d21f00172	X	RINSE			04/21/15 20:29	1.0	1	
173	15d21f00173	X	RINSE			04/21/15 20:34	1.0	1	
174	15d21f00174	X	RINSE			04/21/15 20:39	1.0	1	
175	15d21f00175	X	RINSE			04/21/15 20:44	1.0	1	

NT 04/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 175.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015160186

Date : 04/21/15
 Sequence : MET26 15d21f00

Reference : 15d21f00004
 Analyzed : 04/21/15 06:00

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	80929	217916	24038	160718	43273	12195	456321	520569	416861	734609
		LOWER LIMIT	24279	65375	7211	48215	12982	3659	136896	156171	125058	220383
		UPPER LIMIT	97115	261499	28846	192862	51928	14634	547585	624683	500233	881531
016	ICB		85069	238009	25472	138702	38877	12697	493500	554531	455053	794803
018	ICSA		73897	213721	23830	162411	42925	13372	417614	447225	416362	726297
019	ICSAB		68588	203728	22588	158088	42181	12872	403757	431525	402509	699845
025	BLANK	QC784864	78424	220688	23617	164290	43695	11878	461498	519496	426099	742090
026	BS	QC784865	78129	218443	23779	157165	41734	12013	452412	506773	422953	734280
027	BSD	QC784866	80878	225273	23996	157531	42250	12180	466955	521859	433632	758349
029	MS	QC784867	75716	221522	23366	161297	42455	12051	447049	491398	425439	738017
030	MSD	QC784868	71242	197706	23924	146702	40971	12027	410698	452739	388341	673091
034	CCV		73687	214785	23171	168950	43995	11793	441353	480865	415778	720795
036	CCB		90693	244559	24269	153379	43117	12736	511725	572672	467181	826662
037	BLANK	QC784864	98001 *	267741 *	25249	171887	46915	13074	547563	609635	500718 *	872754
039	CCV		90675	248286	24730	171623	46279	12978	505543	556204	472764	837922
041	CCB		97252 *	257289	25494	176959	48005	13088	530520	590701	484467	858047
042	ICSA		82755	236674	23884	169847	45148	13690	459325	485138	453186	798636
043	ICSAB		81156	237071	22582	168223	44914	12940	459646	485335	456351	800315
046	MS	QC784304	69684	213541	21585	151539	39564	10874	421150	435955	408847	710102
048	MSD	QC784305	69078	217665	21107	146977	38258	10507	420688	433989	409113	711495
050	MS	QC784304	78291	228302	20645	149037	40544	11198	463325	493901	432865	757200
052	MSD	QC784305	72952	204507	23621	151449	41105	11950	424023	454142	394657	687310
054	CCV		64423	182944	23655	147745	39447	11606	375827	403911	355288	598866
056	CCB		76067	218678	22190	149111	40309	11393	458218	492295	423317	722513
057	MSS	266019-005	71520	206825	22258	151039	40793	11510	423820	450340	398139	680552
059	MS	QC784306	69373	199785	22183	145852	39386	11370	402877	428516	383866	650329
061	MSD	QC784307	69899	203186	23018	145600	38781	11519	406159	430378	389092	657939
063	SER	QC784308	74397	207712	21695	144739	39464	11148	428038	457827	395851	678503
065	PDS	QC784309	76190	208110	22756	150018	39811	11449	417146	447276	398362	682629
067	SAMPLE	266019-003	78150	216312	21782	151015	40488	11271	434348	463774	408763	702815
069	CCV		80469	222694	22094	152091	40507	11481	446787	476411	421568	721564
071	CCB		84146	220509	23102	159971	42695	11796	450548	490069	417130	710977
072	MSS	266019-005	79257	212848	22060	144539	39430	11322	432891	457339	408662	696962
074	MS	QC784306	80854	232651	22324	150545	40095	11525	458207	477903	435926	739975
076	MSD	QC784307	77244	218091	22399	150382	40148	11346	430977	454076	411103	696045
078	MSS	266019-005	74285	212579	21792	148077	39793	11397	426189	444984	403251	677977
080	SER	QC784308	79022	212474	22431	151265	40998	11527	430410	458998	401297	677366
082	PDS	QC784309	77667	215325	22867	150992	39881	11452	418761	442108	402330	679452
084	SAMPLE	266019-003	78530	224459	22344	157127	41298	11371	442298	458881	421311	707396
086	CCV		81936	230406	23124	151936	40238	11691	455108	473678	433602	726530
088	CCB		84934	225632	23142	156006	41662	11764	458846	489813	426566	716494
089	MSS	266087-001	75412	203976	22988	153123	40803	11567	407071	430881	384972	648063
091	MS	QC784573	84924	219202	21660	148341	38819	10920	424889	448706	402596	693802
093	MSD	QC784574	78435	209494	21732	158053	40684	10961	411855	433359	392489	663747
095	SER	QC784575	83133	225759	21017	148683	40093	11165	448734	474665	420136	711929
097	PDS	QC784576	84199	215930	21175	146362	38473	10915	414384	438269	397495	678622
101	BLANK	QC784945	85523	220369	21488	142720	38493	11070	439738	469083	407911	695038
103	CCV		88751	230277	20657	159587	40707	10925	439134	462580	415767	710889
105	CCB		92245	227823	22012	153291	40664	11311	453602	483257	418088	711869
106	SAMPLE	266087-002	93113	229362	21565	152732	40390	11058	441153	467805	411774	704511
108	SAMPLE	266087-003	91181	217988	21785	131203	37172	10995	417776	445375	389831	669822

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015160186

Date : 04/21/15
 Sequence : MET26 15d21f00

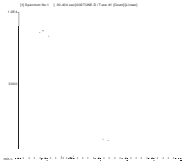
Reference : 15d21f00004
 Analyzed : 04/21/15 06:00

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
110	SAMPLE	265899-005	79400	199832	19193	137116	35571	9682	388789	401334	366827	631616
112	SAMPLE	265899-006	87754	213158	18872	137945	36606	9893	413833	438022	384173	666188
114	CCV		94624	218295	19640	138939	36187	10071	412698	441158	388494	675116
116	CCB		100112 *	212482	19873	140932	37298	10250	412582	450376	379924	649727
117	ICSA		85655	205695	18741	134782	35021	10415	374631	386824	371206	650146
118	ICSAB		80986	206284	18708	138719	36248	10437	381691	393083	379415	658974
121	SAMPLE	266087-004	95236	220519	19723	140826	37479	10357	424067	445542	392190	677747
123	SAMPLE	266087-006	100815 *	221739	20311	135547	36717	10425	414958	442568	385313	671004
125	SAMPLE	266087-007	98495 *	216608	19696	138492	36711	10145	419060	448813	387018	665585
127	SAMPLE	266087-009	88930	212253	19559	140283	36763	10029	406720	428131	380758	657082
129	CCV		107618 *	220386	18480	134903	35431	9730	408375	434818	382569	664574
131	CCB		110509 *	225862	19363	139326	36372	9970	424296	455668	390481	679137
132	SAMPLE	266091-004	116043 *	239175	19120	138393	36988	10078	449159	480016	415447	711702
133	SAMPLE	266091-005	111601 *	230360	19502	138807	36835	10022	426733	458071	394048	684150
134	SAMPLE	266091-006	105546 *	224184	19127	137921	35738	9800	426021	455029	394968	683532
135	SAMPLE	266091-007	107599 *	218199	19760	138823	36113	9923	413028	441988	381538	664485
136	CCV		108888 *	222872	18882	135189	34907	9729	410186	436307	385473	673934
138	CCB		118365 *	223565	18945	137620	36031	9826	416017	451224	383737	670421
139	SAMPLE	266091-002	91091	203032	17846	126373	32498	9035	371517	385640	359417	626592
141	SAMPLE	266091-004	100189 *	214522	17568	129431	34403	9320	400892	431417	370897	644620
143	SAMPLE	266091-005	99435 *	221738	19510	140345	37383	10155	419105	446911	389172	672051
145	SAMPLE	266091-008	102454 *	228761	20351	143812	37851	10381	432836	457829	400951	686039
147	SAMPLE	266091-009	96237	217487	19373	152623	38491	10094	408016	429225	381622	656835
149	SAMPLE	266091-010	101455 *	219336	19934	143524	38083	10363	409561	427746	383958	665363
151	SAMPLE	266091-012	95193	219086	19838	142115	37542	10137	417478	439137	388600	663006
153	CCV		97417 *	222539	20475	150147	37400	10455	418925	438270	395463	679124
155	CCB		107049 *	232406	21382	146858	38674	10827	443567	472742	411500	707219
156	ICSA		91105	220525	19172	144890	37088	10389	393062	401433	392702	681494
157	ICSAB		81973	183197	19217	137105	35792	10368	338039	356667	334137	582054
162	CCV		98086 *	220709	19576	143768	37110	10157	416691	441560	393445	680308
164	CCB		106950 *	230045	20461	146488	38563	10573	441663	468655	406130	700205
165	ICSA		90533	211329	17882	134925	34727	9886	374228	384091	372495	651751
167	ICSAB		83534	185818	15970	121260	31154	8561	332076	342500	327263	576269

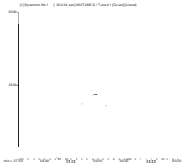
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D21f00.B\002TUNE.D
 Date Acquired: Apr 21 2015 05:50 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

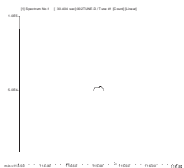
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	7707	7886	7872	7952	7839	1.26	5.00	
59 Co	12790	12634	12800	12726	12582	1.83	5.00	
115 In	267232	263180	264002	265932	265910	0.73	5.00	
205 Tl	17646	17593	17635	17505	17406	2.69	5.00	



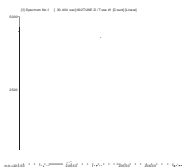
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266087 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015160186001
 Units : ug/L
 Date : 21-APR-2015 06:00
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d21f00005	1015160186005	21-APR-2015 06:05	S27043, S26751	
L2	15d21f00006	1015160186006	21-APR-2015 06:09	S27044, S26751	
L3	15d21f00007	1015160186007	21-APR-2015 06:14	S27045, S26751	
L4	15d21f00008	1015160186008	21-APR-2015 06:19	S27046, S26751	
L5	15d21f00009	1015160186009	21-APR-2015 06:24	S27041, S26751	
L6	15d21f00010	1015160186010	21-APR-2015 06:28	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0055	0.0055	0.0051	0.0047	0.0042	0.0044	BLNK	-0.6950	229.819		0.0049	0.999	0.995	
Antimony	A	0.0033	0.0027	0.0027	0.0029	0.0027	0.0028	BLNK	-0.0141	361.996		0.0028	0.999	0.995	
Barium	A	7.1E-4	6.8E-4	6.0E-4	6.6E-4	6.2E-4	6.5E-4	BLNK	-0.0095	1560.35		6.5E-4	1.000	0.995	
Beryllium	A	0.0039	0.0035	0.0040	0.0038	0.0037	0.0038	BLNK	-0.0219	265.241		0.0038	1.000	0.995	
Cadmium	A	9.4E-4	7.4E-4	7.7E-4	7.3E-4	6.8E-4	7.0E-4	BLNK	-0.0174	1431.18		7.6E-4	1.000	0.995	
Calcium	A	6.2E-4	3.0E-4	2.1E-4	1.9E-4	1.7E-4	1.6E-4	BLNK	-25.444	6145.01		2.7E-4	0.999	0.995	
Lead	A	0.0142	0.0085	0.0071	0.0069	0.0062	0.0063	BLNK	-0.1237	159.839		0.0082	1.000	0.995	
Magnesium	A	0.0089	0.0054	0.0045	0.0039	0.0034	0.0036	BLNK	-12.754	284.472		0.0049	0.999	0.995	
Molybdenum	A	0.0032	0.0023	0.0023	0.0020	0.0020	0.0021	BLNK	-0.0693	490.532		0.0023	0.999	0.995	
Potassium	A	0.1076	0.0269	0.0153	0.0062	0.0048	0.0050	BLNK	-214.50	205.029		0.0276	0.999	0.995	
Silver	A	0.0037	0.0033	0.0031	0.0034	0.0032	0.0033	BLNK	-0.0053	307.716		0.0033	1.000	0.995	
Thallium	A	0.0068	0.0069	0.0066	0.0070	0.0067	0.0070	BLNK	-0.0062	144.503		0.0068	1.000	0.995	
Arsenic	E	0.0095	0.0061	0.0057	0.0053	0.0052	0.0052	BLNK	-0.0994	193.571		0.0062	1.000	0.995	
Chromium	E	0.0617	0.0287	0.0261	0.0220	0.0204	0.0210	BLNK	-0.1714	47.9372		0.0300	1.000	0.995	
Cobalt	E	0.0405	0.0336	0.0364	0.0332	0.0306	0.0313	BLNK	-0.0302	32.1256		0.0343	1.000	0.995	
Copper	E	0.4142	0.0918	0.0543	0.0262	0.0217	0.0219	BLNK	-1.8889	46.1658		0.1050	1.000	0.995	
Manganese	E	0.0311	0.0189	0.0173	0.0150	0.0141	0.0144	BLNK	-0.1217	69.7947		0.0185	1.000	0.995	
Nickel	E	0.0527	0.0187	0.0141	0.0092	0.0081	0.0083	BLNK	-0.4908	121.615		0.0185	1.000	0.995	
Sodium	E	0.0261	0.0091	0.0075	0.0050	0.0041	0.0041	BLNK	-52.418	243.331		0.0093	1.000	0.995	
Vanadium	E	0.0562	0.0262	0.0232	0.0182	0.0171	0.0177	BLNK	-0.2047	56.9917		0.0264	1.000	0.995	
Zinc	E		0.0154	0.0061	0.0046	0.0042	0.0041	BLNK	-0.3438	242.633		0.0069	1.000	0.995	
Iron	H	0.0153	0.0102	0.0093	0.0069	0.0058	0.0062	BLNK	-13.401	164.211		0.0089	0.999	0.995	
Selenium	H	0.0013	0.0011	0.0010	0.0010	8.9E-4	9.1E-4	BLNK	-0.0113	1102.55		0.0010	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	19	50.000	24	100.00	17	1000.0	8	10000	-4	20000	1
Antimony	A	0.1000	5	0.5000	-4	1.0000	-4	10.000	4	100.00	-4	200.00	1
Barium	A	0.1000	1	0.5000	5	1.0000	-7	10.000	2	100.00	-3	200.00	1
Beryllium	A	0.1000	-19	0.5000	-10	1.0000	3	10.000	1	100.00	-3	200.00	1
Cadmium	A	0.1000	16	0.5000	2	1.0000	8	10.000	4	100.00	-3	200.00	1
Calcium	A	10.000	26	50.000	32	100.00	3	1000.0	11	10000	4	20000	-1
Lead	A	0.1000	2	0.5000	11	1.0000	0	10.000	8	100.00	-2	200.00	0
Magnesium	A	10.000	25	50.000	29	100.00	16	1000.0	10	10000	-4	20000	1
Molybdenum	A	0.1000	-11	0.5000	0	1.0000	6	10.000	-1	100.00	-4	200.00	1
Potassium	A	10.000	-38	50.000	23	100.00	-1	1000.0	5	10000	-4	20000	1
Silver	A	0.1000	10	0.5000	2	1.0000	-6	10.000	5	100.00	-2	200.00	1
Thallium	A	0.0500	-14	0.2500	-3	0.5000	-6	5.0000	1	50.000	-3	100.00	1
Arsenic	E	0.1000	-15	0.5000	-1	1.0000	1	10.000	1	100.00	0	200.00	0
Chromium	E	0.1000	24	0.5000	3	1.0000	8	10.000	4	100.00	-2	200.00	1
Cobalt	E	0.1000	0	0.5000	2	1.0000	14	10.000	6	100.00	-2	200.00	0
Copper	E	0.1000	-77	0.5000	-54	1.0000	-38	10.000	2	100.00	-2	200.00	0
Manganese	E	0.1000	-5	0.5000	8	1.0000	9	10.000	4	100.00	-2	200.00	0
Nickel	E	0.1000	51	0.5000	29	1.0000	22	10.000	7	100.00	-2	200.00	0
Sodium	E	10.000	12	50.000	17	100.00	31	1000.0	17	10000	-1	20000	0
Vanadium	E	0.1000	16	0.5000	8	1.0000	12	10.000	2	100.00	-3	200.00	1
Zinc	E			0.5000	205	1.0000	13	10.000	9	100.00	1	200.00	0
Iron	H	10.000	17	50.000	40	100.00	39	1000.0	12	10000	-5	20000	1
Selenium	H	0.1000	33	0.5000	17	1.0000	15	10.000	10	100.00	-2	200.00	1

NT 04/21/15 : Low Cu bias in Calibration.

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015160186001

Cal Date : 21-APR-2015

ICV 1015160186013 (15d21f00013 21-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10330	ug/L	3	10	
Antimony	A	100.0	104.3	ug/L	4	10	
Barium	A	100.0	104.7	ug/L	5	10	
Beryllium	A	100.0	101.8	ug/L	2	10	
Cadmium	A	100.0	104.5	ug/L	5	10	
Calcium	A	10000	11030	ug/L	10	10	
Lead	A	100.0	105.1	ug/L	5	10	
Magnesium	A	10000	10370	ug/L	4	10	
Molybdenum	A	100.0	102.3	ug/L	2	10	
Potassium	A	10000	10340	ug/L	3	10	
Silver	A	100.0	102.8	ug/L	3	10	
Thallium	A	50.00	50.93	ug/L	2	10	
Arsenic	E	100.0	100.9	ug/L	1	10	
Chromium	E	100.0	99.73	ug/L	0	10	
Cobalt	E	100.0	100.2	ug/L	0	10	
Copper	E	100.0	99.79	ug/L	0	10	
Manganese	E	100.0	99.92	ug/L	0	10	
Nickel	E	100.0	100.2	ug/L	0	10	
Sodium	E	10000	10090	ug/L	1	10	
Vanadium	E	100.0	99.72	ug/L	0	10	
Zinc	E	100.0	101.5	ug/L	2	10	
Iron	H	10000	10390	ug/L	4	10	
Selenium	H	100.0	103.1	ug/L	3	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186016 File : 15d21f00016 Time : 21-APR-2015 07:08
 Cal : 1015160186001 Caldate : 21-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.06170]	0.1000	---	ug/L	!ICB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	85069	5.12
Scandium	A	217916	238009	9.22
Scandium	E	24038	25472	5.97
Scandium	H	160718	138702	-13.70
Germanium	H	43273	38877	-10.16
Germanium	E	12195	12697	4.12
Indium	A	456321	493500	8.15
Bismuth	A	520569	554531	6.52
Yttrium	A	416861	455053	9.16
Terbium	A	734609	794803	8.19

!=warning ICB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015160186042
 Cal : 1015160186001
 Standards: S26727, S26751
 File : 15d21f00042
 Caldate : 21-APR-2015
 IDF : 1.0
 Time : 21-APR-2015 09:35

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4911	0.1000	ug/L	
Barium	A	1.886	0.1000	ug/L	
Beryllium	A	[-0.004100]	0.1000	ug/L	
Cadmium	A	3.157	0.1000	ug/L	
Lead	A	0.2121	0.1000	ug/L	
Silver	A	[0.08560]	0.1000	ug/L	
Thallium	A	[0.02000]	0.05000	ug/L	
Arsenic	E	0.6705	0.1000	ug/L	
Chromium	E	0.8611	0.1000	ug/L	
Cobalt	E	1.177	0.1000	ug/L	
Copper	E	1.076	0.1000	ug/L	
Manganese	E	7.287	0.1000	ug/L	
Nickel	E	0.8577	0.1000	ug/L	
Vanadium	E	0.1719	0.1000	ug/L	
Zinc	E	1.959	0.5000	ug/L	
Selenium	H	0.1245	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	102700	ug/L	103
Calcium	A	300000	290500	ug/L	97
Magnesium	A	100000	100400	ug/L	100
Molybdenum	A	2000	1993	ug/L	100
Potassium	A	100000	102600	ug/L	103
Sodium	E	250000	228200	ug/L	91
Phosphorus	E	100000	94510	ug/L	95
Iron	H	250000	240500	ug/L	96

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	82755	2.26
Scandium	A	217916	236674	8.61
Scandium	E	24038	23884	-0.64
Scandium	H	160718	169847	5.68
Germanium	H	43273	45148	4.33
Germanium	E	12195	13690	12.26
Indium	A	456321	459325	0.66
Bismuth	A	520569	485138	-6.81
Yttrium	A	416861	453186	8.71
Terbium	A	734609	798636	8.72

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015160186043
 Cal : 1015160186001
 Standards: S26728, S26751

File : 15d21f00043
 Caldate : 21-APR-2015

IDF : 1.0
 Time : 21-APR-2015 09:39

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	97550	ug/L	-2		
Cadmium	A	100.0	99.73	ug/L	0	20	
Calcium	A	300000	275800	ug/L	-8		
Magnesium	A	100000	95090	ug/L	-5		
Molybdenum	A	2000	1937	ug/L	-3		
Potassium	A	100000	97680	ug/L	-2		
Silver	A	50.00	48.23	ug/L	-4	20	
Arsenic	E	100.0	96.82	ug/L	-3	20	
Chromium	E	200.0	203.0	ug/L	2	20	
Cobalt	E	200.0	199.2	ug/L	0	20	
Copper	E	200.0	193.9	ug/L	-3	20	
Manganese	E	200.0	204.2	ug/L	2	20	
Nickel	E	200.0	196.0	ug/L	-2	20	
Sodium	E	250000	234200	ug/L	-6		
Vanadium	E	200.0	205.8	ug/L	3	20	
Zinc	E	100.0	94.28	ug/L	-6	20	
Iron	H	250000	239600	ug/L	-4		
Selenium	H	100.0	99.17	ug/L	-1	20	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	160718	168223	4.67
Scandium	A	217916	237071	8.79
Scandium	E	24038	22582	-6.06
Germanium	H	43273	44914	3.79
Germanium	E	12195	12940	6.11
Indium	A	456321	459646	0.73
Yttrium	A	416861	456351	9.47

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186086 File : 15d21f00086 Time : 21-APR-2015 13:08
 Cal : 1015160186001 Caldate : 21-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0049	0.0043	10000	9986	ug/L	0	10	
Antimony	A	0.0028	0.0028	100.0	101.0	ug/L	1	10	
Barium	A	6.5E-4	6.7E-4	100.0	104.8	ug/L	5	10	
Beryllium	A	0.0038	0.0036	100.0	96.19	ug/L	-4	10	
Cadmium	A	7.6E-4	7.0E-4	100.0	100.4	ug/L	0	10	
Calcium	A	2.7E-4	1.7E-4	10000	10680	ug/L	7	10	
Lead	A	0.0082	0.0062	100.0	98.64	ug/L	-1	10	
Magnesium	A	0.0049	0.0035	10000	9957	ug/L	0	10	
Molybdenum	A	0.0023	0.0020	100.0	97.38	ug/L	-3	10	
Potassium	A	0.0276	0.0051	10000	10180	ug/L	2	10	
Silver	A	0.0033	0.0032	100.0	99.77	ug/L	0	10	
Thallium	A	0.0068	0.0069	50.00	49.54	ug/L	-1	10	
Arsenic	E	0.0062	0.0052	100.0	101.0	ug/L	1	10	
Chromium	E	0.0300	0.0207	100.0	99.13	ug/L	-1	10	
Cobalt	E	0.0343	0.0310	100.0	99.43	ug/L	-1	10	
Copper	E	0.1050	0.0220	100.0	99.69	ug/L	0	10	
Manganese	E	0.0185	0.0142	100.0	99.18	ug/L	-1	10	
Nickel	E	0.0185	0.0082	100.0	99.07	ug/L	-1	10	
Sodium	E	0.0093	0.0042	10000	10070	ug/L	1	10	
Vanadium	E	0.0264	0.0176	100.0	100.0	ug/L	0	10	
Zinc	E	0.0069	0.0042	100.0	101.2	ug/L	1	10	
Iron	H	0.0089	0.0064	10000	10520	ug/L	5	10	
Selenium	H	0.0010	9.6E-4	100.0	105.8	ug/L	6	10	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	81936	1.24
Scandium	A	217916	230406	5.73
Scandium	E	24038	23124	-3.80
Scandium	H	160718	151936	-5.46
Germanium	H	43273	40238	-7.01
Germanium	E	12195	11691	-4.13
Indium	A	456321	455108	-0.27
Bismuth	A	520569	473678	-9.01
Yttrium	A	416861	433602	4.02
Terbium	A	734609	726530	-1.10

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186088 File : 15d21f00088 Time : 21-APR-2015 13:18
 Cal : 1015160186001 Caldate : 21-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	[0.05520]	0.1000	0.05000	ug/L	!CCB
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.08400]	0.1000	---	ug/L	!CCB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	[0.08380]	0.1000	0.05000	ug/L	!CCB
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	84934	4.95
Scandium	A	217916	225632	3.54
Scandium	E	24038	23142	-3.73
Scandium	H	160718	156006	-2.93
Germanium	H	43273	41662	-3.72
Germanium	E	12195	11764	-3.53
Indium	A	456321	458846	0.55
Bismuth	A	520569	489813	-5.91
Yttrium	A	416861	426566	2.33
Terbium	A	734609	716494	-2.47

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186103 File : 15d21f00103 Time : 21-APR-2015 14:31
 Cal : 1015160186001 Caldate : 21-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0049	0.0045	10000	10360	ug/L	4	10	
Antimony	A	0.0028	0.0029	100.0	103.5	ug/L	4	10	
Barium	A	6.5E-4	6.8E-4	100.0	105.8	ug/L	6	10	
Beryllium	A	0.0038	0.0035	100.0	91.96	ug/L	-8	10	
Cadmium	A	7.6E-4	7.3E-4	100.0	103.8	ug/L	4	10	
Calcium	A	2.7E-4	1.8E-4	10000	10990	ug/L	10	10	
Lead	A	0.0082	0.0063	100.0	100.7	ug/L	1	10	
Magnesium	A	0.0049	0.0037	10000	10430	ug/L	4	10	
Molybdenum	A	0.0023	0.0020	100.0	100.0	ug/L	0	10	
Potassium	A	0.0276	0.0053	10000	10580	ug/L	6	10	
Silver	A	0.0033	0.0033	100.0	101.9	ug/L	2	10	
Thallium	A	0.0068	0.0071	50.00	51.00	ug/L	2	10	
Arsenic	E	0.0062	0.0052	100.0	101.0	ug/L	1	10	
Chromium	E	0.0300	0.0222	100.0	106.2	ug/L	6	10	
Cobalt	E	0.0343	0.0333	100.0	106.9	ug/L	7	10	
Copper	E	0.1050	0.0235	100.0	106.8	ug/L	7	10	
Manganese	E	0.0185	0.0150	100.0	104.6	ug/L	5	10	
Nickel	E	0.0185	0.0088	100.0	106.1	ug/L	6	10	
Sodium	E	0.0093	0.0044	10000	10740	ug/L	7	10	
Vanadium	E	0.0264	0.0188	100.0	107.1	ug/L	7	10	
Zinc	E	0.0069	0.0044	100.0	107.0	ug/L	7	10	
Iron	H	0.0089	0.0059	10000	9692	ug/L	-3	10	
Selenium	H	0.0010	9.0E-4	100.0	99.47	ug/L	-1	10	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	88751	9.67
Scandium	A	217916	230277	5.67
Scandium	E	24038	20657	-14.07
Scandium	H	160718	159587	-0.70
Germanium	H	43273	40707	-5.93
Germanium	E	12195	10925	-10.41
Indium	A	456321	439134	-3.77
Bismuth	A	520569	462580	-11.14
Yttrium	A	416861	415767	-0.26
Terbium	A	734609	710889	-3.23

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186105 File : 15d21f00105 Time : 21-APR-2015 14:41
 Cal : 1015160186001 Caldate : 21-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.07660]	0.1000	---	ug/L	!CCB
Potassium	A	13.99	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	[0.05460]	0.1000	0.05000	ug/L	!CCB
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	92245	13.98
Scandium	A	217916	227823	4.55
Scandium	E	24038	22012	-8.43
Scandium	H	160718	153291	-4.62
Germanium	H	43273	40664	-6.03
Germanium	E	12195	11311	-7.25
Indium	A	456321	453602	-0.60
Bismuth	A	520569	483257	-7.17
Yttrium	A	416861	418088	0.29
Terbium	A	734609	711869	-3.10

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015160186117
 Cal : 1015160186001
 Standards: S26727, S26751
 File : 15d21f00117
 Caldate : 21-APR-2015
 IDF : 1.0
 Time : 21-APR-2015 15:42

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.5202	0.1000	ug/L	
Barium	A	1.754	0.1000	ug/L	
Beryllium	A	[0.01970]	0.1000	ug/L	
Cadmium	A	2.499	0.1000	ug/L	
Lead	A	0.2135	0.1000	ug/L	
Silver	A	[0.07810]	0.1000	ug/L	
Thallium	A	[0.02260]	0.05000	ug/L	
Arsenic	E	0.5237	0.1000	ug/L	
Chromium	E	0.8630	0.1000	ug/L	
Cobalt	E	1.129	0.1000	ug/L	
Copper	E	0.3929	0.1000	ug/L	
Manganese	E	7.051	0.1000	ug/L	
Nickel	E	0.8627	0.1000	ug/L	
Vanadium	E	[0.07590]	0.1000	ug/L	
Zinc	E	1.722	0.5000	ug/L	
Selenium	H	[0.08680]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	107300	ug/L	107
Calcium	A	300000	296100	ug/L	99
Magnesium	A	100000	106700	ug/L	107
Molybdenum	A	2000	2005	ug/L	100
Potassium	A	100000	106900	ug/L	107
Sodium	E	250000	234400	ug/L	94
Phosphorus	E	100000	92030	ug/L	92
Iron	H	250000	241800	ug/L	97

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	85655	5.84
Scandium	A	217916	205695	-5.61
Scandium	E	24038	18741	-22.04
Scandium	H	160718	134782	-16.14
Germanium	H	43273	35021	-19.07
Germanium	E	12195	10415	-14.60
Indium	A	456321	374631	-17.90
Bismuth	A	520569	386824	-25.69
Yttrium	A	416861	371206	-10.95
Terbium	A	734609	650146	-11.50

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015160186118 File : 15d21f00118
 Cal : 1015160186001 Caldate : 21-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 21-APR-2015 15:47

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	103300	ug/L	3		
Cadmium	A	100.0	99.68	ug/L	0	20	
Calcium	A	300000	286200	ug/L	-5		
Magnesium	A	100000	102300	ug/L	2		
Molybdenum	A	2000	1920	ug/L	-4		
Potassium	A	100000	103900	ug/L	4		
Silver	A	50.00	47.94	ug/L	-4	20	
Arsenic	E	100.0	94.66	ug/L	-5	20	
Chromium	E	200.0	200.9	ug/L	0	20	
Cobalt	E	200.0	195.8	ug/L	-2	20	
Copper	E	200.0	190.6	ug/L	-5	20	
Manganese	E	200.0	199.6	ug/L	0	20	
Nickel	E	200.0	192.7	ug/L	-4	20	
Sodium	E	250000	238200	ug/L	-5		
Vanadium	E	200.0	203.9	ug/L	2	20	
Zinc	E	100.0	92.04	ug/L	-8	20	
Iron	H	250000	237700	ug/L	-5		
Selenium	H	100.0	95.19	ug/L	-5	20	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	160718	138719	-13.69
Scandium	A	217916	206284	-5.34
Scandium	E	24038	18708	-22.17
Germanium	H	43273	36248	-16.23
Germanium	E	12195	10437	-14.42
Indium	A	456321	381691	-16.35
Yttrium	A	416861	379415	-8.98

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015163352

Instrument : MET26
 Method : EPA 6020

Begun : 04/23/15 10:32
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d23k00001	X	RINSE			04/23/15 10:32	1.0	1	
002	15d23k00002	XTUN				04/23/15 10:37	1.0	2	t
003	15d23k00003	TUN				04/23/15 10:41	1.0	2	
004	15d23k00004	X	RINSE			04/23/15 10:45	1.0	1	
005	15d23k00005	ICALBLK	CALBLANK			04/23/15 10:50	1.0	1	
006	15d23k00006	ICAL				04/23/15 10:54	1.0	3 1	
007	15d23k00007	ICAL				04/23/15 10:59	1.0	4 1	
008	15d23k00008	ICAL				04/23/15 11:04	1.0	5 1	
009	15d23k00009	ICAL				04/23/15 11:08	1.0	6 1	
010	15d23k00010	ICAL				04/23/15 11:13	1.0	7 1	
011	15d23k00011	ICAL				04/23/15 11:17	1.0	8 1	
012	15d23k00012	X	RINSE			04/23/15 11:22	1.0	1	
013	15d23k00013	XICV				04/23/15 11:27	1.0	9 1	
014	15d23k00014	XICV				04/23/15 11:31	1.0	9 1	
015	15d23k00015	ICV				04/23/15 11:36	1.0	9 1	
016	15d23k00016	XCRI				04/23/15 11:41	1.0	10 1	
017	15d23k00017	XICB				04/23/15 11:45	1.0	1	
018	15d23k00018	ICB				04/23/15 11:50	1.0	1	
019	15d23k00019	CRI				04/23/15 11:55	1.0	10 1	
020	15d23k00020	ICSA				04/23/15 12:00	1.0	11 1	8:CA=280000
021	15d23k00021	ICSAB				04/23/15 12:04	1.0	12 1	8:CA=280000
022	15d23k00022	X	RINSE			04/23/15 12:09	1.0	1	
023	15d23k00023	X	RINSE			04/23/15 12:14	1.0	1	
024	15d23k00024	X	RINSE			04/23/15 12:19	1.0	1	
025	15d23k00025	X	RINSE			04/23/15 12:23	1.0	1	
026	15d23k00026	X	RINSE			04/23/15 12:28	1.0	1	
027	15d23k00027	MSS	266087-001	Filtrate	222325	04/23/15 12:33	10.0	1	1:MN=200
028	15d23k00028	X	RINSE			04/23/15 12:38	1.0	1	
029	15d23k00029	MS	QC784573	Filtrate	222325	04/23/15 12:43	10.0	1	1:MN=230
030	15d23k00030	X	RINSE			04/23/15 12:47	1.0	1	
031	15d23k00031	MSD	QC784574	Filtrate	222325	04/23/15 12:52	10.0	1	1:MN=210
032	15d23k00032	X	RINSE			04/23/15 12:57	1.0	1	
033	15d23k00033	SER	QC784575	Filtrate	222325	04/23/15 13:02	50.0	1	
034	15d23k00034	X	RINSE			04/23/15 13:06	1.0	1	
035	15d23k00035	PDS	QC784576	Filtrate	222325	04/23/15 13:11	10.0	13 14 15 1	1:CA=21000
036	15d23k00036	X	RINSE			04/23/15 13:16	1.0	1	
037	15d23k00037	SAMPLE	266087-002	Filtrate	222325	04/23/15 13:20	10.0	1	
038	15d23k00038	X	RINSE			04/23/15 13:25	1.0	1	
039	15d23k00039	SAMPLE	266087-003	Filtrate	222325	04/23/15 13:30	10.0	1	
040	15d23k00040	X	RINSE			04/23/15 13:35	1.0	1	
041	15d23k00041	SAMPLE	266087-004	Filtrate	222325	04/23/15 13:40	10.0	1	
042	15d23k00042	X	RINSE			04/23/15 13:44	1.0	1	
043	15d23k00043	SAMPLE	266087-006	Filtrate	222325	04/23/15 13:49	10.0	1	
044	15d23k00044	X	RINSE			04/23/15 13:54	1.0	1	
045	15d23k00045	SAMPLE	266087-007	Filtrate	222325	04/23/15 13:58	10.0	1	
046	15d23k00046	CCV				04/23/15 14:03	1.0	16 1	
047	15d23k00047	X	XCCB			04/23/15 14:08	1.0	1	
048	15d23k00048	CCB				04/23/15 14:13	1.0	1	
049	15d23k00049	X	RINSE			04/23/15 14:18	1.0	1	
050	15d23k00050	SAMPLE	266087-009	Filtrate	222325	04/23/15 14:22	10.0	1	3:CA=26000
051	15d23k00051	X	RINSE			04/23/15 14:27	1.0	1	
052	15d23k00052	CCV				04/23/15 14:32	1.0	16 1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015163352

Instrument : MET26
 Method : EPA 6020

Begun : 04/23/15 10:32
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d23k00053	X	XCCB			04/23/15 14:37	1.0	1	
054	15d23k00054	CCB				04/23/15 14:41	1.0	1	
055	15d23k00055	SAMPLE	266091-002	Filtrate	222325	04/23/15 14:46	10.0	1	4:CA=64000
056	15d23k00056	X	RINSE			04/23/15 14:51	1.0	1	
057	15d23k00057	SAMPLE	266091-004	Filtrate	222325	04/23/15 14:56	10.0	1	
058	15d23k00058	X	RINSE			04/23/15 15:00	1.0	1	
059	15d23k00059	SAMPLE	266091-005	Filtrate	222325	04/23/15 15:05	10.0	1	
060	15d23k00060	X	RINSE			04/23/15 15:10	1.0	1	
061	15d23k00061	SAMPLE	266091-008	Filtrate	222325	04/23/15 15:15	10.0	1	
062	15d23k00062	X	RINSE			04/23/15 15:19	1.0	1	
063	15d23k00063	SAMPLE	266091-009	Filtrate	222325	04/23/15 15:24	10.0	1	1:NA=29000
064	15d23k00064	X	RINSE			04/23/15 15:29	1.0	1	
065	15d23k00065	SAMPLE	266091-010	Filtrate	222325	04/23/15 15:34	10.0	1	1:MN=620
066	15d23k00066	X	RINSE			04/23/15 15:39	1.0	1	
067	15d23k00067	SAMPLE	266091-012	Filtrate	222325	04/23/15 15:43	10.0	1	
068	15d23k00068	X	RINSE			04/23/15 15:48	1.0	1	
069	15d23k00069	CCV				04/23/15 15:53	1.0	16 1	
070	15d23k00070	X	XCCB			04/23/15 15:58	1.0	1	
071	15d23k00071	CCB				04/23/15 16:02	1.0	1	
072	15d23k00072	ICSA				04/23/15 16:07	1.0	11 1	8:CA=290000
073	15d23k00073	ICSAB				04/23/15 16:12	1.0	12 1	8:CA=330000
074	15d23k00074	X	RINSE			04/23/15 16:17	1.0	1	
075	15d23k00075	X	RINSE			04/23/15 16:21	1.0	1	
076	15d23k00076	X	RINSE			04/23/15 17:04	1.0	1	
077	15d23k00077	X	RINSE			04/23/15 17:09	1.0	1	
078	15d23k00078	X	RINSE			04/23/15 17:14	1.0	1	
079	15d23k00079	X	RINSE			04/23/15 17:19	1.0	1	
080	15d23k00080	CCV				04/23/15 17:24	1.0	16 1	
081	15d23k00081	X	XCCB			04/23/15 17:28	1.0	1	
082	15d23k00082	CCB				04/23/15 17:33	1.0	1	
083	15d23k00083	X	RINSE			04/23/15 17:38	1.0	1	
084	15d23k00084	X	RINSE			04/23/15 17:43	1.0	1	
085	15d23k00085	X	RINSE			04/23/15 17:48	1.0	1	
086	15d23k00086	X	RINSE			04/23/15 17:53	1.0	1	
087	15d23k00087	CCV				04/23/15 17:57	1.0	16 1	
088	15d23k00088	X	XCCB			04/23/15 18:02	1.0	1	
089	15d23k00089	CCB				04/23/15 18:07	1.0	1	
090	15d23k00090	ICSA				04/23/15 18:12	1.0	11 1	8:CA=290000
091	15d23k00091	XICSAB				04/23/15 18:16	1.0	12 1	8:CA=310000
092	15d23k00092	ICSAB				04/23/15 18:21	1.0	12 1	8:CA=290000
093	15d23k00093	X	RINSE			04/23/15 18:26	1.0	1	
094	15d23k00094	X	RINSE			04/23/15 20:08	1.0	1	
095	15d23k00095	X	RINSE			04/23/15 20:12	1.0	1	
096	15d23k00096	X	RINSE			04/23/15 20:17	1.0	1	
097	15d23k00097	X	RINSE			04/23/15 20:22	1.0	1	
098	15d23k00098	X	RINSE			04/23/15 20:27	1.0	1	
099	15d23k00099	X	RINSE			04/23/15 20:32	1.0	1	
100	15d23k00100	X	RINSE			04/23/15 20:37	1.0	1	

NT 04/24/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 100.

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015163352

Date : 04/23/15
 Sequence : MET26 15d23k00

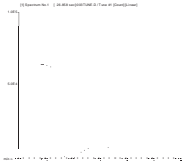
Reference : 15d23k00005
 Analyzed : 04/23/15 10:50

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	651914	1193630	91790	664113	180114	46875	1909489	1343030	1976165	2432585
		LOWER LIMIT	195574	358089	27537	199234	54034	14063	572847	402909	592850	729776
		UPPER LIMIT	782297	1432356	110148	796936	216137	56250	2291387	1611636	2371398	2919102
018	ICB		657707	1242534	95500	646641	178187	48549	1969975	1379045	2044313	2472699
020	ICSA		426674	1061608	80843	612833	161307	44399	1548755	1064809	1739183	2134813
021	ICSAB		398258	1024652	77927	600877	160744	42824	1504392	1033407	1688210	2076564
027	MSS	266087-001	474443	1091153	84257	578655	158270	43137	1726590	1194526	1787466	2220670
029	MS	QC784573	709257	1253133	78183	582685	158413	41553	1937525	1311986	1999656	2521007
031	MSD	QC784574	706872	1184190	83806	594542	162384	43264	1808447	1235275	1873923	2361548
033	SER	QC784575	677356	1088952	85918	653643	173148	43907	1746401	1217353	1781266	2252058
035	PDS	QC784576	730932	1216173	88771	625845	165852	44220	1851274	1275615	1918912	2422469
037	SAMPLE	266087-002	739760	1222006	83992	630999	168443	43145	1883385	1278732	1925288	2442022
039	SAMPLE	266087-003	732368	1253296	92289	628555	168252	46429	1942020	1330619	1994383	2518922
041	SAMPLE	266087-004	729785	1193792	85531	636735	171691	44242	1860608	1288432	1892887	2390153
043	SAMPLE	266087-006	693724	1202206	82392	645372	172480	43571	1889351	1319057	1928195	2465456
045	SAMPLE	266087-007	647546	1144953	86152	627083	167298	43836	1820305	1270662	1859891	2325931
046	CCV		663793	1193881	87388	645327	169569	44145	1866641	1293991	1938043	2479314
048	CCB		642839	1171043	89032	644103	172404	44953	1856815	1308066	1906978	2371188
050	SAMPLE	266087-009	786250 *	1298109	88123	634913	164726	45564	1963787	1349032	2042655	2560875
052	CCV		790481 *	1284213	89935	671933	175533	45778	1932311	1312463	2021420	2530548
054	CCB		809873 *	1267826	93293	671664	178179	46657	1962684	1350814	1996716	2492709
055	SAMPLE	266091-002	787217 *	1293060	89309	661811	173978	45184	1867687	1246256	1985321	2474036
057	SAMPLE	266091-004	752109	1280040	93309	700057	182458	46537	1952296	1343854	2013691	2496501
059	SAMPLE	266091-005	707896	1178105	87575	632082	171396	45424	1850264	1304252	1897891	2388743
061	SAMPLE	266091-008	674392	1141346	85834	630666	168998	43540	1779672	1249652	1827561	2295928
063	SAMPLE	266091-009	753112	1305044	97979	698779	181206	48686	1992793	1380361	2073821	2593347
065	SAMPLE	266091-010	784235 *	1292773	91117	656965	177278	46734	1981039	1337224	2042054	2555212
067	SAMPLE	266091-012	764987	1290550	92208	662015	176553	46543	1978533	1357495	2039116	2529901
069	CCV		724294	1239264	89396	666990	175520	45970	1909923	1303472	1981764	2483672
071	CCB		777190	1252471	90552	663439	177123	45938	1936810	1341879	1995852	2477596
072	ICSA		605019	1121938	79902	611139	159733	42884	1607751	1077179	1794391	2233646
073	ICSAB		494410	950867	71379	596683	155728	39116	1387550	939750	1516772	1902266
080	CCV		668782	1181866	85970	655116	170539	43695	1803426	1226050	1879813	2358590
082	CCB		713897	1214376	96135	692767	174904	46692	1887440	1274297	1939244	2411325
087	CCV		690841	1198809	86548	653675	168948	43750	1832860	1233962	1928045	2388768
089	CCB		711949	1225857	87518	556533	158172	44040	1909301	1279575	1950756	2431444
090	ICSA		579463	1097915	81584	623731	158962	42895	1551375	998790	1727657	2106424
092	ICSAB		447323	1020083	70994	550694	145606	38267	1470930	928912	1646182	2029420

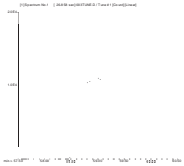
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D23k00.B\003TUNE.D
 Date Acquired: Apr 23 2015 10:41 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

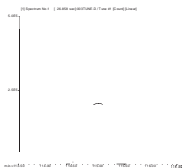
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	43984	44463	43818	44239	44046	1.00	5.00	
59 Co	62676	63315	63436	63373	61972	1.20	5.00	
115 In	1000007	1038303	1034308	1039355	1081740	2.46	5.00	
205 Tl	44426	44373	44731	44416	43737	1.09	5.00	



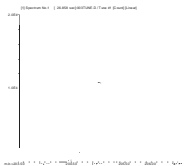
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266087 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015163352001
 Units : ug/L
 Date : 23-APR-2015 10:50
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d23k00006	1015163352006	23-APR-2015 10:54	S27043, S26751	
L2	15d23k00007	1015163352007	23-APR-2015 10:59	S27044, S26751	
L3	15d23k00008	1015163352008	23-APR-2015 11:04	S27045, S26751	
L4	15d23k00009	1015163352009	23-APR-2015 11:08	S27046, S26751	
L5	15d23k00010	1015163352010	23-APR-2015 11:13	S27041, S26751	
L6	15d23k00011	1015163352011	23-APR-2015 11:17	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	MnR^2	Flg
Aluminum	A	0.0053	0.0053	0.0052	0.0051	0.0048	0.0049	BLNK	-0.2604	205.252		0.0051	1.000	0.995	
Antimony	A	0.0030	0.0029	0.0027	0.0028	0.0028	0.0029	BLNK	-0.0175	346.467		0.0029	0.999	0.995	
Barium	A	0.0011	8.4E-4	7.9E-4	8.1E-4	7.9E-4	7.5E-4	BLNK	-0.0125	1303.12		8.4E-4	1.000	0.995	
Beryllium	A	0.0030	0.0026	0.0025	0.0028	0.0026	0.0030	BLNK	-0.0101	345.696		0.0027	0.996	0.995	
Cadmium	A	8.0E-4	7.8E-4	7.0E-4	7.7E-4	7.5E-4	7.3E-4	BLNK	-0.0103	1366.33		7.6E-4	1.000	0.995	
Calcium	A	7.2E-4	3.0E-4	2.2E-4	1.9E-4	1.8E-4	1.8E-4	BLNK	-24.828	5464.53		3.0E-4	1.000	0.995	
Lead	A	0.0091	0.0064	0.0056	0.0055	0.0053	0.0052	BLNK	-0.0590	191.159		0.0062	1.000	0.995	
Magnesium	A	0.0052	0.0046	0.0043	0.0042	0.0040	0.0040	BLNK	-0.7799	251.894		0.0044	1.000	0.995	
Molybdenum	A	0.0031	0.0021	0.0020	0.0020	0.0020	0.0020	BLNK	-0.0519	504.136		0.0022	1.000	0.995	
Potassium	A	0.0952	0.0247	0.0146	0.0068	0.0058	0.0057	BLNK	-157.02	175.696		0.0255	1.000	0.995	
Silver	A	0.0039	0.0036	0.0035	0.0036	0.0035	0.0036	BLNK	-0.0054	278.752		0.0036	1.000	0.995	
Thallium	A	0.0083	0.0074	0.0069	0.0072	0.0071	0.0073	BLNK	-0.0115	137.980		0.0074	1.000	0.995	
Arsenic	E	0.0104	0.0061	0.0058	0.0055	0.0052	0.0058	BLNK	-0.1048	175.594		0.0065	0.997	0.995	
Chromium	E	0.0565	0.0290	0.0270	0.0232	0.0207	0.0253	BLNK	-0.1183	40.9872		0.0303	0.992	0.995	r2 ***
Cobalt	E	0.0374	0.0363	0.0361	0.0350	0.0313	0.0383	BLNK	-0.0051	27.1114		0.0357	0.992	0.995	r2 ***
Copper	E	0.0977	0.0414	0.0323	0.0259	0.0225	0.0268	BLNK	-0.2487	38.5565		0.0411	0.994	0.995	r2 ***
Manganese	E	0.0199	0.0163	0.0156	0.0152	0.0139	0.0168	BLNK	-0.0167	61.5629		0.0163	0.992	0.995	r2 ***
Nickel	E	0.0118	0.0105	0.0099	0.0095	0.0084	0.0101	BLNK	-0.0206	102.275		0.0100	0.993	0.995	r2 ***
Sodium	E	0.0242	0.0086	0.0064	0.0047	0.0041	0.0050	BLNK	-39.267	208.545		0.0088	0.993	0.995	r2 ***
Vanadium	E	0.0651	0.0272	0.0231	0.0192	0.0174	0.0213	BLNK	-0.2248	48.8588		0.0289	0.992	0.995	r2 ***
Zinc	E		0.0177	0.0066	0.0049	0.0042	0.0050	BLNK	-0.1831	208.263		0.0077	0.993	0.995	r2 ***
Iron	H	0.0091	0.0084	0.0082	0.0075	0.0081	0.0080	BLNK	-0.4340	124.628		0.0082	1.000	0.995	
Selenium	H	9.2E-4	9.9E-4	9.5E-4	9.3E-4	9.7E-4	9.5E-4	BLNK	-0.0155	1049.70		9.5E-4	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	5	50.000	9	100.00	6	1000.0	5	10000	0	20000	0
Antimony	A	0.1000	-13	0.5000	-2	1.0000	-9	10.000	-3	100.00	-4	200.00	1
Barium	A	0.1000	26	0.5000	7	1.0000	2	10.000	6	100.00	2	200.00	-1
Beryllium	A	0.1000	-8	0.5000	-11	1.0000	-13	10.000	-5	100.00	-10	200.00	3
Cadmium	A	0.1000	-1	0.5000	5	1.0000	-5	10.000	5	100.00	2	200.00	-1
Calcium	A	10.000	43	50.000	15	100.00	-2	1000.0	-1	10000	0	20000	0
Lead	A	0.1000	15	0.5000	11	1.0000	2	10.000	5	100.00	1	200.00	0
Magnesium	A	10.000	24	50.000	14	100.00	7	1000.0	7	10000	0	20000	0
Molybdenum	A	0.1000	7	0.5000	-6	1.0000	-5	10.000	2	100.00	1	200.00	0
Potassium	A	10.000	3	50.000	19	100.00	0	1000.0	4	10000	0	20000	0
Silver	A	0.1000	3	0.5000	-1	1.0000	-4	10.000	2	100.00	-2	200.00	0
Thallium	A	0.0500	-8	0.2500	-2	0.5000	-7	5.0000	-1	50.000	-2	100.00	1
Arsenic	E	0.1000	-22	0.5000	-14	1.0000	-9	10.000	-4	100.00	-10	200.00	2
Chromium	E	0.1000	13	0.5000	-5	1.0000	-1	10.000	-6	100.00	-15	200.00	4
Cobalt	E	0.1000	-4	0.5000	-3	1.0000	-3	10.000	-5	100.00	-15	200.00	4
Copper	E	0.1000	28	0.5000	10	1.0000	0	10.000	-3	100.00	-13	200.00	3
Manganese	E	0.1000	6	0.5000	-3	1.0000	-6	10.000	-6	100.00	-15	200.00	4
Nickel	E	0.1000	1	0.5000	3	1.0000	0	10.000	-3	100.00	-14	200.00	3
Sodium	E	10.000	12	50.000	1	100.00	-6	1000.0	-6	10000	-14	20000	4
Vanadium	E	0.1000	-7	0.5000	-12	1.0000	-10	10.000	-8	100.00	-15	200.00	4
Zinc	E			0.5000	231	1.0000	19	10.000	0	100.00	-13	200.00	3
Iron	H	10.000	9	50.000	4	100.00	2	1000.0	-6	10000	1	20000	0
Selenium	H	0.1000	-19	0.5000	0	1.0000	-2	10.000	-2	100.00	2	200.00	0

PRW 04/28/15 : Poor recoveries in He gas mode. Those analytes will not be reported from this sequence.

r2=ICAL r^2 failure

Instrument amount = a0 + response * a1 + response^2 * a2; BLNK=Y=aX+ [blank]

Page 2 of 2

1015163352001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015163352001

Cal Date : 23-APR-2015

ICV 1015163352015 (15d23k00015 23-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	9615	ug/L	-4	10	
Antimony	A	100.0	92.00	ug/L	-8	10	
Barium	A	100.0	97.63	ug/L	-2	10	
Beryllium	A	100.0	83.29	ug/L	-17	10	v- ***
Cadmium	A	100.0	97.70	ug/L	-2	10	
Calcium	A	10000	9657	ug/L	-3	10	
Lead	A	100.0	95.49	ug/L	-5	10	
Magnesium	A	10000	9629	ug/L	-4	10	
Molybdenum	A	100.0	96.82	ug/L	-3	10	
Potassium	A	10000	9633	ug/L	-4	10	
Silver	A	100.0	94.21	ug/L	-6	10	
Thallium	A	50.00	47.83	ug/L	-4	10	
Arsenic	E	100.0	92.07	ug/L	-8	10	
Chromium	E	100.0	87.61	ug/L	-12	10	v- ***
Cobalt	E	100.0	88.92	ug/L	-11	10	v- ***
Copper	E	100.0	89.02	ug/L	-11	10	v- ***
Manganese	E	100.0	88.02	ug/L	-12	10	v- ***
Nickel	E	100.0	88.86	ug/L	-11	10	v- ***
Sodium	E	10000	8827	ug/L	-12	10	v- ***
Vanadium	E	100.0	87.38	ug/L	-13	10	v- ***
Zinc	E	100.0	88.70	ug/L	-11	10	v- ***
Iron	H	10000	10020	ug/L	0	10	
Selenium	H	100.0	100.6	ug/L	1	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015163352018 File : 15d23k00018 Time : 23-APR-2015 11:50
 Cal : 1015163352001 Caldate : 23-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	[0.05500]	0.1000	0.05000	ug/L	!ICB
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.07300]	0.1000	---	ug/L	!ICB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	651914	657707	0.89
Scandium	A	1193630	1242534	4.10
Scandium	E	91790	95500	4.04
Scandium	H	664113	646641	-2.63
Germanium	H	180114	178187	-1.07
Germanium	E	46875	48549	3.57
Indium	A	1909489	1969975	3.17
Bismuth	A	1343030	1379045	2.68
Yttrium	A	1976165	2044313	3.45
Terbium	A	2432585	2472699	1.65

!=warning ICB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015163352020
 Cal : 1015163352001
 Standards: S26727, S26751

File : 15d23k00020
 Caldate : 23-APR-2015

IDF : 1.0
 Time : 23-APR-2015 12:00

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4874	0.1000	ug/L	
Barium	A	1.801	0.1000	ug/L	
Beryllium	A	[0.01430]	0.1000	ug/L	
Cadmium	A	2.628	0.1000	ug/L	
Lead	A	0.2145	0.1000	ug/L	
Silver	A	[0.07990]	0.1000	ug/L	
Thallium	A	[0.02170]	0.05000	ug/L	
Arsenic	E	0.6572	0.1000	ug/L	
Chromium	E	0.8368	0.1000	ug/L	
Cobalt	E	1.077	0.1000	ug/L	
Copper	E	1.152	0.1000	ug/L	
Manganese	E	7.041	0.1000	ug/L	
Nickel	E	1.108	0.1000	ug/L	
Vanadium	E	[0.04390]	0.1000	ug/L	
Zinc	E	2.734	0.5000	ug/L	
Selenium	H	0.1318	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94210	ug/L	94
Calcium	A	300000	284100	ug/L	95
Magnesium	A	100000	91820	ug/L	92
Molybdenum	A	2000	2021	ug/L	101
Potassium	A	100000	94430	ug/L	94
Sodium	E	250000	225800	ug/L	90
Phosphorus	E	100000	92220	ug/L	92
Iron	H	250000	235800	ug/L	94

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	651914	426674	-34.55
Scandium	A	1193630	1061608	-11.06
Scandium	E	91790	80843	-11.93
Scandium	H	664113	612833	-7.72
Germanium	H	180114	161307	-10.44
Germanium	E	46875	44399	-5.28
Indium	A	1909489	1548755	-18.89
Bismuth	A	1343030	1064809	-20.72
Yttrium	A	1976165	1739183	-11.99
Terbium	A	2432585	2134813	-12.24

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015163352021 File : 15d23k00021
 Cal : 1015163352001 Caldate : 23-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 23-APR-2015 12:04

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	91930	ug/L	-8		
Cadmium	A	100.0	98.44	ug/L	-2	20	
Calcium	A	300000	278300	ug/L	-7		
Magnesium	A	100000	89450	ug/L	-11		
Molybdenum	A	2000	2013	ug/L	1		
Potassium	A	100000	92390	ug/L	-8		
Silver	A	50.00	46.57	ug/L	-7	20	
Arsenic	E	100.0	94.41	ug/L	-6	20	
Chromium	E	200.0	188.7	ug/L	-6	20	
Cobalt	E	200.0	184.6	ug/L	-8	20	
Copper	E	200.0	181.0	ug/L	-9	20	
Manganese	E	200.0	190.8	ug/L	-5	20	
Nickel	E	200.0	182.6	ug/L	-9	20	
Sodium	E	250000	229900	ug/L	-8		
Vanadium	E	200.0	190.9	ug/L	-5	20	
Zinc	E	100.0	87.27	ug/L	-13	20	
Iron	H	250000	237900	ug/L	-5		
Selenium	H	100.0	96.20	ug/L	-4	20	

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	664113	600877	-9.52
Scandium	A	1193630	1024652	-14.16
Scandium	E	91790	77927	-15.10
Germanium	H	180114	160744	-10.75
Germanium	E	46875	42824	-8.64
Indium	A	1909489	1504392	-21.21
Yttrium	A	1976165	1688210	-14.57

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015163352046 File : 15d23k00046 Time : 23-APR-2015 14:03
 Cal : 1015163352001 Caldate : 23-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0051	0.0048	10000	9890	ug/L	-1	10	
Antimony	A	0.0029	0.0027	100.0	93.97	ug/L	-6	10	
Barium	A	8.4E-4	7.5E-4	100.0	97.86	ug/L	-2	10	
Beryllium	A	0.0027	0.0024	100.0	81.48	ug/L	-19	10	c- v- ***
Cadmium	A	7.6E-4	7.2E-4	100.0	98.20	ug/L	-2	10	
Calcium	A	3.0E-4	1.8E-4	10000	9745	ug/L	-3	10	
Lead	A	0.0062	0.0050	100.0	94.82	ug/L	-5	10	
Magnesium	A	0.0044	0.0040	10000	9978	ug/L	0	10	
Molybdenum	A	0.0022	0.0019	100.0	97.30	ug/L	-3	10	
Potassium	A	0.0255	0.0056	10000	9750	ug/L	-2	10	
Silver	A	0.0036	0.0034	100.0	94.48	ug/L	-6	10	
Thallium	A	0.0074	0.0070	50.00	48.09	ug/L	-4	10	
Arsenic	E	0.0065	0.0054	100.0	95.22	ug/L	-5	10	
Chromium	E	0.0303	0.0228	100.0	93.15	ug/L	-7	10	r2 v- ***
Cobalt	E	0.0357	0.0345	100.0	93.59	ug/L	-6	10	r2 v- ***
Copper	E	0.0411	0.0246	100.0	94.79	ug/L	-5	10	r2 v- ***
Manganese	E	0.0163	0.0149	100.0	91.83	ug/L	-8	10	r2 v- ***
Nickel	E	0.0100	0.0092	100.0	94.39	ug/L	-6	10	r2 v- ***
Sodium	E	0.0088	0.0046	10000	9627	ug/L	-4	10	r2 v- ***
Vanadium	E	0.0289	0.0191	100.0	92.86	ug/L	-7	10	r2 v- ***
Zinc	E	0.0077	0.0045	100.0	93.71	ug/L	-6	10	r2 v- ***
Iron	H	0.0082	0.0078	10000	9681	ug/L	-3	10	
Selenium	H	9.5E-4	9.4E-4	100.0	99.03	ug/L	-1	10	

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	651914	663793	1.82
Scandium	A	1193630	1193881	0.02
Scandium	E	91790	87388	-4.80
Scandium	H	664113	645327	-2.83
Germanium	H	180114	169569	-5.85
Germanium	E	46875	44145	-5.82
Indium	A	1909489	1866641	-2.24
Bismuth	A	1343030	1293991	-3.65
Yttrium	A	1976165	1938043	-1.93
Terbium	A	2432585	2479314	1.92

--low bias c=CCV r2=ICAL r^2 failure v=ICV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015163352048 File : 15d23k00048 Time : 23-APR-2015 14:13
 Cal : 1015163352001 Caldate : 23-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.08670]	0.1000	---	ug/L	!CCB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	651914	642839	-1.39
Scandium	A	1193630	1171043	-1.89
Scandium	E	91790	89032	-3.00
Scandium	H	664113	644103	-3.01
Germanium	H	180114	172404	-4.28
Germanium	E	46875	44953	-4.10
Indium	A	1909489	1856815	-2.76
Bismuth	A	1343030	1308066	-2.60
Yttrium	A	1976165	1906978	-3.50
Terbium	A	2432585	2371188	-2.52

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015163352072
 Cal : 1015163352001
 Standards: S26727, S26751

File : 15d23k00072
 Caldate : 23-APR-2015

IDF : 1.0
 Time : 23-APR-2015 16:07

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4650	0.1000	ug/L	
Barium	A	1.840	0.1000	ug/L	
Beryllium	A	[0.01280]	0.1000	ug/L	
Cadmium	A	1.956	0.1000	ug/L	
Lead	A	0.2102	0.1000	ug/L	
Silver	A	[0.06730]	0.1000	ug/L	
Thallium	A	[0.01540]	0.05000	ug/L	
Arsenic	E	0.6677	0.1000	ug/L	
Chromium	E	0.8740	0.1000	ug/L	
Cobalt	E	1.099	0.1000	ug/L	
Copper	E	1.200	0.1000	ug/L	
Manganese	E	6.929	0.1000	ug/L	
Nickel	E	1.140	0.1000	ug/L	
Vanadium	E	[0.006300]	0.1000	ug/L	
Zinc	E	2.758	0.5000	ug/L	
Selenium	H	[0.08960]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	97480	ug/L	97
Calcium	A	300000	288400	ug/L	96
Magnesium	A	100000	96460	ug/L	96
Molybdenum	A	2000	2047	ug/L	102
Potassium	A	100000	96180	ug/L	96
Sodium	E	250000	233500	ug/L	93
Phosphorus	E	100000	90330	ug/L	90
Iron	H	250000	236300	ug/L	95

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	651914	605019	-7.19
Scandium	A	1193630	1121938	-6.01
Scandium	E	91790	79902	-12.95
Scandium	H	664113	611139	-7.98
Germanium	H	180114	159733	-11.32
Germanium	E	46875	42884	-8.51
Indium	A	1909489	1607751	-15.80
Bismuth	A	1343030	1077179	-19.79
Yttrium	A	1976165	1794391	-9.20
Terbium	A	2432585	2233646	-8.18

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015163352073
 Cal : 1015163352001
 Standards: S26728, S26751
 File : 15d23k00073
 Caldate : 23-APR-2015
 IDF : 1.0
 Time : 23-APR-2015 16:12

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	108700	ug/L	9		
Cadmium	A	100.0	111.7	ug/L	12	20	
Calcium	A	300000	325600	ug/L	9		
Magnesium	A	100000	106700	ug/L	7		
Molybdenum	A	2000	2353	ug/L	18		
Potassium	A	100000	108600	ug/L	9		
Silver	A	50.00	52.84	ug/L	6	20	
Arsenic	E	100.0	100.3	ug/L	0	20	
Chromium	E	200.0	197.6	ug/L	-1	20	
Cobalt	E	200.0	194.5	ug/L	-3	20	
Copper	E	200.0	189.8	ug/L	-5	20	
Manganese	E	200.0	200.0	ug/L	0	20	
Nickel	E	200.0	190.7	ug/L	-5	20	
Sodium	E	250000	244300	ug/L	-2		
Vanadium	E	200.0	200.0	ug/L	0	20	
Zinc	E	100.0	91.61	ug/L	-8	20	
Iron	H	250000	231500	ug/L	-7		
Selenium	H	100.0	94.30	ug/L	-6	20	

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	664113	596683	-10.15
Scandium	A	1193630	950867	-20.34
Scandium	E	91790	71379	-22.24
Germanium	H	180114	155728	-13.54
Germanium	E	46875	39116	-16.55
Indium	A	1909489	1387550	-27.33
Yttrium	A	1976165	1516772	-23.25

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015168934

Instrument : MET26
 Method : EPA 6020

Begun : 04/27/15 07:34
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d27h00001	X	RINSE			04/27/15 07:34	1.0	1	
002	15d27h00002	TUN				04/27/15 07:38	1.0	2	
003	15d27h00003	X	RINSE			04/27/15 07:43	1.0	1	
004	15d27h00004	ICALBLK	CALBLANK			04/27/15 07:47	1.0	1	
005	15d27h00005	ICAL				04/27/15 07:52	1.0	3 1	
006	15d27h00006	ICAL				04/27/15 07:57	1.0	4 1	
007	15d27h00007	ICAL				04/27/15 08:01	1.0	5 1	
008	15d27h00008	ICAL				04/27/15 08:06	1.0	6 1	
009	15d27h00009	ICAL				04/27/15 08:11	1.0	7 1	
010	15d27h00010	ICAL				04/27/15 08:15	1.0	8 1	
011	15d27h00011	X	RINSE			04/27/15 08:20	1.0	1	
012	15d27h00012	ICV				04/27/15 08:25	1.0	9 1	
013	15d27h00013	XCRI				04/27/15 08:29	1.0	10 1	
014	15d27h00014	XICB				04/27/15 08:34	1.0	1	
015	15d27h00015	ICB				04/27/15 08:39	1.0	1	
016	15d27h00016	CRI				04/27/15 08:48	1.0	10 1	
017	15d27h00017	ICSA				04/27/15 08:53	1.0	11 1	8:CA=300000
018	15d27h00018	ICSAB				04/27/15 08:58	1.0	12 1	11:CA=310000
019	15d27h00019	X	RINSE			04/27/15 09:03	1.0	1	
020	15d27h00020	X	RINSE			04/27/15 09:07	1.0	1	
021	15d27h00021	X	RINSE			04/27/15 09:12	1.0	1	
022	15d27h00022	X	RINSE			04/27/15 09:17	1.0	1	
023	15d27h00023	X	RINSE			04/27/15 09:22	1.0	1	
024	15d27h00024	BLANK	QC785236	Water	222504	04/27/15 09:27	1.0	1	
025	15d27h00025	LOD	256092-050	Water	222504	04/27/15 09:31	1.0	1	
026	15d27h00026	CCV				04/27/15 09:36	1.0	13 1	
027	15d27h00027	X	XCCB			04/27/15 09:41	1.0	1	
028	15d27h00028	CCB				04/27/15 09:46	1.0	1	
029	15d27h00029	BLANK	QC785469	Filtrate	222567	04/27/15 09:51	5.0	1	
030	15d27h00030	BS	QC785470	Filtrate	222567	04/27/15 09:55	5.0	1	
031	15d27h00031	BSD	QC785471	Filtrate	222567	04/27/15 10:00	5.0	1	
032	15d27h00032	CCV				04/27/15 10:05	1.0	13 1	
033	15d27h00033	X	XCCB			04/27/15 10:10	1.0	1	
034	15d27h00034	CCB				04/27/15 10:14	1.0	1	
035	15d27h00035	MSS	266234-001	Filtrate	222567	04/27/15 10:19	5.0	1	
036	15d27h00036	MS	QC785472	Filtrate	222567	04/27/15 10:24	5.0	1	
037	15d27h00037	MSD	QC785473	Filtrate	222567	04/27/15 10:28	5.0	1	
038	15d27h00038	SER	QC785474	Filtrate	222567	04/27/15 10:33	25.0	1	
039	15d27h00039	MS	QC785472	Filtrate	222567	04/27/15 10:38	5.0	1	
040	15d27h00040	MSD	QC785473	Filtrate	222567	04/27/15 10:42	5.0	1	
041	15d27h00041	PDS	QC785475	Filtrate	222567	04/27/15 10:47	5.0	14 15 16 1	2:CA=23000
042	15d27h00042	MSS	266234-001	Filtrate	222567	04/27/15 10:52	500.0	1	
043	15d27h00043	CCV				04/27/15 10:57	1.0	13 1	
044	15d27h00044	X	XCCB			04/27/15 11:01	1.0	1	
045	15d27h00045	CCB				04/27/15 11:06	1.0	1	
046	15d27h00046	SAMPLE	266241-005	Filtrate	222567	04/27/15 11:11	5.0	1	5:NA=450000
047	15d27h00047	SAMPLE	266241-006	Filtrate	222567	04/27/15 11:16	5.0	1	5:NA=680000
048	15d27h00048	SAMPLE	266241-010	Filtrate	222567	04/27/15 11:20	5.0	1	5:NA=470000
049	15d27h00049	SAMPLE	266241-005	Filtrate	222567	04/27/15 11:25	50.0	1	1:NA=46000
050	15d27h00050	SAMPLE	266241-006	Filtrate	222567	04/27/15 11:30	50.0	1	1:NA=62000
051	15d27h00051	SAMPLE	266241-010	Filtrate	222567	04/27/15 11:34	50.0	1	1:NA=44000
052	15d27h00052	CCV				04/27/15 11:39	1.0	13 1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015168934

Instrument : MET26
 Method : EPA 6020

Begun : 04/27/15 07:34
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d27h00053	X	XCCB			04/27/15 11:44	1.0	1	
054	15d27h00054	CCB				04/27/15 11:49	1.0	1	
055	15d27h00055	ICSA				04/27/15 11:53	1.0	11 1	8:CA=320000
056	15d27h00056	ICSAB				04/27/15 11:58	1.0	12 1	9:CA=310000
057	15d27h00057	X	RINSE			04/27/15 12:03	1.0	1	
058	15d27h00058	X	RINSE			04/27/15 12:08	1.0	1	
059	15d27h00059	XBLANK	QC785469	Filtrate	222567	04/27/15 12:13	5.0	1	
060	15d27h00060	BLANK	QC785469	Filtrate	222567	04/27/15 12:17	5.0	1	
061	15d27h00061	SAMPLE	266241-010	Filtrate	222567	04/27/15 12:22	5.0	1	5:NA=470000
062	15d27h00062	CCV				04/27/15 12:27	1.0	13 1	
063	15d27h00063	X	XCCB			04/27/15 12:32	1.0	1	
064	15d27h00064	CCB				04/27/15 12:37	1.0	1	
065	15d27h00065	X	RINSE			04/27/15 12:42	1.0	1	
066	15d27h00066	SER	QC784575	Filtrate	222325	04/27/15 12:47	50.0	1	
067	15d27h00067	SAMPLE	266087-003	Filtrate	222325	04/27/15 12:51	10.0	1	
068	15d27h00068	SAMPLE	266087-003	Filtrate	222325	04/27/15 12:56	50.0	1	
069	15d27h00069	SAMPLE	266087-009	Filtrate	222325	04/27/15 13:01	50.0	1	
070	15d27h00070	CCV				04/27/15 13:06	1.0	13 1	
071	15d27h00071	X	XCCB			04/27/15 13:10	1.0	1	
072	15d27h00072	CCB				04/27/15 13:15	1.0	1	
073	15d27h00073	SAMPLE	266091-002	Filtrate	222325	04/27/15 13:20	10.0	1	4:CA=66000
074	15d27h00074	SAMPLE	266091-004	Filtrate	222325	04/27/15 13:25	10.0	1	
075	15d27h00075	SAMPLE	266091-005	Filtrate	222325	04/27/15 13:30	10.0	1	
076	15d27h00076	SAMPLE	266091-008	Filtrate	222325	04/27/15 13:34	10.0	1	
077	15d27h00077	SAMPLE	266091-009	Filtrate	222325	04/27/15 13:39	50.0	1	
078	15d27h00078	SAMPLE	266091-010	Filtrate	222325	04/27/15 13:44	10.0	1	1:MN=640
079	15d27h00079	SAMPLE	266091-012	Filtrate	222325	04/27/15 13:49	10.0	1	
080	15d27h00080	CCV				04/27/15 13:53	1.0	13 1	
081	15d27h00081	X	XCCB			04/27/15 13:58	1.0	1	
082	15d27h00082	CCB				04/27/15 14:03	1.0	1	
083	15d27h00083	ICSA				04/27/15 14:08	1.0	11 1	8:CA=280000
084	15d27h00084	ICSAB				04/27/15 14:13	1.0	12 1	8:CA=290000
085	15d27h00085	X	RINSE			04/27/15 14:17	1.0	1	
086	15d27h00086	X	RINSE			04/27/15 14:22	1.0	1	
087	15d27h00087	CCV				04/27/15 14:27	1.0	13 1	
088	15d27h00088	X	XCCB			04/27/15 14:32	1.0	1	
089	15d27h00089	CCB				04/27/15 14:37	1.0	1	
090	15d27h00090	ICSA				04/27/15 14:42	1.0	11 1	8:CA=300000
091	15d27h00091	ICSAB				04/27/15 14:46	1.0	12 1	8:CA=290000
092	15d27h00092	X	RINSE			04/27/15 14:51	1.0	1	
093	15d27h00093	X	RINSE			04/27/15 14:56	1.0	1	
094	15d27h00094	XBLANK	QC785236		222325	04/27/15 15:01	1.0	1	
095	15d27h00095	XSAMPLE	256092-050		222325	04/27/15 15:06	1.0	1	
096	15d27h00096	CCV				04/27/15 15:11	1.0	13 1	
097	15d27h00097	X	XCCB			04/27/15 15:16	1.0	1	
098	15d27h00098	CCB				04/27/15 15:20	1.0	1	
099	15d27h00099	ICSA				04/27/15 15:25	1.0	11 1	8:CA=300000
100	15d27h00100	ICSAB				04/27/15 15:30	1.0	12 1	8:CA=310000
101	15d27h00101	X	RINSE			04/27/15 15:35	1.0	1	
102	15d27h00102	X	RINSE			04/27/15 20:07	1.0	1	
103	15d27h00103	X	RINSE			04/27/15 20:12	1.0	1	
104	15d27h00104	X	RINSE			04/27/15 20:17	1.0	1	

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015168934

Date : 04/27/15
 Sequence : MET26 15d27h00

Reference : 15d27h00004
 Analyzed : 04/27/15 07:47

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	236515	728463	54295	391185	102004	26585	993887	506561	1176061	1083593
		LOWER LIMIT	70955	218539	16289	117356	30601	7976	298166	151968	352818	325078
		UPPER LIMIT	283818	874156	65154	469422	122405	31902	1192664	607873	1411273	1300312
015	ICB		264150	801404	60451	433946	112572	29623	1088295	542114	1248532	1162278
017	ICSA		221446	661249	53196	397915	98833	27102	905701	453299	1132945	1074966
018	ICSAB		224115	647319	50662	387517	99658	26472	909509	454868	1129382	1066439
024	BLANK	QC785236	220855	629949	49818	365050	99227	25835	1004122	521352	1111648	1098100
025	LOD	256092-050	233137	653340	52156	378304	102981	26302	1027227	532463	1129946	1124333
026	CCV		262826	786365	55917	406863	107907	27951	1091635	539513	1260691	1219180
028	CCB		260865	720699	60591	423269	111725	30005	1035034	532815	1166018	1119288
029	BLANK	QC785469	264603	751904	59757	395138	107351	29110	1079779	545811	1231140	1165594
030	BS	QC785470	251049	706488	55456	409353	107596	27514	1043529	540647	1181681	1147155
031	BSD	QC785471	260573	746207	53984	403508	106767	27109	1074942	549958	1212553	1164904
032	CCV		247971	672922	57137	400642	105135	27879	1020007	509919	1180928	1140585
034	CCB		261175	747849	56652	398649	106058	27673	1106204	557815	1234462	1206161
035	MSS	266234-001	223269	647623	51607	388741	102544	25982	986886	520075	1120554	1107009
036	MS	QC785472	222403	646287	52136	389218	101396	26272	995791	510141	1116387	1112806
037	MSD	QC785473	223480	665650	54036	386954	101508	26490	964256	503836	1118438	1103747
038	SER	QC785474	242952	662520	53818	396861	105203	27350	1042027	541557	1161942	1142666
039	MS	QC785472	245674	738655	51862	378826	100271	25944	1113086	564718	1244945	1257799
040	MSD	QC785473	227235	640861	49455	407166	105172	25378	990568	518078	1105283	1112420
041	PDS	QC785475	213510	670522	54829	365093	97813	26454	968864	510014	1113079	1106109
042	MSS	266234-001	223811	654153	53962	389742	104603	27249	1010426	536061	1142886	1128800
043	CCV		218266	624946	52425	378552	98532	25851	986820	511868	1098656	1118558
045	CCB		238506	674084	54128	390248	102845	26712	1036291	542672	1182378	1144516
046	SAMPLE	266241-005	275588	808106	59931	406151	102249	27574	982360	191377	1206367	1101596
047	SAMPLE	266241-006	274209	838356	58925	454914	113188	29131	966899	465780	1221392	1089090
048	SAMPLE	266241-010	249669	729329	66813 *	467958	116112	31321	888764	176175	1069503	974619
049	SAMPLE	266241-005	291240 *	764325	67630 *	489118 *	124016 *	32453 *	1037189	358373	1227939	1124193
050	SAMPLE	266241-006	213246	704863	61233	342712	93749	28279	943664	509141	1127817	1080593
051	SAMPLE	266241-010	206785	684225	60776	336799	91796	27511	914764	338433	1087567	1044233
052	CCV		194417	641076	58826	409154	104032	27606	950748	704680 *	1113956	1088602
054	CCB		218157	686284	60895	433867	111665	29194	1003091	540107	1139072	1119174
055	ICSA		194362	626680	55295	391694	100171	28131	833770	553446	1028785	1013685
056	ICSAB		164436	565970	51179	369556	95251	26379	788750	534298	1015795	1002086
060	BLANK	QC785469	118127	426457	42660	284442	72319	19484	638166	405751	722613	752520
061	SAMPLE	266241-010	136907	468794	44962	300059	70582	18852	594532	114025 *	713385	705007
062	CCV		117030	435962	45036	297111	72007	19717	608898	499638	701377	735580
064	CCB		129121	452020	45898	304917	77266	20736	672723	411640	737731	769194
066	SER	QC784575	147688	513646	46793	290377	72776	21867	782489	475577	913491	939391
067	SAMPLE	266087-003	150224	510369	49502	345176	89471	23923	774290	467606	906731	931938
068	SAMPLE	266087-003	165575	551386	50362	333338	89303	24115	842424	494951	981467	997911
069	SAMPLE	266087-009	152556	510524	50970	354409	93398	24684	779354	466836	882818	915456
070	CCV		126711	439677	44774	294190	74101	20610	653071	466219	739240	777525
072	CCB		133938	451810	45096	301502	76628	20757	678247	421098	750178	784509
073	SAMPLE	266091-002	127002	447239	44720	297588	73521	20002	615783	370236	713169	739757
074	SAMPLE	266091-004	136029	472944	46877	303781	77984	21417	677946	418449	762054	784320
075	SAMPLE	266091-005	148746	483985	49025	282822	77250	22754	719399	429157	822900	816774
076	SAMPLE	266091-008	152036	503683	44243	310634	81151	21138	743770	441221	882665	859211
077	SAMPLE	266091-009	133650	456241	45151	306643	79235	21144	687847	420484	766619	784853
078	SAMPLE	266091-010	128951	444456	43943	297293	76243	20590	654169	399127	738218	762235

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015168934

Date : 04/27/15
 Sequence : MET26 15d27h00

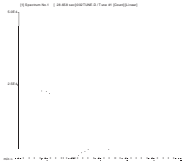
Reference : 15d27h00004
 Analyzed : 04/27/15 07:47

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
079	SAMPLE	266091-012	143712	476029	46425	310711	78376	21297	698056	422491	804458	795710
080	CCV		138007	457802	44899	304116	76894	20744	683612	445455	818589	796217
082	CCB		144446	475942	46535	319141	81449	21602	716044	431321	852017	813938
083	ICSA		91525	376054	39501	281138	69022	19519	507931	341860	614767	649891
084	ICSAB		84867	343514	36119	250780	60397	17525	479207	320800	570016	616700
087	CCV		102408	383221	39423	260031	65908	18151	579157	390094	650717	701205
089	CCB		104486	379235	40171	259282	65933	18199	589605	381680	645124	692069
090	ICSA		81304	332459	36041	248842	59655	17255	465261	306495	556463	600525
091	ICSAB		77181	321313	33889	229884	56389	16475	453632	301869	538302	586639
096	CCV		82059	305385	35884	237590	58374	15758	478523	333892	525512	589547
098	CCB		82803	320940	35650	232906	58874	15976	511851	347430	548802	616629
099	ICSA		69224 *	293036	32892	222466	54093	15939	417598	277011	488523	544250
100	ICSAB		66116 *	278675	32632	223582	53922	15456	398005	270909	471064	522142

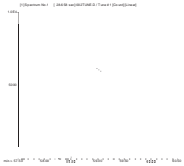
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D27h00.B\002TUNE.D
 Date Acquired: Apr 27 2015 07:38 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

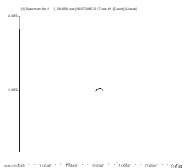
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	18756	18742	18645	18904	18688	0.94	5.00	
59 Co	34334	34633	34739	34362	34763	1.43	5.00	
115 In	495005	505574	498598	516698	500772	1.76	5.00	
205 Tl	16120	16191	16313	16482	16380	1.04	5.00	



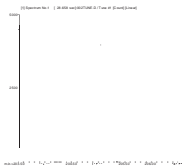
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266087 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015168934001
 Units : ug/L
 Date : 27-APR-2015 07:47
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d27h00005	1015168934005	27-APR-2015 07:52	S27043, S26751	
L2	15d27h00006	1015168934006	27-APR-2015 07:57	S27044, S26751	
L3	15d27h00007	1015168934007	27-APR-2015 08:01	S27045, S26751	
L4	15d27h00008	1015168934008	27-APR-2015 08:06	S27046, S26751	
L5	15d27h00009	1015168934009	27-APR-2015 08:11	S27041, S26751	
L6	15d27h00010	1015168934010	27-APR-2015 08:15	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0059	0.0051	0.0049	0.0050	0.0051	0.0051	BLNK	-1.2815	197.044		0.0052	1.000	0.995	
Antimony	A	0.0035	0.0028	0.0026	0.0027	0.0027	0.0027	BLNK	-0.0351	369.506		0.0029	1.000	0.995	
Barium	A	0.0013	8.8E-4	8.5E-4	9.2E-4	9.0E-4	8.9E-4	BLNK	-0.0207	1117.69		9.5E-4	1.000	0.995	
Beryllium	A	0.0043	0.0033	0.0034	0.0035	0.0035	0.0035	BLNK	-0.0456	286.731		0.0036	1.000	0.995	
Cadmium	A	9.0E-4	7.7E-4	7.2E-4	7.5E-4	7.5E-4	7.4E-4	BLNK	-0.0313	1345.66		7.7E-4	1.000	0.995	
Calcium	A	0.0016	4.4E-4	2.9E-4	2.0E-4	2.1E-4	2.0E-4	BLNK	-60.310	4987.48		4.9E-4	1.000	0.995	
Lead	A	0.0080	0.0055	0.0051	0.0048	0.0047	0.0046	BLNK	-0.0751	215.373		0.0055	1.000	0.995	
Magnesium	A	0.0060	0.0043	0.0040	0.0041	0.0041	0.0040	BLNK	-2.7775	246.866		0.0044	1.000	0.995	
Molybdenum	A	0.0036	0.0021	0.0020	0.0019	0.0019	0.0019	BLNK	-0.0751	519.974		0.0022	1.000	0.995	
Potassium	A	0.1394	0.0317	0.0179	0.0074	0.0065	0.0063	BLNK	-198.46	159.179		0.0349	1.000	0.995	
Silver	A	0.0042	0.0038	0.0037	0.0037	0.0036	0.0036	BLNK	-0.0109	277.973		0.0038	1.000	0.995	
Thallium	A	0.0090	0.0076	0.0072	0.0075	0.0077	0.0076	BLNK	-0.0175	130.906		0.0078	1.000	0.995	
Arsenic	E	0.0162	0.0077	0.0068	0.0058	0.0060	0.0057	BLNK	-0.1776	173.011		0.0080	1.000	0.995	
Chromium	E	0.0761	0.0375	0.0294	0.0241	0.0244	0.0230	BLNK	-0.2083	43.0446		0.0357	0.999	0.995	
Cobalt	E	0.0406	0.0408	0.0369	0.0364	0.0364	0.0343	BLNK	-0.0247	28.8092		0.0376	0.999	0.995	
Copper	E	0.1164	0.0476	0.0345	0.0269	0.0259	0.0242	BLNK	-0.3129	40.7624		0.0459	0.999	0.995	
Manganese	E	0.0181	0.0172	0.0172	0.0156	0.0159	0.0150	BLNK	-0.0304	65.7406		0.0165	0.999	0.995	
Nickel	E	0.0196	0.0126	0.0104	0.0099	0.0097	0.0092	BLNK	-0.0671	107.930		0.0119	0.999	0.995	
Sodium	E	0.0279	0.0100	0.0071	0.0051	0.0051	0.0048	BLNK	-46.722	204.726		0.0100	0.999	0.995	
Vanadium	E	0.0698	0.0312	0.0241	0.0202	0.0204	0.0194	BLNK	-0.2948	51.1404		0.0309	0.999	0.995	
Zinc	E		0.0205	0.0074	0.0050	0.0047	0.0044	BLNK	-0.2632	224.568		0.0084	0.998	0.995	
Iron	H	0.0097	0.0085	0.0082	0.0084	0.0081	0.0079	BLNK	-2.3738	126.207		0.0085	1.000	0.995	
Selenium	H	0.0012	0.0011	0.0010	9.9E-4	9.9E-4	9.5E-4	BLNK	-0.0203	1042.05		0.0010	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	4	50.000	-2	100.00	-5	1000.0	-2	10000	1	20000	0
Antimony	A	0.1000	-5	0.5000	-2	1.0000	-7	10.000	0	100.00	1	200.00	0
Barium	A	0.1000	19	0.5000	-6	1.0000	-8	10.000	2	100.00	1	200.00	0
Beryllium	A	0.1000	-23	0.5000	-14	1.0000	-7	10.000	0	100.00	-1	200.00	0
Cadmium	A	0.1000	-10	0.5000	-3	1.0000	-6	10.000	0	100.00	1	200.00	0
Calcium	A	10.000	85	50.000	1	100.00	-14	1000.0	-8	10000	2	20000	-1
Lead	A	0.1000	-2	0.5000	3	1.0000	2	10.000	3	100.00	1	200.00	0
Magnesium	A	10.000	21	50.000	1	100.00	-5	1000.0	0	10000	2	20000	0
Molybdenum	A	0.1000	13	0.5000	-5	1.0000	-5	10.000	-1	100.00	1	200.00	0
Potassium	A	10.000	134	50.000	7	100.00	-13	1000.0	-3	10000	1	20000	0
Silver	A	0.1000	7	0.5000	3	1.0000	1	10.000	2	100.00	1	200.00	0
Thallium	A	0.0500	-18	0.2500	-7	0.5000	-10	5.0000	-2	50.000	1	100.00	0
Arsenic	E	0.1000	2	0.5000	-3	1.0000	0	10.000	-2	100.00	3	200.00	-1
Chromium	E	0.1000	19	0.5000	20	1.0000	6	10.000	2	100.00	5	200.00	-1
Cobalt	E	0.1000	-8	0.5000	13	1.0000	4	10.000	5	100.00	5	200.00	-1
Copper	E	0.1000	61	0.5000	31	1.0000	9	10.000	7	100.00	5	200.00	-1
Manganese	E	0.1000	-11	0.5000	7	1.0000	10	10.000	3	100.00	5	200.00	-1
Nickel	E	0.1000	44	0.5000	23	1.0000	6	10.000	6	100.00	5	200.00	-1
Sodium	E	10.000	3	50.000	11	100.00	-1	1000.0	1	10000	4	20000	-1
Vanadium	E	0.1000	-38	0.5000	1	1.0000	-6	10.000	0	100.00	4	200.00	-1
Zinc	E			0.5000	307	1.0000	40	10.000	10	100.00	6	200.00	-2
Iron	H	10.000	-1	50.000	2	100.00	2	1000.0	5	10000	3	20000	-1
Selenium	H	0.1000	7	0.5000	6	1.0000	7	10.000	3	100.00	3	200.00	-1

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015168934001

Cal Date : 27-APR-2015

ICV 1015168934012 (15d27h00012 27-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	9826	ug/L	-2	10	
Antimony	A	100.0	98.51	ug/L	-1	10	
Barium	A	100.0	97.14	ug/L	-3	10	
Beryllium	A	100.0	96.30	ug/L	-4	10	
Cadmium	A	100.0	96.37	ug/L	-4	10	
Calcium	A	10000	9856	ug/L	-1	10	
Lead	A	100.0	98.38	ug/L	-2	10	
Magnesium	A	10000	9834	ug/L	-2	10	
Molybdenum	A	100.0	97.41	ug/L	-3	10	
Potassium	A	10000	9810	ug/L	-2	10	
Silver	A	100.0	96.94	ug/L	-3	10	
Thallium	A	50.00	47.76	ug/L	-4	10	
Arsenic	E	100.0	96.30	ug/L	-4	10	
Chromium	E	100.0	96.03	ug/L	-4	10	
Cobalt	E	100.0	96.36	ug/L	-4	10	
Copper	E	100.0	97.27	ug/L	-3	10	
Manganese	E	100.0	96.94	ug/L	-3	10	
Nickel	E	100.0	96.11	ug/L	-4	10	
Sodium	E	10000	9785	ug/L	-2	10	
Vanadium	E	100.0	96.04	ug/L	-4	10	
Zinc	E	100.0	96.73	ug/L	-3	10	
Iron	H	10000	9828	ug/L	-2	10	
Selenium	H	100.0	98.26	ug/L	-2	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015168934015 File : 15d27h00015 Time : 27-APR-2015 08:39
 Cal : 1015168934001 Caldate : 27-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.05970]	0.1000	---	ug/L	!ICB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	236515	264150	11.68
Scandium	A	728463	801404	10.01
Scandium	E	54295	60451	11.34
Scandium	H	391185	433946	10.93
Germanium	H	102004	112572	10.36
Germanium	E	26585	29623	11.43
Indium	A	993887	1088295	9.50
Bismuth	A	506561	542114	7.02
Yttrium	A	1176061	1248532	6.16
Terbium	A	1083593	1162278	7.26

!=warning ICB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015168934055 File : 15d27h00055 Time : 27-APR-2015 11:53
 Cal : 1015168934001 Caldate : 27-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.5688	0.1000	ug/L	
Barium	A	1.947	0.1000	ug/L	
Beryllium	A	[-0.003500]	0.1000	ug/L	
Cadmium	A	2.657	0.1000	ug/L	
Lead	A	0.2639	0.1000	ug/L	
Silver	A	10.60	0.1000	ug/L	
Thallium	A	[0.03910]	0.05000	ug/L	
Arsenic	E	0.7275	0.1000	ug/L	
Chromium	E	0.8226	0.1000	ug/L	
Cobalt	E	1.077	0.1000	ug/L	
Copper	E	1.281	0.1000	ug/L	
Manganese	E	7.108	0.1000	ug/L	
Nickel	E	1.103	0.1000	ug/L	
Vanadium	E	[0.02400]	0.1000	ug/L	
Zinc	E	2.553	0.5000	ug/L	
Selenium	H	0.5067	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	107500	ug/L	108
Calcium	A	300000	321600	ug/L	107
Magnesium	A	100000	104700	ug/L	105
Molybdenum	A	2000	2322	ug/L	116
Potassium	A	100000	107100	ug/L	107
Sodium	E	250000	230100	ug/L	92
Phosphorus	E	100000	99150	ug/L	99
Iron	H	250000	242200	ug/L	97

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	236515	194362	-17.82
Scandium	A	728463	626680	-13.97
Scandium	E	54295	55295	1.84
Scandium	H	391185	391694	0.13
Germanium	H	102004	100171	-1.80
Germanium	E	26585	28131	5.82
Indium	A	993887	833770	-16.11
Bismuth	A	506561	553446	9.26
Yttrium	A	1176061	1028785	-12.52
Terbium	A	1083593	1013685	-6.45

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015168934056
 Cal : 1015168934001
 Standards: S26728, S26751

File : 15d27h00056
 Caldate : 27-APR-2015

IDF : 1.0
 Time : 27-APR-2015 11:58

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	102200	ug/L	2		
Cadmium	A	100.0	108.0	ug/L	8	20	
Calcium	A	300000	306400	ug/L	2		
Magnesium	A	100000	98550	ug/L	-1		
Molybdenum	A	2000	2085	ug/L	4		
Potassium	A	100000	102400	ug/L	2		
Silver	A	50.00	52.15	ug/L	4	20	
Arsenic	E	100.0	97.96	ug/L	-2	20	
Chromium	E	200.0	191.8	ug/L	-4	20	
Cobalt	E	200.0	185.9	ug/L	-7	20	
Copper	E	200.0	185.1	ug/L	-7	20	
Manganese	E	200.0	200.9	ug/L	0	20	
Nickel	E	200.0	181.7	ug/L	-9	20	
Sodium	E	250000	232000	ug/L	-7		
Vanadium	E	200.0	195.1	ug/L	-2	20	
Zinc	E	100.0	90.76	ug/L	-9	20	
Iron	H	250000	242300	ug/L	-3		
Selenium	H	100.0	99.92	ug/L	0	20	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	391185	369556	-5.53
Scandium	A	728463	565970	-22.31
Scandium	E	54295	51179	-5.74
Germanium	H	102004	95251	-6.62
Germanium	E	26585	26379	-0.77
Indium	A	993887	788750	-20.64
Yttrium	A	1176061	1015795	-13.63

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015168934062 File : 15d27h00062 Time : 27-APR-2015 12:27
 Cal : 1015168934001 Caldate : 27-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0052	0.0050	10000	9873	ug/L	-1	10	
Antimony	A	0.0029	0.0028	100.0	103.6	ug/L	4	10	
Barium	A	9.5E-4	8.7E-4	100.0	97.54	ug/L	-2	10	
Beryllium	A	0.0036	0.0040	100.0	115.2	ug/L	15	10	c+ ***
Cadmium	A	7.7E-4	7.4E-4	100.0	99.35	ug/L	-1	10	
Calcium	A	4.9E-4	2.0E-4	10000	9950	ug/L	0	10	
Lead	A	0.0055	0.0052	100.0	111.5	ug/L	12	10	c+ ***
Magnesium	A	0.0044	0.0040	10000	9749	ug/L	-3	10	
Molybdenum	A	0.0022	0.0020	100.0	103.0	ug/L	3	10	
Potassium	A	0.0349	0.0064	10000	9937	ug/L	-1	10	
Silver	A	0.0038	0.0031	100.0	85.64	ug/L	-14	10	c- ***
Thallium	A	0.0078	0.0056	50.00	36.58	ug/L	-27	10	c- ***
Arsenic	E	0.0080	0.0057	100.0	97.60	ug/L	-2	10	
Chromium	E	0.0357	0.0205	100.0	87.82	ug/L	-12	10	c- ***
Cobalt	E	0.0376	0.0298	100.0	85.91	ug/L	-14	10	c- ***
Copper	E	0.0459	0.0207	100.0	83.90	ug/L	-16	10	c- ***
Manganese	E	0.0165	0.0139	100.0	91.61	ug/L	-8	10	
Nickel	E	0.0119	0.0079	100.0	85.59	ug/L	-14	10	c- ***
Sodium	E	0.0100	0.0048	10000	9771	ug/L	-2	10	
Vanadium	E	0.0309	0.0175	100.0	89.29	ug/L	-11	10	c- ***
Zinc	E	0.0084	0.0038	100.0	85.94	ug/L	-14	10	c- ***
Iron	H	0.0085	0.0074	10000	9301	ug/L	-7	10	
Selenium	H	0.0010	9.2E-4	100.0	95.45	ug/L	-5	10	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	236515	117030	-50.52
Scandium	A	728463	435962	-40.15
Scandium	E	54295	45036	-17.05
Scandium	H	391185	297111	-24.05
Germanium	H	102004	72007	-29.41
Germanium	E	26585	19717	-25.83
Indium	A	993887	608898	-38.74
Bismuth	A	506561	499638	-1.37
Yttrium	A	1176061	701377	-40.36
Terbium	A	1083593	735580	-32.12

+ = high bias - = low bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015168934064
Cal : 1015168934001

File : 15d27h00064
Caldate : 27-APR-2015

IDF : 1.0
Time : 27-APR-2015 12:37

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	0.1623	0.1000	0.2000	ug/L	CCB ***
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	1.211	0.1000	0.05000	ug/L	CCB ***
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	26.47	10.00	15.00	ug/L	CCB ***
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	0.1026	0.1000	0.1000	ug/L	CCB ***

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	236515	129121	-45.41
Scandium	A	728463	452020	-37.95
Scandium	E	54295	45898	-15.47
Scandium	H	391185	304917	-22.05
Germanium	H	102004	77266	-24.25
Germanium	E	26585	20736	-22.00
Indium	A	993887	672723	-32.31
Bismuth	A	506561	411640	-18.74
Yttrium	A	1176061	737731	-37.27
Terbium	A	1083593	769194	-29.01

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015168934070 File : 15d27h00070 Time : 27-APR-2015 13:06
 Cal : 1015168934001 Caldate : 27-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0052	0.0051	10000	10030	ug/L	0	10	
Antimony	A	0.0029	0.0028	100.0	103.1	ug/L	3	10	
Barium	A	9.5E-4	8.8E-4	100.0	98.55	ug/L	-1	10	
Beryllium	A	0.0036	0.0038	100.0	109.8	ug/L	10	10	
Cadmium	A	7.7E-4	7.5E-4	100.0	100.9	ug/L	1	10	
Calcium	A	4.9E-4	2.0E-4	10000	10040	ug/L	0	10	
Lead	A	0.0055	0.0052	100.0	111.1	ug/L	11	10	c+ ***
Magnesium	A	0.0044	0.0040	10000	9918	ug/L	-1	10	
Molybdenum	A	0.0022	0.0020	100.0	102.6	ug/L	3	10	
Potassium	A	0.0349	0.0065	10000	10070	ug/L	1	10	
Silver	A	0.0038	0.0035	100.0	97.56	ug/L	-2	10	
Thallium	A	0.0078	0.0064	50.00	41.57	ug/L	-17	10	c- ***
Arsenic	E	0.0080	0.0055	100.0	94.87	ug/L	-5	10	
Chromium	E	0.0357	0.0209	100.0	89.94	ug/L	-10	10	
Cobalt	E	0.0376	0.0308	100.0	88.67	ug/L	-11	10	c- ***
Copper	E	0.0459	0.0215	100.0	87.42	ug/L	-13	10	c- ***
Manganese	E	0.0165	0.0141	100.0	92.63	ug/L	-7	10	
Nickel	E	0.0119	0.0081	100.0	87.65	ug/L	-12	10	c- ***
Sodium	E	0.0100	0.0048	10000	9850	ug/L	-1	10	
Vanadium	E	0.0309	0.0178	100.0	90.83	ug/L	-9	10	
Zinc	E	0.0084	0.0040	100.0	89.29	ug/L	-11	10	c- ***
Iron	H	0.0085	0.0076	10000	9627	ug/L	-4	10	
Selenium	H	0.0010	9.3E-4	100.0	97.06	ug/L	-3	10	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	236515	126711	-46.43
Scandium	A	728463	439677	-39.64
Scandium	E	54295	44774	-17.54
Scandium	H	391185	294190	-24.80
Germanium	H	102004	74101	-27.35
Germanium	E	26585	20610	-22.48
Indium	A	993887	653071	-34.29
Bismuth	A	506561	466219	-7.96
Yttrium	A	1176061	739240	-37.14
Terbium	A	1083593	777525	-28.25

+ = high bias - = low bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015168934072
Cal : 1015168934001

File : 15d27h00072
Caldate : 27-APR-2015

IDF : 1.0
Time : 27-APR-2015 13:15

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	1.207	0.1000	0.05000	ug/L	CCB ***
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	12.76	10.00	15.00	ug/L	CCB ***
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	236515	133938	-43.37
Scandium	A	728463	451810	-37.98
Scandium	E	54295	45096	-16.94
Scandium	H	391185	301502	-22.93
Germanium	H	102004	76628	-24.88
Germanium	E	26585	20757	-21.92
Indium	A	993887	678247	-31.76
Bismuth	A	506561	421098	-16.87
Yttrium	A	1176061	750178	-36.21
Terbium	A	1083593	784509	-27.60

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015168934083
 Cal : 1015168934001
 Standards: S26727, S26751
 File : 15d27h00083
 Caldate : 27-APR-2015
 IDF : 1.0
 Time : 27-APR-2015 14:08

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4396	0.1000	ug/L	
Barium	A	1.704	0.1000	ug/L	
Beryllium	A	[-0.01770]	0.1000	ug/L	
Cadmium	A	2.748	0.1000	ug/L	
Lead	A	0.2660	0.1000	ug/L	
Silver	A	7.258	0.1000	ug/L	
Thallium	A	[0.02290]	0.05000	ug/L	
Arsenic	E	0.6091	0.1000	ug/L	
Chromium	E	0.8269	0.1000	ug/L	
Cobalt	E	1.046	0.1000	ug/L	
Copper	E	1.051	0.1000	ug/L	
Manganese	E	6.981	0.1000	ug/L	
Nickel	E	1.095	0.1000	ug/L	
Vanadium	E	[0.02600]	0.1000	ug/L	
Zinc	E	2.433	0.5000	ug/L	
Selenium	H	0.2010	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	95960	ug/L	96
Calcium	A	300000	280300	ug/L	93
Magnesium	A	100000	91660	ug/L	92
Molybdenum	A	2000	2099	ug/L	105
Potassium	A	100000	95110	ug/L	95
Sodium	E	250000	235100	ug/L	94
Phosphorus	E	100000	103700	ug/L	104
Iron	H	250000	225900	ug/L	90

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	236515	91525	-61.30
Scandium	A	728463	376054	-48.38
Scandium	E	54295	39501	-27.25
Scandium	H	391185	281138	-28.13
Germanium	H	102004	69022	-32.33
Germanium	E	26585	19519	-26.58
Indium	A	993887	507931	-48.89
Bismuth	A	506561	341860	-32.51
Yttrium	A	1176061	614767	-47.73
Terbium	A	1083593	649891	-40.02

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266087 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015168934084 File : 15d27h00084
 Cal : 1015168934001 Caldate : 27-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 27-APR-2015 14:13

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	101100	ug/L	1		
Cadmium	A	100.0	101.4	ug/L	1	20	
Calcium	A	300000	294200	ug/L	-2		
Magnesium	A	100000	96100	ug/L	-4		
Molybdenum	A	2000	2186	ug/L	9		
Potassium	A	100000	100300	ug/L	0		
Silver	A	50.00	51.13	ug/L	2	20	
Arsenic	E	100.0	93.57	ug/L	-6	20	
Chromium	E	200.0	177.1	ug/L	-11	20	
Cobalt	E	200.0	169.7	ug/L	-15	20	
Copper	E	200.0	161.3	ug/L	-19	20	
Manganese	E	200.0	190.9	ug/L	-5	20	
Nickel	E	200.0	163.8	ug/L	-18	20	
Sodium	E	250000	236400	ug/L	-5		
Vanadium	E	200.0	183.5	ug/L	-8	20	
Zinc	E	100.0	85.00	ug/L	-15	20	
Iron	H	250000	222800	ug/L	-11		
Selenium	H	100.0	94.47	ug/L	-6	20	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	391185	250780	-35.89
Scandium	A	728463	343514	-52.84
Scandium	E	54295	36119	-33.48
Germanium	H	102004	60397	-40.79
Germanium	E	26585	17525	-34.08
Indium	A	993887	479207	-51.78
Yttrium	A	1176061	570016	-51.53

SAMPLE PREPARATION SUMMARY

Batch # : 222325
 Started By : RFC
 Method : METHOD
 Spike #1 ID : S26229

Prep Date : 16-APR-2015 10:20
 Spike #2 ID : S26230

Analysis : ICPMS
 Finished By : RFC
 Units : mL
 Spike #3 ID : S26912

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266068-003		Filtrate	50	50	1	1.0						6020	
266068-005		Filtrate	50	50	1	1.0						6020	
266087-001		Filtrate	50	50	1	1.0						6020	
266087-002		Filtrate	50	50	1	1.0						6020	
266087-003		Filtrate	50	50	1	1.0						6020	
266087-004		Filtrate	50	50	1	1.0						6020	
266087-006		Filtrate	50	50	1	1.0						6020	
266087-007		Filtrate	50	50	1	1.0						6020	
266087-009		Filtrate	50	50	1	1.0						6020	
266091-002		Filtrate	50	50	1	1.0						6020	
266091-004		Filtrate	50	50	1	1.0						6020	
266091-005		Filtrate	50	50	1	1.0						6020	
266091-006		Filtrate	50	50	1	1.0						6020	
266091-007		Filtrate	50	50	1	1.0						6020	
266091-008		Filtrate	50	50	1	1.0						6020	
266091-009		Filtrate	50	50	1	1.0						6020	
266091-010		Filtrate	50	50	1	1.0						6020	
266091-012		Filtrate	50	50	1	1.0						6020	
QC784570	BLANK	Filtrate	50	50	1	1.0							
QC784571	BS	Filtrate	50	50	1	1.0	.5	.5	.5				
QC784572	BSD	Filtrate	50	50	1	1.0	.5	.5	.5				
QC784573	MS	Filtrate	50	50	1	1.0	.5	.5	.5				
QC784574	MSD	Filtrate	50	50	1	1.0	.5	.5	.5				
QC784575	SER	Filtrate	50	50	1	1.0							
QC784576	PDS	Filtrate	50	50	1	1.0							

Analyst: NT

Date: 04/21/15

Reviewer: PRW

Date: 04/21/15

Water Digestion for ICP-MS

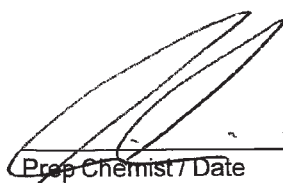
Curtis & Tompkins, Ltd.

LIMS Batch #: 222325
 Digested by: RFC
 Date Digested: 4/16/15

Digestion Method **BK3678**
 EPA 200.8 for ICP-M Page 7
 EPA 3005A for ICP-MS
 FILTRATE

Lvl.	Sample #	Container ID	Volume Sample(mL)	Final Volume (mL)	Filtered? (y/n)	ID ✓	Comments
	BLANK		50 □	50 □	N	✓	QC784570
	BS		50 □	50 □		✓	↓ -571
	BSD		50 □	50 □		✓	↓ -572
	MS		50 □	50 □		✓	↓ -573
5	MSD		50 □	50 □		✓	↓ -574
III	266068-003	A	50 □	50 □		✓	↓ -575 RFC 4/16/15
	-005		50 □	50 □		✓	
IV	266087-001	D	50 □	50 □		✓	MSS
	-002	A	50 □	50 □		✓	
10	-003	A	50 □	50 □		✓	
	-004	D	50 □	50 □		✓	
	-006		50 □	50 □		✓	
	-007		50 □	50 □		✓	
	-009		50 □	50 □		✓	
15	266091-002	A	50 □	50 □		✓	
	-004		50 □	50 □		✓	
	-005		50 □	50 □		✓	
	-006	D	50 □	50 □		✓	
	-007		50 □	50 □		✓	
20	-008		50 □	50 □		✓	
	-009		50 □	50 □		✓	
	-010		50 □	50 □		✓	
	-012		50 □	50 □		✓	
			50 □	50 □			
			50 □	50 □			

	Reagent ID or LIMS #	Initials / Date
Digestion tubes, lot #	ACCUFLOW	RFC 4/16/15
0.50 mL of spike solution (Std1) was added to all spikes	S26229	
0.50 mL of spike solution (Std2) was added to all spikes	S26230	
0.50 mL of spike solution (Std3) was added to all spikes	S26912	
Digestion Temperature (°C), Block and Probe Location		
digestion begun at (time)	10:20	
concentrated HCl	JTB97264	
concentrated HNO3	JTB102053	
digestion ended at (time)	10:40	
<input type="checkbox"/> filtered thru' Whatman # 541		
Relinquished to ICP group	ICP-MS	


 Prep Chemist / Date 4/16/15

Continued from page 8
 Continued on page _____

Reviewed Online / See LIMS

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1075159406

Instrument : MET54 Begun : 04/20/15 16:46
 Method : EPA 7470A SOP Version : hg_water_rv16

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	met54	ICALBLK				04/20/15 16:46	1.0	
002	met54	ICAL	ICAL1			04/20/15 16:47	1.0	1
003	met54	ICAL	ICAL2			04/20/15 16:48	1.0	1
004	met54	ICAL	ICAL3			04/20/15 16:49	1.0	1
005	met54	ICAL	ICAL4			04/20/15 16:51	1.0	1
006	met54	ICAL	ICAL5			04/20/15 16:52	1.0	1
007	met54	ICV				04/20/15 16:53	1.0	2
008	met54	ICB				04/20/15 16:54	1.0	
009	met54	BLANK	QC784841	Filtrate	222394	04/20/15 17:00	1.0	
010	met54	BLANK	QC784842	WET Leachate	222394	04/20/15 17:02	1.0	
011	met54	BS	QC784843	Filtrate	222394	04/20/15 17:03	1.0	
012	met54	BSD	QC784844	Filtrate	222394	04/20/15 17:04	1.0	
013	met54	MSS	266087-009	Filtrate	222394	04/20/15 17:05	1.0	
014	met54	MS	QC784845	Filtrate	222394	04/20/15 17:06	1.0	
015	met54	MSD	QC784846	Filtrate	222394	04/20/15 17:07	1.0	
016	met54	SER	QC784847	Filtrate	222394	04/20/15 17:08	5.0	
017	met54	SAMPLE	266072-001	WET Leachate	222394	04/20/15 17:09	1.0	
018	met54	SAMPLE	266087-001	Filtrate	222394	04/20/15 17:11	1.0	
019	met54	XCCV				04/20/15 17:12	1.0	3
020	met54	CCV				04/20/15 17:17	1.0	3
021	met54	CCB				04/20/15 17:18	1.0	
022	met54	SAMPLE	266087-002	Filtrate	222394	04/20/15 17:20	1.0	
023	met54	SAMPLE	266087-003	Filtrate	222394	04/20/15 17:21	1.0	
024	met54	SAMPLE	266087-004	Filtrate	222394	04/20/15 17:22	1.0	
025	met54	SAMPLE	266087-006	Filtrate	222394	04/20/15 17:23	1.0	
026	met54	SAMPLE	266087-007	Filtrate	222394	04/20/15 17:24	1.0	
027	met54	SAMPLE	266091-002	Filtrate	222394	04/20/15 17:25	1.0	
028	met54	SAMPLE	266091-004	Filtrate	222394	04/20/15 17:26	1.0	
029	met54	SAMPLE	266091-005	Filtrate	222394	04/20/15 17:27	1.0	
030	met54	SAMPLE	266091-006	Filtrate	222394	04/20/15 17:28	1.0	
031	met54	SAMPLE	266091-007	Filtrate	222394	04/20/15 17:30	1.0	
032	met54	CCV				04/20/15 17:31	1.0	3
033	met54	CCB				04/20/15 17:32	1.0	
034	met54	MS	QC784845	Filtrate	222394	04/20/15 17:33	1.0	
035	met54	MSD	QC784846	Filtrate	222394	04/20/15 17:34	1.0	
036	met54	SAMPLE	266091-008	Filtrate	222394	04/20/15 17:35	1.0	
037	met54	SAMPLE	266091-009	Filtrate	222394	04/20/15 17:36	1.0	
038	met54	SAMPLE	266091-010	Filtrate	222394	04/20/15 17:37	1.0	
039	met54	SAMPLE	266091-012	Filtrate	222394	04/20/15 17:39	1.0	
040	met54	CCV				04/20/15 17:40	1.0	3
041	met54	CCB				04/20/15 17:41	1.0	

ARD 04/20/15 : Reran ccv; SnCl2 out

ARD 04/20/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 41.

Standards used: 1=S27077 2=S27079 3=S27080

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266087 METALS Filtrate: EPA 7470A

Inst : MET54
 Calnum : 1075159406001
 Units : ug/L

Date : 20-APR-2015 16:46
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	met54	1075159406002	ICAL1 20-APR-2015 16:47	S27077 (500X)
L2	met54	1075159406003	ICAL2 20-APR-2015 16:48	S27077 (200X)
L3	met54	1075159406004	ICAL3 20-APR-2015 16:49	S27077 (50X)
L4	met54	1075159406005	ICAL4 20-APR-2015 16:51	S27077 (20X)
L5	met54	1075159406006	ICAL5 20-APR-2015 16:52	S27077 (10X)

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	%RSD	Mnr^2	Flg
Mercury	0.0090	0.0098	0.0103	0.0097	0.0095	LIN0	-0.0419	105.347		0.0096	1.000		.99	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D
Mercury	0.2000	0.5000	-26	2.0000	6	5.0000	1	10.000	0

Instrument amount = a0 + response * a1 + response^2 * a2; LIN0=Linear regression including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266087 METALS Filtrate
EPA 7470A

Inst : MET54
Calnum : 1075159406001

Cal Date : 20-APR-2015

ICV 1075159406007 (20-APR-2015) stds: S27079

Analyte	Spiked	Quant	Units	%D	Max	Flags
Mercury	5.000	5.225	ug/L	5	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075159406008
Cal : 1075159406001
File : met54
Caldate : 20-APR-2015
IDF : 1.0
Time : 20-APR-2015 16:54

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
 EPA 7470A

Inst : MET54
 Seqnum : 1075159406020
 Cal : 1075159406001
 Standards: S27080

File : met54
 Caldate : 20-APR-2015

IDF : 1.0
 Time : 20-APR-2015 17:17

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	0.0096	0.0105	5.000	5.499	ug/L	10	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075159406021
Cal : 1075159406001
File : met54
Caldate : 20-APR-2015
IDF : 1.0
Time : 20-APR-2015 17:18

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 7470A

Inst : MET54 IDF : 1.0
 Seqnum : 1075159406032 File : met54 Time : 20-APR-2015 17:31
 Cal : 1075159406001 Caldate : 20-APR-2015
 Standards: S27080

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	0.0096	0.0102	5.000	5.310	ug/L	6	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075159406033
Cal : 1075159406001
File : met54
Caldate : 20-APR-2015
IDF : 1.0
Time : 20-APR-2015 17:32

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266087 METALS Filtrate
EPA 7470A

Inst : MET54 IDF : 1.0
 Seqnum : 1075159406040 File : met54 Time : 20-APR-2015 17:40
 Cal : 1075159406001 Caldate : 20-APR-2015
 Standards: S27080

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	0.0096	0.0101	5.000	5.278	ug/L	6	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266087 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075159406041
Cal : 1075159406001
File : met54
Caldate : 20-APR-2015
IDF : 1.0
Time : 20-APR-2015 17:41

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

SAMPLE PREPARATION SUMMARY

Batch # : 222394
 Started By : ARD
 Method : METHOD
 Spike #1 ID : S27077

Prep Date : 20-APR-2015 11:45

Analysis : HG
 Finished By : ARD
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266072-001		WET Leachate	10	50	1	5.0						T22/HG	extracted 4.16.15
266087-001		Filtrate	50	50	1	1.0						TAL/HG	
266087-002		Filtrate	50	50	1	1.0						TAL/HG	
266087-003		Filtrate	50	50	1	1.0						TAL/HG	
266087-004		Filtrate	50	50	1	1.0						TAL/HG	
266087-006		Filtrate	50	50	1	1.0						TAL/HG	
266087-007		Filtrate	50	50	1	1.0						TAL/HG	
266087-009		Filtrate	50	50	1	1.0						TAL/HG	
266091-002		Filtrate	50	50	1	1.0						TAL/HG	
266091-004		Filtrate	50	50	1	1.0						TAL/HG	
266091-005		Filtrate	50	50	1	1.0						TAL/HG	
266091-006		Filtrate	50	50	1	1.0						TAL/HG	
266091-007		Filtrate	50	50	1	1.0						TAL/HG	
266091-008		Filtrate	50	50	1	1.0						TAL/HG	
266091-009		Filtrate	50	50	1	1.0						TAL/HG	
266091-010		Filtrate	50	50	1	1.0						TAL/HG	
266091-012		Filtrate	50	50	1	1.0						TAL/HG	
QC784841	BLANK	Filtrate	50	50	1	1.0							
QC784842	BLANK	WET Leachate	10	50	1	5.0							wet blank 4.16.15
QC784843	BS	Filtrate	50	50	1	1.0		1.25					
QC784844	BSD	Filtrate	50	50	1	1.0		1.25					
QC784845	MS	Filtrate	50	50	1	1.0		1.25					
QC784846	MSD	Filtrate	50	50	1	1.0		1.25					
QC784847	SER	Filtrate	50	50	1	1.0							

Analyst: ARD

Date: 04/20/15

Reviewer: PRW

Date: 04/21/15

W.E.T (STLC) EXTRACTION LOG

Curtis & Tompkins, Ltd.

LIMS Batch #: 222269 Date/ Time ON: 4-14-15 1900
 Extraction Method: WET Temp (C) ON: 21
 Rotator #'s: 2 Date/ Time OFF: 4-16-15 1825
 Temp (C) OFF: 21-24

Page: 48
 Benchbook#: **BK 3658**
Scale Used
 Leachates
 Extractions

Sample # / Letter	Sample Mass (g)	Sieved? (y/n)*	Extract Vol (mL)	N2 purge	*Comments
BK 784341	<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 50	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	YES	
266071-001 C	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	N	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	↓	
266072-001 A	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	↓	
↓ -002 ↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	↓	
5 266079-001 C	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	↓	
266089-001 B	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	↓	
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
10	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
15	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
20	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		

Temperature Limits: 20 - 40 C

Extraction Fluid pH Limits: 4.9 - 5.1 su

	Mfg & Lot #	Date/ Initials
Used Citric Acid	993509242 BMD	4-14-15 MN
Used Sodium Hydroxide (NaOH)	410617 BDH	
Extraction Fluid pH, Prep Date	4.92 4-13-15	↓
Extract filtered through 0.45um cellulose fiber filter paper	MILLIPORE P4NA25845	4-16-15 MN
Metals extracts acidified with 5% HNO ₃	102053 JTB	↓

[Signature] 4-14-15
 Extraction Chemist Date

Reviewed Online / See LIMS

Water Digestion for Mercury

Curtis & Tompkins, Ltd.

LIMS Batch #: 222394
 Date Digested: ~~04/10/2015~~ 4/20/15

Digestion Method BK3651
 EPA 7470A/ EPA 245.1 Page 80

Sample #	container ID	Volume Sample (mL)	Final Volume (mL)	Filtered? (y/n)	Comments
Blank		<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	N	QC 784841
Blank (wet) 4.16.15		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		↓ 842
BS	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		↓ 843
BSD	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
5 MSS 266087-009	D	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
MS	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
MSD	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
266072-001	A	<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
266087-001	D	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
10 -002	A	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-003	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-004	B	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-006	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
↓ -007	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
15 266091-002	A	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-004	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-005	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-006	D	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-007	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
20 -008	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-009	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-010	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
↓ -012	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
		<input type="checkbox"/> 50 <input type="checkbox"/> _____	<input type="checkbox"/> 50 <input type="checkbox"/> _____		
		<input type="checkbox"/> 50 <input type="checkbox"/> _____	<input type="checkbox"/> 50 <input type="checkbox"/> _____		

Reagent ID/ LIMS# / Time Initials / Date

Digestion Tube Lot #	EK14178	ARD/ 4/20/15
<u>1.25</u> mL of spike solution was added to all spikes	S27077 *	
<input checked="" type="checkbox"/> CAL digested with this batch	ICAL Source LIMS S#	S27078
	ICV / CCV LIMS S#	S27079 / S27080
Digestion Temperature (°C), Block and Probe Location	95°	A32
Digestion Started at (time)	11:45	
concentrated H ₂ SO ₄	BDH - 2014090938	
concentrated HNO ₃	JTB - 102053	
5% KMnO ₄	040915	
5% K ₂ S ₂ O ₈	030215	
NaCl.hydroxylamine hydrochloride	040915	ARD 4/20/15
Stannous Chloride	040915	
Digestion Completed at (time)	14:45	
<input type="checkbox"/> filtered thru' 0.45 um syringe filter (lot #)		

ARD 4/20/15
 Prep Chemist / Date

Continued from page 0

Continued on page _____

Reviewed Online / See LIMS



ct Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266091

ANALYTICAL REPORT


Volatile Organics by GC/MS

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

<u>Sample ID</u>	<u>Lab ID</u>
2015 0413 TB	266091-001
2015 0413 WTA	266091-003
2015 0413 BULB1	266091-006
2015 0413 BULB1D	266091-007
2015 0413 SWB	266091-008
2015 0413 BULB2	266091-009
2015 0413 ETA	266091-010
2015 0413 MFA	266091-011
2015 0413 ER	266091-012

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/29/2015

CA ELAP# 2896, NELAP# 4044-001

**CASE NARRATIVE
VOLATILE ORGANICS BY GC/MS (EPA 8260B)**

Laboratory number: 266091
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/14/15
Samples Received: 04/14/15

This data package contains sample and QC results for nine water samples, requested for the above referenced project on 04/14/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Volatile Organics by GC/MS (EPA 8260B):

Methylene chloride was detected between the MDL and the RL in 2015 0413 TB (lab # 266091-001); this analyte is a common laboratory contaminant.

No other analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266091

Chain of Custody Record No. 6877

Page 1 of 1

Project name: 2015 Groundwater	Lab PO#: 15 OAK 32	Lab: Card T	Field samplers: Mark Duffy Dayno Aragon		No./Container Types 40 ml VOA 1 liter Amber 500 ml Poly Sleeve Glass Jar	Analysis Required VOA SVA Pest/PCBs Metals TPH Purgeables TPH Extractables	Preservative Added None
Project (CTO) number: 1035225323.05	TIEMI technical contact: Sara Woolley	TIEMI project manager: Jason Brubaker	Field samplers' signatures: <i>Mark Duffy</i> <i>Dayno Aragon</i>				
Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD		
1 20150413 TB		4/13/15	0900	water	3	X	
2 20150413 DHR			0925		1	X	
3 20150413 WTA			1020		3	X	
4 20150413 B128			1145		2	X	
5 20150413 B128D			1140		2	X	
6 20150413 BULB1			1235		3	X	
7 20150413 BULB1D			1240		1	X	
8 20150413 SWB			1300		3	X	
9 20150413 BULB2			1320		2	X	
10 20150413 ETA			1510		3	X	
11 20150413 MFA H10			1418		3	X	
12 20150413 ER			1545		2	X	

Relinquished by: <i>Mark Duffy</i>	Name (print): Mark Duffy	Company Name: Tetra Tech	Date: 4/14/15	Time: 1617
Received by: <i>Mikella Cheong</i>	Name (print): Mikella Cheong	Company Name: CT	Date: 4/14	Time: 1617
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:
* metals were field-filtered

Fed Ex #: N/A

COOLER RECEIPT CHECKLIST



Login # 266091 Date Received 4/14/15 Number of coolers 3
Client Tetra Tech EM Inc. Project 2015 Ground Water

Date Opened 4/14 By (print) BL (sign) [Signature]
Date Logged in [Signature] By (print) [Signature] (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Cloth material, Foam blocks, Cardboard, Bags, Styrofoam, None, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 5.3c, 2.0c, 6.0c

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO

If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 266091

Sample	pH: <2	>9	>12	Other
-002a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-004a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-005a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-006a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-007a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-008a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Sample	pH: <2	>9	>12	Other
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-009a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-010a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-012a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: BL
 Date: 4/14/15

Results & QC Summary

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 TB	Batch#:	222281
Lab ID:	266091-001	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	0.2 J	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 TB	Batch#:	222281
Lab ID:	266091-001	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 WTA	Batch#:	222281
Lab ID:	266091-003	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	0.3 J	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	1.5	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 WTA	Batch#:	222281
Lab ID:	266091-003	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	96	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	109	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 BULB1	Batch#:	222281
Lab ID:	266091-006	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 BULB1	Batch#:	222281
Lab ID:	266091-006	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	101	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	110	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 BULB1D	Batch#:	222281
Lab ID:	266091-007	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 BULB1D	Batch#:	222281
Lab ID:	266091-007	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 SWB	Batch#:	222281
Lab ID:	266091-008	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 SWB	Batch#:	222281
Lab ID:	266091-008	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	96	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	107	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 BULB2	Batch#:	222281
Lab ID:	266091-009	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	0.5	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	0.6	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	2.4	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 BULB2	Batch#:	222281
Lab ID:	266091-009	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	107	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 ETA	Batch#:	222281
Lab ID:	266091-010	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	0.4 J	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	0.1 J	0.5	0.1
trans-1,2-Dichloroethene	1.9	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	4.0	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	0.2 J	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	16	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 ETA	Batch#:	222281
Lab ID:	266091-010	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	107	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 MFA	Batch#:	222281
Lab ID:	266091-011	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	0.3 J	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	0.3 J	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	2.3	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	19	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 MFA	Batch#:	222281
Lab ID:	266091-011	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	108	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 ER	Batch#:	222281
Lab ID:	266091-012	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	2015 0413 ER	Batch#:	222281
Lab ID:	266091-012	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	96	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222281
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Type: BS Lab ID: QC784375

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	8.276	83	45-131
Chloromethane	10.00	8.865	89	48-133
Vinyl Chloride	10.00	9.523	95	63-132
Bromomethane	10.00	11.75	118	38-161
Chloroethane	10.00	9.645	96	62-131
Trichlorofluoromethane	10.00	9.242	92	64-137
Acetone	12.50	9.269	74	46-151
Freon 113	12.50	12.50	100	61-138
1,1-Dichloroethene	12.50	12.26	98	66-135
Methylene Chloride	12.50	12.58	101	74-131
Carbon Disulfide	12.50	13.08	105	63-150
MTBE	12.50	11.03	88	65-120
trans-1,2-Dichloroethene	12.50	12.15	97	72-134
Vinyl Acetate	12.50	14.52	116	60-194
1,1-Dichloroethane	12.50	12.18	97	68-127
2-Butanone	12.50	10.17	81	50-141
cis-1,2-Dichloroethene	12.50	12.22	98	73-129
2,2-Dichloropropane	12.50	13.37	107	72-146
Chloroform	12.50	12.87	103	73-126
Bromochloromethane	12.50	12.56	100	78-127
1,1,1-Trichloroethane	12.50	13.08	105	72-134
1,1-Dichloropropene	12.50	12.80	102	79-135
Carbon Tetrachloride	12.50	13.30	106	72-142
1,2-Dichloroethane	12.50	12.62	101	74-133
Benzene	12.50	12.96	104	80-123
Trichloroethene	12.50	13.02	104	80-123
1,2-Dichloropropane	12.50	11.78	94	74-120
Bromodichloromethane	12.50	12.28	98	79-121
Dibromomethane	12.50	12.05	96	80-120
4-Methyl-2-Pentanone	12.50	10.39	83	57-129
cis-1,3-Dichloropropene	12.50	11.94	95	80-130
Toluene	12.50	12.69	102	80-121
trans-1,3-Dichloropropene	12.50	11.06	88	76-122
1,1,2-Trichloroethane	12.50	11.89	95	80-120
2-Hexanone	12.50	10.14	81	49-136
1,3-Dichloropropane	12.50	12.26	98	80-120
Tetrachloroethene	12.50	13.20	106	78-130
Dibromochloromethane	12.50	11.78	94	80-123
1,2-Dibromoethane	12.50	11.72	94	80-120
Chlorobenzene	12.50	12.65	101	80-123
1,1,1,2-Tetrachloroethane	12.50	11.96	96	80-124
Ethylbenzene	12.50	12.83	103	80-123
m,p-Xylenes	25.00	25.25	101	80-126
o-Xylene	12.50	12.15	97	80-126
Styrene	12.50	12.01	96	80-122
Bromoform	12.50	10.80	86	72-132
Isopropylbenzene	12.50	13.29	106	79-130
1,1,2,2-Tetrachloroethane	12.50	12.32	99	72-129
1,2,3-Trichloropropane	12.50	12.27	98	72-124
Propylbenzene	12.50	13.22	106	79-128
Bromobenzene	12.50	12.65	101	80-122
1,3,5-Trimethylbenzene	12.50	13.13	105	80-129

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222281
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
2-Chlorotoluene	12.50	13.07	105	80-130
4-Chlorotoluene	12.50	12.80	102	79-125
tert-Butylbenzene	12.50	12.85	103	79-130
1,2,4-Trimethylbenzene	12.50	12.33	99	78-124
sec-Butylbenzene	12.50	13.33	107	79-134
para-Isopropyl Toluene	12.50	12.48	100	74-125
1,3-Dichlorobenzene	12.50	12.33	99	80-124
1,4-Dichlorobenzene	12.50	12.45	100	80-121
n-Butylbenzene	12.50	12.40	99	69-135
1,2-Dichlorobenzene	12.50	12.04	96	80-123
1,2-Dibromo-3-Chloropropane	12.50	10.50	84	59-125
1,2,4-Trichlorobenzene	12.50	11.72	94	66-133
Hexachlorobutadiene	12.50	13.31	106	70-152
Naphthalene	12.50	9.246	74	53-139
1,2,3-Trichlorobenzene	12.50	10.84	87	64-134
tert-Butyl Alcohol (TBA)	62.50	48.50	78	32-155
Isopropyl Ether (DIPE)	12.50	11.09	89	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	11.28	90	62-120
Methyl tert-Amyl Ether (TAME)	12.50	10.89	87	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	107	80-120

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222281
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC784376

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	8.046	80	45-131	3	29
Chloromethane	10.00	9.141	91	48-133	3	25
Vinyl Chloride	10.00	9.360	94	63-132	2	23
Bromomethane	10.00	11.34	113	38-161	4	32
Chloroethane	10.00	9.369	94	62-131	3	24
Trichlorofluoromethane	10.00	9.034	90	64-137	2	23
Acetone	12.50	10.01	80	46-151	8	29
Freon 113	12.50	12.13	97	61-138	3	25
1,1-Dichloroethene	12.50	12.07	97	66-135	2	24
Methylene Chloride	12.50	12.52	100	74-131	1	21
Carbon Disulfide	12.50	12.96	104	63-150	1	25
MTBE	12.50	11.37	91	65-120	3	22
trans-1,2-Dichloroethene	12.50	12.02	96	72-134	1	22
Vinyl Acetate	12.50	14.55	116	60-194	0	25
1,1-Dichloroethane	12.50	12.18	97	68-127	0	21
2-Butanone	12.50	10.78	86	50-141	6	24
cis-1,2-Dichloroethene	12.50	12.10	97	73-129	1	20
2,2-Dichloropropane	12.50	13.25	106	72-146	1	24
Chloroform	12.50	12.68	101	73-126	2	20
Bromochloromethane	12.50	12.59	101	78-127	0	20
1,1,1-Trichloroethane	12.50	12.79	102	72-134	2	22
1,1-Dichloropropene	12.50	12.56	100	79-135	2	23
Carbon Tetrachloride	12.50	12.98	104	72-142	2	22
1,2-Dichloroethane	12.50	12.54	100	74-133	1	20
Benzene	12.50	12.58	101	80-123	3	20
Trichloroethene	12.50	12.61	101	80-123	3	20
1,2-Dichloropropane	12.50	11.77	94	74-120	0	20
Bromodichloromethane	12.50	12.36	99	79-121	1	20
Dibromomethane	12.50	12.18	97	80-120	1	20
4-Methyl-2-Pentanone	12.50	10.72	86	57-129	3	23
cis-1,3-Dichloropropene	12.50	11.98	96	80-130	0	20
Toluene	12.50	12.63	101	80-121	1	20
trans-1,3-Dichloropropene	12.50	11.20	90	76-122	1	20
1,1,2-Trichloroethane	12.50	12.38	99	80-120	4	20
2-Hexanone	12.50	10.42	83	49-136	3	24
1,3-Dichloropropane	12.50	12.50	100	80-120	2	20
Tetrachloroethene	12.50	13.20	106	78-130	0	21
Dibromochloromethane	12.50	11.82	95	80-123	0	20
1,2-Dibromoethane	12.50	11.82	95	80-120	1	20
Chlorobenzene	12.50	12.69	102	80-123	0	20
1,1,1,2-Tetrachloroethane	12.50	11.99	96	80-124	0	20
Ethylbenzene	12.50	12.79	102	80-123	0	21
m,p-Xylenes	25.00	24.97	100	80-126	1	21
o-Xylene	12.50	12.20	98	80-126	0	20
Styrene	12.50	12.13	97	80-122	1	20
Bromoform	12.50	11.11	89	72-132	3	20
Isopropylbenzene	12.50	13.11	105	79-130	1	21
1,1,2,2-Tetrachloroethane	12.50	12.46	100	72-129	1	20
1,2,3-Trichloropropane	12.50	12.30	98	72-124	0	22
Propylbenzene	12.50	13.16	105	79-128	0	21
Bromobenzene	12.50	12.55	100	80-122	1	20
1,3,5-Trimethylbenzene	12.50	13.06	105	80-129	1	20

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222281
Units:	ug/L	Analyzed:	04/15/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
2-Chlorotoluene	12.50	13.03	104	80-130	0	20
4-Chlorotoluene	12.50	12.83	103	79-125	0	20
tert-Butylbenzene	12.50	12.65	101	79-130	2	23
1,2,4-Trimethylbenzene	12.50	12.22	98	78-124	1	22
sec-Butylbenzene	12.50	13.17	105	79-134	1	23
para-Isopropyl Toluene	12.50	12.40	99	74-125	1	24
1,3-Dichlorobenzene	12.50	12.37	99	80-124	0	20
1,4-Dichlorobenzene	12.50	12.43	99	80-121	0	20
n-Butylbenzene	12.50	12.53	100	69-135	1	28
1,2-Dichlorobenzene	12.50	12.11	97	80-123	1	20
1,2-Dibromo-3-Chloropropane	12.50	11.26	90	59-125	7	23
1,2,4-Trichlorobenzene	12.50	11.94	95	66-133	2	24
Hexachlorobutadiene	12.50	13.28	106	70-152	0	26
Naphthalene	12.50	10.04	80	53-139	8	25
1,2,3-Trichlorobenzene	12.50	11.73	94	64-134	8	25
tert-Butyl Alcohol (TBA)	62.50	50.97	82	32-155	5	33
Isopropyl Ether (DIPE)	12.50	11.19	90	57-128	1	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.49	92	62-120	2	20
Methyl tert-Amyl Ether (TAME)	12.50	11.00	88	69-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	99	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	106	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784377	Batch#:	222281
Matrix:	Water	Analyzed:	04/15/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.2
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.2
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784377	Batch#:	222281
Matrix:	Water	Analyzed:	04/15/15
Units:	ug/L		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.7
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

CURTIS & TOMPKINS BFB TUNE FOR 266091 MSVOA Water
EPA 8260B

Inst : MSVOA11 Run Name : BFB IDF : 1.0
Seqnum : 835120089003 File : kcn03 Time : 24-MAR-2015 10:41

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	5955	16.73	
75	30% - 60% of mass 95	16765	47.10	
95		35592	100.00	
96	5% - 9% of mass 95	2363	6.64	
173	< 2% of mass 174	173	0.54	
174	> 50% and < 100% of mass 95	32248	90.60	
175	5% - 9% of mass 174	2404	7.45	
176	> 95% and < 101% of mass 174	31152	96.60	
177	5% - 9% of mass 176	1795	5.76	

Analyst: DJA Date: 03/25/15 Reviewer: LW Date: 03/25/15

CURTIS & TOMPKINS BFB TUNE FOR 266091 MSVOA Water
EPA 8260B

Inst : MSVOA11 Run Name : BFB IDF : 1.0
Seqnum : 835151690005 File : kdf05 Time : 15-APR-2015 10:59

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	5689	15.59	
75	30% - 60% of mass 95	17181	47.09	
95		36484	100.00	
96	5% - 9% of mass 95	2601	7.13	
173	< 2% of mass 174	277	0.79	
174	> 50% and < 100% of mass 95	34864	95.56	
175	5% - 9% of mass 174	2525	7.24	
176	> 95% and < 101% of mass 174	33748	96.80	
177	5% - 9% of mass 176	2394	7.09	

DJA 04/15/15 : single scan

Analyst: DJA Date: 04/15/15 Reviewer: LW Date: 04/15/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266091 MSVOA Water: EPA 8260B

Inst : MSVOA11 Name : 8260GX11
 Calnum : 835120089001 Date : 24-MAR-2015 12:00 Type : WATER
 Units : ug/L X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	kcn06 835120089006	24-MAR-2015 12:00	S25695 (2000000X), S26851 (2000000X), S26838 (2000000X), S25156 (1000000X), S26882 (25000X)	
L2	kcn07 835120089007	24-MAR-2015 12:29	S25695 (1000000X), S26851 (1000000X), S26838 (1000000X), S25156 (5000000X), S26882 (25000X)	
L3	kcn08 835120089008	24-MAR-2015 12:57	S25695 (5000000X), S26851 (2500000X), S26838 (2500000X), S25156 (2500000X), S26882 (25000X)	
L4	kcn09 835120089009	24-MAR-2015 13:26	S25695 (2000000X), S26851 (1000000X), S26838 (1000000X), S25156 (1000000X), S26882 (25000X)	
L5	kcn10 835120089010	24-MAR-2015 13:54	S25695 (1000000X), S26851 (5000000X), S26838 (5000000X), S25156 (5000000X), S26882 (25000X)	
L6	kcn11 835120089011	24-MAR-2015 14:22	S25695 (5000000X), S26851 (2500000X), S26838 (2500000X), S25156 (2500000X), S26882 (25000X)	
L7	kcn12 835120089012	24-MAR-2015 14:50	S25695 (2000000X), S26851 (1000000X), S26838 (1000000X), S25156 (1000000X), S26882 (25000X)	
L8	kcn13 835120089013	24-MAR-2015 15:19	S25695 (1333000X), S26851 (6667000X), S26838 (6667000X), S25156 (6667000X), S26882 (25000X)	
L9	kcn14 835120089014	24-MAR-2015 15:47	S25695 (1000000X), S26851 (5000000X), S26838 (5000000X), S25156 (5000000X), S26882 (25000X)	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.4176m	0.5104m	0.5321m	0.4359m	0.4989m	0.5178	0.5421	0.5225m	AVRG	2.01144			0.4972	9	15	0.05	0.99	
Chloromethane	0.5381	0.5312	0.5115m	0.4913	0.4750	0.4546	0.4539	0.4515	0.4455	AVRG	2.06776			0.4836	7	15	0.10	0.99	
Vinyl Chloride	0.4961	0.5051	0.5537	0.5307	0.4953	0.5090	0.5230	0.5309	0.5292	AVRG	1.92594			0.5192	4	15	0.05	0.99	
Bromomethane		0.2093	0.2370	0.2504	0.2661	0.2464	0.2701	0.2860	0.2973	AVRG	3.87849			0.2578	11	15	0.05	0.99	
Chloroethane		0.2677	0.2884	0.2848	0.2726	0.2716	0.2747	0.2817	0.2789	AVRG	3.60305			0.2775	3	15	0.05	0.99	
Trichlorofluoromethane		0.5796	0.6637	0.6753	0.5831	0.6436	0.6684	0.6971	0.6921	AVRG	1.53758			0.6504	7	15	0.05	0.99	
Acetone			0.1568	0.1367	0.1277	0.1044	0.1102	0.1323	0.1343	AVRG	7.75752			0.1289	14	15	0.05	0.99	
Freon 113			0.2836	0.3824	0.2520	0.3711	0.3455	0.3666	0.3793	AVRG	2.94056			0.3401	15	15	0.05	0.99	
1,1-Dichloroethene		0.4324	0.3712m	0.4004	0.3242	0.3728	0.3523	0.3707	0.3742	AVRG	2.66826			0.3748	8	15	0.05	0.99	
Methylene Chloride		0.4914	0.4501	0.4472	0.4521	0.4283	0.4274	0.4444	0.4410	AVRG	2.23342			0.4477	4	15	0.05	0.99	
Carbon Disulfide		1.3315	1.2425	1.3164	1.1447	1.2640	1.2139	1.2679	1.2665	AVRG	0.79623			1.2559	5	15	0.05	0.99	
MTBE		1.3893	1.2304	1.2483	1.2515	1.1863	1.1942	1.2602	1.2541	AVRG	0.79886			1.2518	5	15	0.05	0.99	
trans-1,2-Dichloroethene		0.5517	0.4463	0.4501	0.4091	0.4274	0.4200	0.4335	0.4304	AVRG	2.24186			0.4461	10	15	0.05	0.99	
Vinyl Acetate			0.6168	0.6389	0.6500	0.6303	0.6476	0.6630	0.6537	AVRG	1.55542			0.6429	2	15	0.05	0.99	
1,1-Dichloroethane		0.7968	0.7746	0.7643	0.7457	0.7326	0.7309	0.7667	0.7550	AVRG	1.31867			0.7583	3	15	0.10	0.99	
2-Butanone			0.1783	0.1866	0.1785	0.1673	0.1733	0.1897	0.1935	AVRG	5.52345			0.1810	5	15	0.05	0.99	
2,2-Dichloropropane		0.5863	0.5701	0.6194	0.5597	0.6072	0.5934	0.6175	0.6115	AVRG	1.67886			0.5956	4	15	0.05	0.99	
cis-1,2-Dichloroethene		0.6311m	0.5139m	0.4915	0.5032	0.4713	0.4808	0.4990	0.4920	AVRG	1.95951			0.5103	10	15	0.05	0.99	
Chloroform		0.8512	0.7596	0.7717	0.7906	0.7583	0.7597	0.7817	0.7749	AVRG	1.28048			0.7810	4	15	0.05	0.99	
Bromochloromethane		0.2524	0.2476	0.2503	0.2630	0.2487	0.2553	0.2530	0.2512	AVRG	3.95720			0.2527	2	15	0.05	0.99	
1,1,1-Trichloroethane		0.7104	0.6391	0.6846	0.6029	0.6754	0.6513	0.6686	0.6712	AVRG	1.50843			0.6629	5	15	0.05	0.99	
1,1-Dichloropropene		0.3694	0.3563	0.3998	0.3319	0.4003	0.3939	0.4072	0.4121	AVRG	2.60508			0.3839	7	15	0.05	0.99	
Carbon Tetrachloride		0.3226	0.3343	0.3882	0.3117	0.3942	0.3850	0.4122	0.4131	AVRG	2.70161			0.3701	11	15	0.05	0.99	
1,2-Dichloroethane		0.4282	0.3940	0.3951	0.3965	0.3869	0.3952	0.4098	0.4074	AVRG	2.48977			0.4016	3	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max	Min	Min	FLg
															%RSD	%RSD	RF	r^2	
Benzene		1.2992	1.1879	1.2152	1.1905	1.2109	1.2263	1.2775	1.2622	AVRG		0.81056		1.2337	3	15	0.05	0.99	
Trichloroethene		0.3094	0.3029	0.3159	0.2964	0.3135	0.3124	0.3331	0.3293	AVRG		3.18357		0.3141	4	15	0.05	0.99	
1,2-Dichloropropane		0.3221	0.3063	0.3240	0.2995	0.2996	0.3076	0.3225	0.3186	AVRG		3.19953		0.3125	3	15	0.05	0.99	
Bromodichloromethane		0.4242	0.3949	0.3994	0.3965	0.3950	0.4038	0.4247	0.4157	AVRG		2.45843		0.4068	3	15	0.05	0.99	
Dibromomethane		0.2088	0.1976	0.1979	0.1965	0.1942	0.1931	0.2065	0.2027	AVRG		5.00854		0.1997	3	15	0.05	0.99	
4-Methyl-2-Pentanone			0.2474	0.2459	0.2512	0.2419	0.2570	0.2746	0.2706	AVRG		3.91359		0.2555	5	15	0.05	0.99	
cis-1,3-Dichloropropene		0.5117	0.4789	0.4898	0.5063	0.4929	0.5172	0.5410	0.5278	AVRG		1.96772		0.5082	4	15	0.05	0.99	
Toluene		1.0102	0.8938	0.9272	0.9453	0.9251	0.9122	0.9524	0.9348	AVRG		1.06652		0.9376	4	15	0.05	0.99	
trans-1,3-Dichloropropene		0.5775	0.5243	0.5309	0.5381	0.5226	0.5374	0.5689	0.5592	AVRG		1.83536		0.5449	4	15	0.05	0.99	
1,1,2-Trichloroethane		0.2003	0.1767	0.1788	0.1764	0.1730	0.1755	0.1853	0.1844	AVRG		5.51582		0.1813	5	15	0.05	0.99	
2-Hexanone			0.2127	0.2034	0.2116	0.2008	0.2043	0.2276	0.2291	AVRG		4.69965		0.2128	5	15	0.05	0.99	
1,3-Dichloropropane		0.5762	0.5244	0.5382	0.5395	0.5216	0.5314	0.5612	0.5522	AVRG		1.84130		0.5431	3	15	0.05	0.99	
Tetrachloroethene		0.3347	0.3306	0.3798	0.3278	0.3979	0.3858	0.4156	0.4155	AVRG		2.67763		0.3735	10	15	0.05	0.99	
Dibromochloromethane		0.4043	0.3704	0.3863	0.3927	0.3882	0.3995	0.4247	0.4194	AVRG		2.51147		0.3982	4	15	0.05	0.99	
1,2-Dibromoethane		0.3669	0.3350	0.3438	0.3520	0.3361	0.3402	0.3560	0.3558	AVRG		2.87187		0.3482	3	15	0.05	0.99	
Chlorobenzene		1.1322	1.0869	1.0997	1.1083	1.0860	1.0883	1.1323	1.1211	AVRG		0.90346		1.1069	2	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.3974	0.3615	0.3748	0.3810	0.3750	0.3781	0.3996	0.4141	AVRG		2.59612		0.3852	4	15	0.05	0.99	
Ethylbenzene		1.8829	1.7189	1.7953	1.7547	1.8265	1.7947	1.9055	1.9347	AVRG		0.54745		1.8266	4	15	0.05	0.99	
m,p-Xylenes	0.7494	0.6659	0.6439	0.7044	0.7126	0.7317	0.7285	0.7986	0.8134	AVRG		1.37438		0.7276	8	15	0.05	0.99	
o-Xylene		0.6682	0.6474	0.6641	0.6915	0.6852	0.6972	0.7750	0.7900	AVRG		1.42383		0.7023	7	15	0.05	0.99	
Styrene		1.1307	1.1037	1.1514	1.1970	1.1906	1.2187	1.4176	1.3018	AVRG		0.82377		1.2139	8	15	0.05	0.99	
Bromoform		0.2798	0.2423	0.2574	0.2671	0.2672	0.2869	0.3283	0.3484	AVRG		3.51294		0.2847	13	15	0.10	0.99	
Isopropylbenzene		3.2457	3.4201	3.5500	3.1998	3.5713	3.5049	3.3638	3.5541	AVRG		0.29187		3.4262	4	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		0.8332	0.8653	0.8349	0.8088	0.7719	0.7711	0.6794	0.7116	AVRG		1.27468		0.7845	8	15	0.30	0.99	
1,2,3-Trichloropropane		0.9147	0.8611	0.7973	0.7958	0.7622	0.7416	0.7373	0.7922	AVRG		1.24957		0.8003	8	15	0.05	0.99	
Propylbenzene		3.7738	3.9707	4.0121	3.6803	4.0687	3.9476	3.6356	3.9958	AVRG		0.25736		3.8856	4	15	0.05	0.99	
Bromobenzene		1.0345	0.9565	0.9790	0.9912	0.9606	0.9103	0.9004	0.9958	AVRG		1.03515		0.9660	5	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.6322	2.8359	2.7833	2.7085	2.8842	2.8133	2.8692	2.9397	AVRG		0.35609		2.8083	4	15	0.05	0.99	
2-Chlorotoluene		2.8250	2.8084	2.7169	2.6789	2.6985	2.6512	2.6636	2.6961	AVRG		0.36801		2.7173	2	15	0.05	0.99	
4-Chlorotoluene		2.5149	2.5544	2.4923	2.4889	2.4549	2.4546	2.5451	2.5474	AVRG		0.39895		2.5066	2	15	0.05	0.99	
tert-Butylbenzene		2.2558	2.3387	2.5098	2.2445	2.5771	2.5449	2.6172	2.5580	AVRG		0.40721		2.4558	6	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.6048	2.6139	2.5762	2.6790	2.7148	2.7387	3.0055	2.3688	AVRG		0.37556		2.6627	7	15	0.05	0.99	
sec-Butylbenzene		2.8769	3.2355	3.5368	3.0841	3.7706	3.7196	3.8904	3.3718	AVRG		0.29106		3.4357	10	15	0.05	0.99	
para-Isopropyl Toluene		2.4301	2.5954	2.7469	2.3719	2.9865	3.0478	3.2553	2.7826	AVRG		0.36009		2.7771	11	15	0.05	0.99	
1,3-Dichlorobenzene		1.6928	1.7431	1.7070	1.7246	1.6843	1.7136	1.7602	1.7826	AVRG		0.57936		1.7260	2	15	0.05	0.99	
1,4-Dichlorobenzene		1.7592	1.7867	1.7713	1.7823	1.7167	1.7512	1.8020	1.7749	AVRG		0.56560		1.7680	1	15	0.05	0.99	
n-Butylbenzene		2.0535	2.0338	2.1637	1.9507	2.3306	2.3795	2.5552	2.5202	AVRG		0.44476		2.2484	10	15	0.05	0.99	
1,2-Dichlorobenzene		1.6890	1.6845	1.6259	1.6343	1.5839	1.5752	1.5359	1.6678	AVRG		0.61555		1.6246	3	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane			0.1584	0.1509	0.1467	0.1369	0.1322	0.1210	0.1247	AVRG		7.20988		0.1387	10	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.7611	0.8200	0.7427	0.7547	0.7392	0.7235	0.6719	0.7103	AVRG		1.35059		0.7404	6	15	0.05	0.99	
Hexachlorobutadiene		0.3597	0.4106	0.4096	0.3722	0.4818	0.4673	0.4287	0.4468	AVRG		2.36917		0.4221	10	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max	Min	Min	FLg
															%RSD	%RSD	RF	r^2	
Naphthalene	1.8332	1.8189	1.6887	1.6624	1.5752	1.4556	1.3535	1.4390	AVRG	0.62371	1.6033	11	15	0.05	0.99				
1,2,3-Trichlorobenzene	0.5718	0.5835	0.5350	0.5436	0.5385	0.5352	0.5037	0.5566	AVRG	1.83153	0.5460	5	15	0.05	0.99				
tert-Butyl Alcohol (TEA)	0.0391	0.0385	0.0389	0.0382	0.0371	0.0378	0.0412	0.0411	AVRG	25.6435	0.0390	4	15	0.005	0.99				
Isopropyl Ether (DIPE)	1.3999	1.2549	1.2522	1.2551	1.1879	1.2160	1.2561	1.2535	AVRG	0.79400	1.2595	5	15	0.05	0.99				
Ethyl tert-Butyl Ether (ETBE)	1.3891	1.3020	1.3034	1.3273	1.2730	1.3008	1.3656	1.3504	AVRG	0.75389	1.3265	3	15	0.05	0.99				
Methyl tert-Amyl Ether (TAME)	0.9883	0.8793	0.8811	0.8990	0.8836	0.9172	0.9630	0.9544	AVRG	1.08609	0.9207	5	15	0.05	0.99				
Dibromofluoromethane	0.4311	0.4341	0.4379	0.4408	0.4411	0.4352	0.4337	0.4341	AVRG	2.29409	0.4359	1	15	0.05	0.99				
1,2-Dichloroethane-d4	0.3334	0.3405	0.3386	0.3435	0.3470	0.3567	0.3674	0.3665	AVRG	2.86859	0.3486	3	15	0.05	0.99				
Toluene-d8	1.4458	1.4616	1.4470	1.4411	1.4473	1.4226	1.4309	1.4280	AVRG	0.69436	1.4402	1	15	0.05	0.99				
Bromofluorobenzene	0.9728	0.9814	1.0171	0.9515	0.9316	0.9137	0.8947	0.8497	AVRG	1.08703	0.9199	8	15	0.05	0.99				

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	-16	2.0000	3	5.0000	7	10.000	-12	20.000	0	50.000	4	75.000	4	100.00	5
Chloromethane	0.5000	11	1.0000	10	2.0000	6	5.0000	2	10.000	-2	20.000	-6	50.000	-6	75.000	-7	100.00	-8
Vinyl Chloride	0.5000	-4	1.0000	-3	2.0000	7	5.0000	2	10.000	-5	20.000	-2	50.000	1	75.000	2	100.00	2
Bromomethane			1.0000	-19	2.0000	-8	5.0000	-3	10.000	3	20.000	-4	50.000	5	75.000	11	100.00	15
Chloroethane			1.0000	-4	2.0000	4	5.0000	3	10.000	-2	20.000	-2	50.000	-1	75.000	2	100.00	0
Trichlorofluoromethane			1.0000	-11	2.0000	2	5.0000	4	10.000	-10	20.000	-1	50.000	3	75.000	7	100.00	6
Acetone					2.0000	22	5.0000	6	10.000	-1	20.000	-19	50.000	-15	75.000	3	100.00	4
Freon 113					2.0000	-17	5.0000	12	10.000	-26	20.000	9	50.000	2	75.000	8	100.00	12
1,1-Dichloroethene	0.5000	15	0.5000	15	2.0000	-1	5.0000	7	10.000	-13	20.000	-1	50.000	-6	75.000	-1	100.00	0
Methylene Chloride	0.5000	10	0.5000	10	2.0000	1	5.0000	0	10.000	1	20.000	-4	50.000	-5	75.000	-1	100.00	-2
Carbon Disulfide	0.5000	6	0.5000	6	2.0000	-1	5.0000	5	10.000	-9	20.000	1	50.000	-3	75.000	1	100.00	1
MTBE	0.5000	11	0.5000	11	2.0000	-2	5.0000	0	10.000	0	20.000	-5	50.000	-5	75.000	1	100.00	0
trans-1,2-Dichloroethene	0.5000	24	0.5000	24	2.0000	0	5.0000	1	10.000	-8	20.000	-4	50.000	-6	75.000	-3	100.00	-4
Vinyl Acetate					2.0000	-4	5.0000	-1	10.000	1	20.000	-2	50.000	1	75.000	3	100.00	2
1,1-Dichloroethane	0.5000	5	0.5000	5	2.0000	2	5.0000	1	10.000	-2	20.000	-3	50.000	-4	75.000	1	100.00	0
2-Butanone					2.0000	-1	5.0000	3	10.000	-1	20.000	-8	50.000	-4	75.000	5	100.00	7
2,2-Dichloropropane	0.5000	-2	0.5000	-2	2.0000	-4	5.0000	4	10.000	-6	20.000	2	50.000	0	75.000	4	100.00	3
cis-1,2-Dichloroethene	0.5000	24	0.5000	24	2.0000	1	5.0000	-4	10.000	-1	20.000	-8	50.000	-6	75.000	-2	100.00	-4
Chloroform	0.5000	9	0.5000	9	2.0000	-3	5.0000	-1	10.000	1	20.000	-3	50.000	-3	75.000	0	100.00	-1
Bromochloromethane	0.5000	0	0.5000	0	2.0000	-2	5.0000	-1	10.000	4	20.000	-2	50.000	1	75.000	0	100.00	-1
1,1,1-Trichloroethane	0.5000	7	0.5000	7	2.0000	-4	5.0000	3	10.000	-9	20.000	2	50.000	-2	75.000	1	100.00	1
1,1-Dichloropropene	0.5000	-4	0.5000	-4	2.0000	-7	5.0000	4	10.000	-14	20.000	4	50.000	3	75.000	6	100.00	7
Carbon Tetrachloride	0.5000	-13	0.5000	-13	2.0000	-10	5.0000	5	10.000	-16	20.000	6	50.000	4	75.000	11	100.00	12
1,2-Dichloroethane	0.5000	7	0.5000	7	2.0000	-2	5.0000	-2	10.000	-1	20.000	-4	50.000	-2	75.000	2	100.00	1
Benzene	0.5000	5	0.5000	5	2.0000	-4	5.0000	-1	10.000	-4	20.000	-2	50.000	-1	75.000	4	100.00	2
Trichloroethene	0.5000	-1	0.5000	-1	2.0000	-4	5.0000	1	10.000	-6	20.000	0	50.000	-1	75.000	6	100.00	5
1,2-Dichloropropane	0.5000	3	0.5000	3	2.0000	-2	5.0000	4	10.000	-4	20.000	-4	50.000	-2	75.000	3	100.00	2
Bromodichloromethane	0.5000	4	0.5000	4	2.0000	-3	5.0000	-2	10.000	-3	20.000	-3	50.000	-1	75.000	4	100.00	2
Dibromomethane	0.5000	5	0.5000	5	2.0000	-1	5.0000	-1	10.000	-2	20.000	-3	50.000	-3	75.000	3	100.00	2
4-Methyl-2-Pentanone					2.0000	-3	5.0000	-4	10.000	-2	20.000	-5	50.000	1	75.000	7	100.00	6
cis-1,3-Dichloropropene	0.5000	1	0.5000	1	2.0000	-6	5.0000	-4	10.000	0	20.000	-3	50.000	2	75.000	6	100.00	4
Toluene	0.5000	8	0.5000	8	2.0000	-5	5.0000	-1	10.000	1	20.000	-1	50.000	-3	75.000	2	100.00	0
trans-1,3-Dichloropropene	0.5000	6	0.5000	6	2.0000	-4	5.0000	-3	10.000	-1	20.000	-4	50.000	-1	75.000	4	100.00	3
1,1,2-Trichloroethane	0.5000	10	0.5000	10	2.0000	-3	5.0000	-1	10.000	-3	20.000	-5	50.000	-3	75.000	2	100.00	2
2-Hexanone					2.0000	0	5.0000	-4	10.000	-1	20.000	-6	50.000	-4	75.000	7	100.00	8
1,3-Dichloropropane	0.5000	6	0.5000	6	2.0000	-3	5.0000	-1	10.000	-1	20.000	-4	50.000	-2	75.000	3	100.00	2
Tetrachloroethene	0.5000	-10	0.5000	-10	2.0000	-11	5.0000	2	10.000	-12	20.000	7	50.000	3	75.000	11	100.00	11
Dibromochloromethane	0.5000	2	0.5000	2	2.0000	-7	5.0000	-3	10.000	-1	20.000	-3	50.000	0	75.000	7	100.00	5
1,2-Dibromoethane	0.5000	5	0.5000	5	2.0000	-4	5.0000	-1	10.000	1	20.000	-3	50.000	-2	75.000	2	100.00	2
Chlorobenzene	0.5000	2	0.5000	2	2.0000	-2	5.0000	-1	10.000	0	20.000	-2	50.000	-2	75.000	2	100.00	1
1,1,1,2-Tetrachloroethane	0.5000	3	0.5000	3	2.0000	-6	5.0000	-3	10.000	-1	20.000	-3	50.000	-2	75.000	4	100.00	8
Ethylbenzene	0.5000	3	0.5000	3	2.0000	-6	5.0000	-2	10.000	-4	20.000	0	50.000	-2	75.000	4	100.00	6

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	3	1.0000	-8	4.0000	-12	10.000	-3	20.000	-2	40.000	1	100.00	0	150.00	10	200.00	12
o-Xylene			0.5000	-5	2.0000	-8	5.0000	-5	10.000	-2	20.000	-2	50.000	-1	75.000	10	100.00	12
Styrene			0.5000	-7	2.0000	-9	5.0000	-5	10.000	-1	20.000	-2	50.000	0	75.000	17	100.00	7
Bromoform			0.5000	-2	2.0000	-15	5.0000	-10	10.000	-6	20.000	-6	50.000	1	75.000	15	100.00	22
Isopropylbenzene			0.5000	-5	2.0000	0	5.0000	4	10.000	-7	20.000	4	50.000	2	75.000	-2	100.00	4
1,1,2,2-Tetrachloroethane			0.5000	6	2.0000	10	5.0000	6	10.000	3	20.000	-2	50.000	-2	75.000	-13	100.00	-9
1,2,3-Trichloropropane			0.5000	14	2.0000	8	5.0000	0	10.000	-1	20.000	-5	50.000	-7	75.000	-8	100.00	-1
Propylbenzene			0.5000	-3	2.0000	2	5.0000	3	10.000	-5	20.000	5	50.000	2	75.000	-6	100.00	3
Bromobenzene			0.5000	7	2.0000	-1	5.0000	1	10.000	3	20.000	-1	50.000	-6	75.000	-7	100.00	3
1,3,5-Trimethylbenzene			0.5000	-6	2.0000	1	5.0000	-1	10.000	-4	20.000	3	50.000	0	75.000	2	100.00	5
2-Chlorotoluene			0.5000	4	2.0000	3	5.0000	0	10.000	-1	20.000	-1	50.000	-2	75.000	-2	100.00	-1
4-Chlorotoluene			0.5000	0	2.0000	2	5.0000	2	10.000	-1	20.000	-2	50.000	-2	75.000	2	100.00	2
tert-Butylbenzene			0.5000	-8	2.0000	-5	5.0000	2	10.000	-9	20.000	5	50.000	4	75.000	7	100.00	4
1,2,4-Trimethylbenzene			0.5000	-2	2.0000	-2	5.0000	-3	10.000	1	20.000	2	50.000	3	75.000	13	100.00	-11
sec-Butylbenzene			0.5000	-16	2.0000	-6	5.0000	3	10.000	-10	20.000	10	50.000	8	75.000	13	100.00	-2
para-Isopropyl Toluene			0.5000	-12	2.0000	-7	5.0000	-1	10.000	-15	20.000	8	50.000	10	75.000	17	100.00	0
1,3-Dichlorobenzene			0.5000	-2	2.0000	1	5.0000	-1	10.000	0	20.000	-2	50.000	-1	75.000	2	100.00	3
1,4-Dichlorobenzene			0.5000	-1	2.0000	1	5.0000	0	10.000	1	20.000	-3	50.000	-1	75.000	2	100.00	0
n-Butylbenzene			0.5000	-9	2.0000	-10	5.0000	-4	10.000	-13	20.000	4	50.000	6	75.000	14	100.00	12
1,2-Dichlorobenzene			0.5000	4	2.0000	4	5.0000	0	10.000	1	20.000	-3	50.000	-3	75.000	-5	100.00	3
1,2-Dibromo-3-Chloropropane					2.0000	14	5.0000	9	10.000	6	20.000	-1	50.000	-5	75.000	-13	100.00	-10
1,2,4-Trichlorobenzene			0.5000	3	2.0000	11	5.0000	0	10.000	2	20.000	0	50.000	-2	75.000	-9	100.00	-4
Hexachlorobutadiene			0.5000	-15	2.0000	-3	5.0000	-3	10.000	-12	20.000	14	50.000	11	75.000	2	100.00	6
Naphthalene			0.5000	14	2.0000	13	5.0000	5	10.000	4	20.000	-2	50.000	-9	75.000	-16	100.00	-10
1,2,3-Trichlorobenzene			0.5000	5	2.0000	7	5.0000	-2	10.000	0	20.000	-1	50.000	-2	75.000	-8	100.00	2
tert-Butyl Alcohol (TEA)			5.0000	0	20.000	-1	50.000	0	100.00	-2	200.00	-5	500.00	-3	750.00	6	1000.0	5
Isopropyl Ether (DIPE)			0.5000	11	2.0000	0	5.0000	-1	10.000	0	20.000	-6	50.000	-3	75.000	0	100.00	0
Ethyl tert-Butyl Ether (ETBE)			0.5000	5	2.0000	-2	5.0000	-2	10.000	0	20.000	-4	50.000	-2	75.000	3	100.00	2
Methyl tert-Amyl Ether (TAME)			0.5000	7	2.0000	-5	5.0000	-4	10.000	-2	20.000	-4	50.000	0	75.000	5	100.00	4
Dibromofluoromethane	50.000	-1	50.000	0	50.000	0	50.000	1	50.000	1	50.000	0	50.000	0	50.000	-1	50.000	0
1,2-Dichloroethane-d4	50.000	-4	50.000	-2	50.000	-3	50.000	-1	50.000	-1	50.000	0	50.000	2	50.000	5	50.000	5
Toluene-d8	50.000	0	50.000	1	50.000	0	50.000	0	50.000	0	50.000	0	50.000	-1	50.000	-1	50.000	-1
Bromofluorobenzene	50.000	6	50.000	7	50.000	11	50.000	3	50.000	1	50.000	-1	50.000	-3	50.000	-17	50.000	-8

DJA 03/25/15 [Freon 12]: Corrected fronting or tailing peak integration in multiple levels.

DJA 03/25/15 [cis-1,2-Dichloroethene]: Corrected automatically drawn baseline in multiple levels.

DJA 03/25/15 [Ethanol]: Corrected fronting or tailing peak integration in multiple levels.

DJA 03/25/15 [Chloromethane]: Corrected fronting or tailing peak integration in (kcn08).

DJA 03/25/15 [1,1-Dichloroethene]: Corrected fronting or tailing peak integration in (kcn08).

DJA 03/25/15 [Isopropanol]: Corrected fronting or tailing peak integration in (kcn08).

DJA 03/25/15 : integrated cis-1,2-Dichloroethene and 1,1-Dichloroethene down to baseline

Analyst: DJA

Date: 03/25/15

Reviewer: LW

Date: 03/25/15

m>manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor

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835120089001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266091 MSVOA Water
EPA 8260B

Inst : MSVOA11
Calnum : 835120089001

Name : 8260GX11
Cal Date : 24-MAR-2015

Type : WATER

ICV 835120089015 (kcn15 24-MAR-2015) stds: S24978 (10000X), S26882 (2500X)
ICV 835120089016 (kcn16 24-MAR-2015) stds: S26642 (10000X), S26876 (10000X),
S26759 (10000X), S26882 (2500X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	835120089015	20.00	17.70	ug/L	-12	30	m
Chloromethane	835120089015	20.00	19.36	ug/L	-3	30	
Vinyl Chloride	835120089015	20.00	20.11	ug/L	1	20	
Bromomethane	835120089015	20.00	14.85	ug/L	-26	30	!v-
Chloroethane	835120089015	20.00	20.19	ug/L	1	30	
Trichlorofluoromethane	835120089015	20.00	19.23	ug/L	-4	30	
Acetone	835120089016	25.00	19.25	ug/L	-23	40	!v-
Freon 113	835120089016	25.00	23.47	ug/L	-6	30	
1,1-Dichloroethene	835120089016	25.00	23.65	ug/L	-5	20	
Methylene Chloride	835120089016	25.00	24.15	ug/L	-3	30	
Carbon Disulfide	835120089016	25.00	25.92	ug/L	4	30	
MTBE	835120089016	25.00	23.19	ug/L	-7	30	
trans-1,2-Dichloroethene	835120089016	25.00	23.83	ug/L	-5	30	
Vinyl Acetate	835120089016	25.00	32.30	ug/L	29	40	!v+
1,1-Dichloroethane	835120089016	25.00	23.81	ug/L	-5	30	
2-Butanone	835120089016	25.00	22.50	ug/L	-10	40	
2,2-Dichloropropane	835120089016	25.00	25.22	ug/L	1	30	
cis-1,2-Dichloroethene	835120089016	25.00	24.06	ug/L	-4	30	
Chloroform	835120089016	25.00	24.68	ug/L	-1	20	
Bromochloromethane	835120089016	25.00	25.22	ug/L	1	30	
1,1,1-Trichloroethane	835120089016	25.00	26.16	ug/L	5	30	
1,1-Dichloropropene	835120089016	25.00	24.86	ug/L	-1	30	
Carbon Tetrachloride	835120089016	25.00	27.02	ug/L	8	30	
1,2-Dichloroethane	835120089016	25.00	23.99	ug/L	-4	30	
Benzene	835120089016	25.00	25.06	ug/L	0	30	
Trichloroethene	835120089016	25.00	24.90	ug/L	0	30	
1,2-Dichloropropane	835120089016	25.00	23.15	ug/L	-7	20	
Bromodichloromethane	835120089016	25.00	23.79	ug/L	-5	30	
Dibromomethane	835120089016	25.00	23.73	ug/L	-5	30	
4-Methyl-2-Pentanone	835120089016	25.00	24.20	ug/L	-3	40	
cis-1,3-Dichloropropene	835120089016	25.00	23.71	ug/L	-5	30	
Toluene	835120089016	25.00	24.70	ug/L	-1	20	
trans-1,3-Dichloropropene	835120089016	25.00	22.11	ug/L	-12	30	
1,1,2-Trichloroethane	835120089016	25.00	23.48	ug/L	-6	30	
2-Hexanone	835120089016	25.00	23.69	ug/L	-5	40	
1,3-Dichloropropane	835120089016	25.00	24.28	ug/L	-3	30	
Tetrachloroethene	835120089016	25.00	26.10	ug/L	4	30	
Dibromochloromethane	835120089016	25.00	24.05	ug/L	-4	30	
1,2-Dibromoethane	835120089016	25.00	24.01	ug/L	-4	30	
Chlorobenzene	835120089016	25.00	24.71	ug/L	-1	30	
1,1,1,2-Tetrachloroethane	835120089016	25.00	23.82	ug/L	-5	30	
Ethylbenzene	835120089016	25.00	24.94	ug/L	0	20	
m,p-Xylenes	835120089016	50.00	49.55	ug/L	-1	30	
o-Xylene	835120089016	25.00	24.67	ug/L	-1	30	
Styrene	835120089016	25.00	24.43	ug/L	-2	30	
Bromoform	835120089016	25.00	23.75	ug/L	-5	30	
Isopropylbenzene	835120089016	25.00	26.30	ug/L	5	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	835120089016	25.00	24.85	ug/L	-1	30	
1,2,3-Trichloropropane	835120089016	25.00	23.58	ug/L	-6	30	
Propylbenzene	835120089016	25.00	25.30	ug/L	1	30	
Bromobenzene	835120089016	25.00	25.25	ug/L	1	30	
1,3,5-Trimethylbenzene	835120089016	25.00	26.63	ug/L	7	30	
2-Chlorotoluene	835120089016	25.00	24.94	ug/L	0	30	
4-Chlorotoluene	835120089016	25.00	24.86	ug/L	-1	30	
tert-Butylbenzene	835120089016	25.00	26.56	ug/L	6	30	
1,2,4-Trimethylbenzene	835120089016	25.00	25.36	ug/L	1	30	
sec-Butylbenzene	835120089016	25.00	27.18	ug/L	9	30	
para-Isopropyl Toluene	835120089016	25.00	26.79	ug/L	7	30	
1,3-Dichlorobenzene	835120089016	25.00	25.06	ug/L	0	30	
1,4-Dichlorobenzene	835120089016	25.00	24.83	ug/L	-1	30	
n-Butylbenzene	835120089016	25.00	26.03	ug/L	4	30	
1,2-Dichlorobenzene	835120089016	25.00	24.68	ug/L	-1	30	
1,2-Dibromo-3-Chloropropane	835120089016	25.00	23.49	ug/L	-6	30	
1,2,4-Trichlorobenzene	835120089016	25.00	24.53	ug/L	-2	30	
Hexachlorobutadiene	835120089016	25.00	26.82	ug/L	7	30	
Naphthalene	835120089016	25.00	22.50	ug/L	-10	30	
1,2,3-Trichlorobenzene	835120089016	25.00	24.63	ug/L	-1	30	
tert-Butyl Alcohol (TBA)	835120089016	125.0	119.3	ug/L	-5	30	
Isopropyl Ether (DIPE)	835120089016	25.00	22.65	ug/L	-9	30	
Ethyl tert-Butyl Ether (ETBE)	835120089016	25.00	23.06	ug/L	-8	30	
Methyl tert-Amyl Ether (TAME)	835120089016	25.00	22.68	ug/L	-9	30	

835120089015: Analyst: DJA Date: 03/25/15 Reviewer: LW Date: 03/25/15
835120089016: Analyst: DJA Date: 03/25/15 Reviewer: LW Date: 03/25/15

!=warning +=high bias -=low bias m=manual integration v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 MSVOA Water
EPA 8260B

Inst : MSVOA11 IDF : 1.0
 Seqnum : 835151690006 File : kdf06 Time : 15-APR-2015 11:26
 Cal : 835120089001 Caldate : 24-MAR-2015 Caltype : WATER
 Standards: S25695 (25000X), S26948 (25000X), S26838 (25000X), S25156 (25000X),
 S26882 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.4972	0.5689	20.00	22.89	ug/L	14	30	0.0500	
Chloromethane	0.4836	0.4642	20.00	19.20	ug/L	-4	30	0.1000	
Vinyl Chloride	0.5192	0.5549	20.00	21.38	ug/L	7	20	0.0500	
Bromomethane	0.2578	0.3122	20.00	24.22	ug/L	21	30	0.0500	!c+ !v-
Chloroethane	0.2775	0.2874	20.00	20.71	ug/L	4	30	0.0500	
Trichlorofluoromethane	0.6504	0.7154	20.00	22.00	ug/L	10	30	0.0500	
Acetone	0.1289	0.1202	20.00	18.65	ug/L	-7	40	0.0500	!v-
Freon 113	0.3401	0.3917	20.00	23.03	ug/L	15	30	0.0500	
1,1-Dichloroethene	0.3748	0.3868	20.00	20.64	ug/L	3	20	0.0500	
Methylene Chloride	0.4477	0.4564	20.00	20.39	ug/L	2	30	0.0500	
Carbon Disulfide	1.2559	1.3178	20.00	20.98	ug/L	5	30	0.0500	
MTBE	1.2518	1.1812	20.00	18.87	ug/L	-6	30	0.0500	
trans-1,2-Dichloroethene	0.4461	0.4550	20.00	20.40	ug/L	2	30	0.0500	
Vinyl Acetate	0.6429	0.5979	20.00	18.60	ug/L	-7	40	0.0500	!v+
1,1-Dichloroethane	0.7583	0.7750	20.00	20.44	ug/L	2	30	0.1000	
2-Butanone	0.1810	0.1611	20.00	17.80	ug/L	-11	40	0.0500	
2,2-Dichloropropane	0.5956	0.6638	20.00	22.29	ug/L	11	30	0.0500	
cis-1,2-Dichloroethene	0.5103	0.5100	20.00	19.99	ug/L	0	30	0.0500	
Chloroform	0.7810	0.8196	20.00	20.99	ug/L	5	20	0.0500	
Bromochloromethane	0.2527	0.2617	20.00	20.71	ug/L	4	30	0.0500	
1,1,1-Trichloroethane	0.6629	0.7138	20.00	21.53	ug/L	8	30	0.0500	
1,1-Dichloropropene	0.3839	0.4186	20.00	21.81	ug/L	9	30	0.0500	
Carbon Tetrachloride	0.3701	0.4079	20.00	22.04	ug/L	10	30	0.0500	
1,2-Dichloroethane	0.4016	0.4173	20.00	20.78	ug/L	4	30	0.0500	
Benzene	1.2337	1.2785	20.00	20.73	ug/L	4	30	0.0500	
Trichloroethene	0.3141	0.3364	20.00	21.42	ug/L	7	30	0.0500	
1,2-Dichloropropane	0.3125	0.3148	20.00	20.14	ug/L	1	20	0.0500	
Bromodichloromethane	0.4068	0.4238	20.00	20.84	ug/L	4	30	0.0500	
Dibromomethane	0.1997	0.2005	20.00	20.08	ug/L	0	30	0.0500	
4-Methyl-2-Pentanone	0.2555	0.2227	20.00	17.43	ug/L	-13	40	0.0500	
cis-1,3-Dichloropropene	0.5082	0.5237	20.00	20.61	ug/L	3	30	0.0500	
Toluene	0.9376	0.9515	20.00	20.30	ug/L	1	20	0.0500	
trans-1,3-Dichloropropene	0.5449	0.5378	20.00	19.74	ug/L	-1	30	0.0500	
1,1,2-Trichloroethane	0.1813	0.1792	20.00	19.77	ug/L	-1	30	0.0500	
2-Hexanone	0.2128	0.1803	20.00	16.94	ug/L	-15	40	0.0500	
1,3-Dichloropropane	0.5431	0.5278	20.00	19.44	ug/L	-3	30	0.0500	
Tetrachloroethene	0.3735	0.4019	20.00	21.53	ug/L	8	30	0.0500	
Dibromochloromethane	0.3982	0.3894	20.00	19.56	ug/L	-2	30	0.0500	
1,2-Dibromoethane	0.3482	0.3299	20.00	18.95	ug/L	-5	30	0.0500	
Chlorobenzene	1.1069	1.1102	20.00	20.06	ug/L	0	30	0.3000	
1,1,1,2-Tetrachloroethane	0.3852	0.3757	20.00	19.51	ug/L	-2	30	0.0500	
Ethylbenzene	1.8266	1.8810	20.00	20.60	ug/L	3	20	0.0500	
m,p-Xylenes	0.7276	0.7365	40.00	40.49	ug/L	1	30	0.0500	
o-Xylene	0.7023	0.7007	20.00	19.95	ug/L	0	30	0.0500	
Styrene	1.2139	1.2010	20.00	19.79	ug/L	-1	30	0.0500	
Bromoform	0.2847	0.2536	20.00	17.82	ug/L	-11	30	0.1000	
Isopropylbenzene	3.4262	3.7707	20.00	22.01	ug/L	10	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.7845	0.7799	20.00	19.88	ug/L	-1	30	0.3000	
1,2,3-Trichloropropane	0.8003	0.7893	20.00	19.72	ug/L	-1	30	0.0500	
Propylbenzene	3.8856	4.3718	20.00	22.50	ug/L	13	30	0.0500	
Bromobenzene	0.9660	0.9867	20.00	20.43	ug/L	2	30	0.0500	
1,3,5-Trimethylbenzene	2.8083	3.0043	20.00	21.40	ug/L	7	30	0.0500	
2-Chlorotoluene	2.7173	2.9138	20.00	21.45	ug/L	7	30	0.0500	
4-Chlorotoluene	2.5066	2.6502	20.00	21.15	ug/L	6	30	0.0500	
tert-Butylbenzene	2.4558	2.6053	20.00	21.22	ug/L	6	30	0.0500	
1,2,4-Trimethylbenzene	2.6627	2.8195	20.00	21.18	ug/L	6	30	0.0500	
sec-Butylbenzene	3.4357	3.8691	20.00	22.52	ug/L	13	30	0.0500	
para-Isopropyl Toluene	2.7771	3.0114	20.00	21.69	ug/L	8	30	0.0500	
1,3-Dichlorobenzene	1.7260	1.7352	20.00	20.11	ug/L	1	30	0.0500	
1,4-Dichlorobenzene	1.7680	1.7590	20.00	19.90	ug/L	-1	30	0.0500	
n-Butylbenzene	2.2484	2.4618	20.00	21.90	ug/L	9	30	0.0500	
1,2-Dichlorobenzene	1.6246	1.6011	20.00	19.71	ug/L	-1	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.1387	0.1265	20.00	18.24	ug/L	-9	30	0.0500	
1,2,4-Trichlorobenzene	0.7404	0.7148	20.00	19.31	ug/L	-3	30	0.0500	
Hexachlorobutadiene	0.4221	0.4808	20.00	22.78	ug/L	14	30	0.0500	
Naphthalene	1.6033	1.3297	20.00	16.59	ug/L	-17	30	0.0500	
1,2,3-Trichlorobenzene	0.5460	0.4888	20.00	17.91	ug/L	-10	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0390	0.0316	200.0	162.3	ug/L	-19	30	0.0050	
Isopropyl Ether (DIPE)	1.2595	1.2106	20.00	19.22	ug/L	-4	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	1.3265	1.3075	20.00	19.71	ug/L	-1	30	0.0500	
Methyl tert-Amyl Ether (TAME)	0.9207	0.8870	20.00	19.27	ug/L	-4	30	0.0500	
Dibromofluoromethane	0.4359	0.4479	50.00	51.38	ug/L	3	30	0.0500	
1,2-Dichloroethane-d4	0.3486	0.3490	50.00	50.05	ug/L	0	30	0.0500	
Toluene-d8	1.4402	1.4199	50.00	49.30	ug/L	-1	30	0.0500	
Bromofluorobenzene	0.9199	0.9687	50.00	52.65	ug/L	5	30	0.0500	

ISTD (ICAL kcn12)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	915237	913728	-0.16	10.67	10.67	0.00
1,4-Difluorobenzene	1337386	1376748	2.94	11.61	11.60	-0.01
Chlorobenzene-d5	1178204	1215954	3.20	14.70	14.70	0.00
1,4-Dichlorobenzene-d4	608161	590520	-2.90	16.95	16.95	0.00

Analyst: DJA Date: 04/15/15 Reviewer: LW Date: 04/16/15

!=warning +=high bias -=low bias c=CCV v=ICV

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 835151690

Date : 04/15/15
 Sequence : MSVOA11 kdf

Reference : kcn12
 Analyzed : 03/24/15 14:50

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	915237	10.67	1337386	11.61	1178204	14.70	608161	16.95
		LOWER LIMIT	457619	10.17	668693	11.11	589102	14.20	304081	16.45
		UPPER LIMIT	1830474	11.17	2674772	12.11	2356408	15.20	1216322	17.45
004	CCV		792709	10.67	1306807	11.60	1285887	14.70	639884	16.94
006	CCV		913728	10.67	1376748	11.60	1215954	14.70	590520	16.95
008	BS	QC784375	911497	10.67	1362486	11.60	1186477	14.70	577569	16.94
009	BSD	QC784376	923253	10.67	1390285	11.61	1194731	14.70	584826	16.95
011	BLANK	QC784377	893551	10.67	1356922	11.60	1167579	14.70	533571	16.95
012	SAMPLE	266091-001	867785	10.67	1276144	11.60	1121598	14.70	508407	16.95
013	SAMPLE	266082-003	875722	10.67	1335293	11.60	1141637	14.70	516034	16.95
014	SAMPLE	266091-003	855435	10.67	1309686	11.60	1125593	14.70	510032	16.94
015	SAMPLE	266091-006	830272	10.67	1278483	11.61	1104869	14.70	498072	16.95
016	SAMPLE	266091-007	851709	10.67	1311243	11.60	1121145	14.70	511313	16.94
017	SAMPLE	266091-008	859489	10.67	1314918	11.60	1128575	14.70	516020	16.95
018	SAMPLE	266091-009	843066	10.67	1305964	11.60	1111683	14.70	510037	16.94
019	SAMPLE	266091-010	853696	10.67	1296128	11.61	1116632	14.70	516210	16.95
020	SAMPLE	266091-011	848260	10.67	1288839	11.60	1115207	14.70	513512	16.95
021	SAMPLE	266091-012	866046	10.67	1322667	11.61	1123675	14.70	512648	16.95
022	SAMPLE	266087-006	842293	10.67	1295034	11.61	1111062	14.70	507149	16.95
023	SAMPLE	266087-007	837698	10.67	1285063	11.60	1114096	14.70	506866	16.95
024	SAMPLE	266087-008	839786	10.67	1291085	11.61	1108864	14.70	508147	16.95
025	SAMPLE	266087-009	848169	10.67	1287146	11.60	1108494	14.70	500855	16.95
026	SAMPLE	266087-001	841788	10.67	1288868	11.60	1110190	14.70	502163	16.95
027	SAMPLE	266087-004	839271	10.67	1284313	11.60	1108042	14.70	487968	16.95
028	SAMPLE	266026-004	847784	10.67	1287422	11.61	1104398	14.70	497107	16.95
029	SAMPLE	266027-001	845085	10.67	1287710	11.61	1101512	14.70	495204	16.95
030	IB		831815	10.67	1269424	11.61	1102218	14.70	489242	16.95
031	IB		829900	10.67	1271129	11.60	1102308	14.70	513560	16.94
032	IB		829039	10.67	1275546	11.60	1093160	14.70	490649	16.95
033	IB		830251	10.67	1273171	11.60	1091436	14.70	489071	16.95
034	IB		811628	10.67	1264612	11.60	1081629	14.70	488825	16.95

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 835151690

Instrument : MSVOA11 Begun : 04/15/15 08:10
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	kdf01	X	HIGH GAS			04/15/15 08:10	1.0	1	
002	kdf02	X	IB			04/15/15 08:38	1.0	1	
003	kdf03	TUN	BFB			04/15/15 09:22	1.0	2	
004	kdf04	CCV				04/15/15 09:45	1.0	3 4 5 6 1	cc+
005	kdf05	TUN	BFB			04/15/15 10:59	1.0	2	
006	kdf06	CCV				04/15/15 11:26	1.0	3 4 5 6 1	
007	kdf07	ICAL	A/A			04/15/15 12:03	1.0	7 1	
008	kdf08	BS	QC784375	Water	222281	04/15/15 12:31	1.0	8 9 10 11 1	
009	kdf09	BSD	QC784376	Water	222281	04/15/15 12:59	1.0	8 9 10 11 1	
010	kdf10	X	IB			04/15/15 13:27	1.0	1	
011	kdf11	BLANK	QC784377	Water	222281	04/15/15 13:56	1.0	1	
012	kdf12	SAMPLE	266091-001	Water	222281	04/15/15 14:24	1.0	1	
013	kdf13	SAMPLE	266082-003	Water	222281	04/15/15 14:52	1.0	1	
014	kdf14	SAMPLE	266091-003	Water	222281	04/15/15 15:20	1.0	1	
015	kdf15	SAMPLE	266091-006	Water	222281	04/15/15 15:49	1.0	1	
016	kdf16	SAMPLE	266091-007	Water	222281	04/15/15 16:17	1.0	1	
017	kdf17	SAMPLE	266091-008	Water	222281	04/15/15 16:45	1.0	1	
018	kdf18	SAMPLE	266091-009	Water	222281	04/15/15 17:13	1.0	1	
019	kdf19	SAMPLE	266091-010	Water	222281	04/15/15 17:41	1.0	1	
020	kdf20	SAMPLE	266091-011	Water	222281	04/15/15 18:10	1.0	1	
021	kdf21	SAMPLE	266091-012	Water	222281	04/15/15 18:38	1.0	1	
022	kdf22	SAMPLE	266087-006	Water	222281	04/15/15 19:06	1.0	1	
023	kdf23	SAMPLE	266087-007	Water	222281	04/15/15 19:34	1.0	1	
024	kdf24	SAMPLE	266087-008	Water	222281	04/15/15 20:03	1.0	1	
025	kdf25	SAMPLE	266087-009	Water	222281	04/15/15 20:31	1.0	1	
026	kdf26	SAMPLE	266087-001	Water	222281	04/15/15 20:59	2.0	1	
027	kdf27	SAMPLE	266087-004	Water	222281	04/15/15 21:27	2.0	1	
028	kdf28	SAMPLE	266026-004	Water	222281	04/15/15 21:56	4.0	1	
029	kdf29	SAMPLE	266027-001	Water	222281	04/15/15 22:24	2500	1	
030	kdf30	IB				04/15/15 22:52	222300	1	
031	kdf31	IB				04/15/15 23:21	222300	1	<<t
032	kdf32	IB				04/15/15 23:49	222300	1	<<t
033	kdf33	IB				04/16/15 00:17	222300	1	<<t
034	kdf34	IB				04/16/15 00:45	222300	1	<<t
035	kdf35	LOD	263628-009	Water	222281	04/16/15 01:14	1.0	7 1	<<t

DJA 04/15/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 7.

DJA 04/16/15 : returned after file 4

DJA 04/16/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 8 through 35.

DJA 04/16/15 : Matrix spikes were not performed for this analysis in batch 222281 due to insufficient sample amount.

Analyst: DJA Date: 04/15/15 Reviewer: LW Date: 04/16/15

Standards used: 1=S26882 2=S26000 3=S25695 4=S26948 5=S26838 6=S25156 7=S27011 8=S26876 9=S27022 10=S26759 11=S24978

Flags used: +=high bias <<t=out of clock cc=CCV CCC failure

MSVOA WATER Prepsheet

Batch #: 222 281

Prep Date: 4/15/15

Instrument: MSI

Dilutions prepared & pH of dilutions checked (initials/date): QJA 4/15/15
 For Undiluted samples, pH checked (initials/date): JLH 4/15/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
1 266086-4	C	✓			129	2	4x	runs dont match				
16 266087-1	C	✓			910	1	2500x	Acetone Acetone 7 LR			4/17	X
20 266088-3	B	✓				1	1x	OD				
20 266091-1	A	✓					1x	TB				
5	B	✓										
6	A	✓										
7	-7	✓										
8	-8	✓										
9	-9	✓										
10	-10	✓										
11	-11	✓										
12	-12	✓										
20 13 266087-1	A	✓			1011	074	2x					
14	-4	✓			1112	4/15	2x					
15	-6	✓					1x					
16	-7	✓										
17	-8	✓										
18	-9	✓										
19												
20												
21												
22												



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266091
ANALYTICAL REPORT
Semivolatile Organics by GC/MS

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

Table with 2 columns: Sample ID and Lab ID. Rows include sample identifiers like WTA, B128, SWB, etc., and their corresponding lab IDs.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: [Handwritten Signature]
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/29/2015

**CASE NARRATIVE
SEMIVOLATILE ORGANICS BY GC/MS (EPA 8270C)**

Laboratory number: 266091
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/14/15
Samples Received: 04/14/15

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 04/14/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Semivolatile Organics by GC/MS (EPA 8270C):

No analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266091

Chain of Custody Record No. 6877

Page 1 of 1

Project name: 2015 Groundwater	Lab PO#: 15 OAK 32	Lab: Card T	No./Container Types		Preservative Added
TIEMI technical contact: Sara Woolley	Field samplers: Mark Duffy Dayno Aragon		40 ml VOA	1 liter Amber	500 ml Poly
Project (CTO) number: 1035225323.05	TIEMI project manager: Jason Brubaker	Field samplers' signatures: <i>Dayno Aragon</i>	MS / MSD	Matrix	
Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	
1 20150413 TB		4/13/15	0900	water	3
2 20150413 DHR			0925		1
3 20150413 WTA			1020		3
4 20150413 B128			1145		2
5 20150413 B128D			1140		2
6 20150413 BULB1			1235		3
7 20150413 BULB1D			1240		3
8 20150413 SWB			1300		3
9 20150413 BULB2			1320		3
10 20150413 ETA			1510		3
11 20150413 MFA H10			1418		3
12 20150413 ER			1545		3
					VOA
					SVOA
					Pest/PCBs
					Metals
					District #
					TPH Purgeables
					TPH Extractables
					HH

Relinquished by: <i>Mark Duffy</i>	Name (print): Mark Duffy	Company Name: Tetra Tech	Date: 4/14/15	Time: 1617
Received by: <i>Mikella Cheong</i>	Mikella Cheong	CA	4/14	1617
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Turnaround time/remarks: * metals were field-filtered				
Fed Ex #: N/A				

COOLER RECEIPT CHECKLIST



Login # 266091 Date Received 4/14/15 Number of coolers 3
Client Tetra Tech EM Inc. Project 2015 Ground Water

Date Opened 4/14 By (print) BL (sign) [Signature]
Date Logged in [Signature] By (print) [Signature] (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Cloth material, Foam blocks, Cardboard, Bags, Styrofoam, None, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 5.3c, 2.0c, 6.0c

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 266091

Sample	pH: <2	>9	>12	Other
-002a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-004a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-005a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-006a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-007a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-008a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Sample	pH: <2	>9	>12	Other
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-009a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-010a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-012a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: BL
 Date: 4/14/15

Results & QC Summary

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 WTA	Batch#:	222270
Lab ID:	266091-003	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.4	2.1
Phenol	ND	9.4	0.76
bis(2-Chloroethyl)ether	ND	9.4	1.4
2-Chlorophenol	ND	9.4	0.86
1,3-Dichlorobenzene	ND	9.4	1.4
1,4-Dichlorobenzene	ND	9.4	1.4
Benzyl alcohol	ND	9.4	1.4
1,2-Dichlorobenzene	ND	9.4	1.4
2-Methylphenol	ND	9.4	0.66
bis(2-Chloroisopropyl) ether	ND	9.4	1.5
4-Methylphenol	ND	9.4	1.1
N-Nitroso-di-n-propylamine	ND	9.4	1.2
Hexachloroethane	ND	9.4	1.4
Nitrobenzene	ND	9.4	1.2
Isophorone	ND	9.4	1.6
2-Nitrophenol	ND	19	1.9
2,4-Dimethylphenol	ND	9.4	0.54
Benzoic acid	ND	47	6.5
bis(2-Chloroethoxy)methane	ND	9.4	1.3
2,4-Dichlorophenol	ND	9.4	0.75
1,2,4-Trichlorobenzene	ND	9.4	1.3
4-Chloroaniline	ND	9.4	1.3
Hexachlorobutadiene	ND	9.4	1.3
4-Chloro-3-methylphenol	ND	9.4	1.5
Hexachlorocyclopentadiene	ND	19	1.6
2,4,6-Trichlorophenol	ND	9.4	0.89
2,4,5-Trichlorophenol	ND	9.4	1.1
2-Chloronaphthalene	ND	9.4	1.2
2-Nitroaniline	ND	19	1.5
Dimethylphthalate	ND	9.4	1.5
2,6-Dinitrotoluene	ND	9.4	1.6
3-Nitroaniline	ND	19	3.6
2,4-Dinitrophenol	ND	19	2.5
4-Nitrophenol	ND	19	1.3
Dibenzofuran	ND	9.4	1.4
2,4-Dinitrotoluene	ND	9.4	1.3

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 WTA	Batch#:	222270
Lab ID:	266091-003	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.4	1.4
4-Chlorophenyl-phenylether	ND	9.4	1.3
4-Nitroaniline	ND	19	2.0
2,3,4,6-Tetrachlorophenol	ND	9.4	2.0
4,6-Dinitro-2-methylphenol	ND	19	1.5
N-Nitrosodiphenylamine	ND	9.4	1.2
Azobenzene	ND	9.4	1.3
4-Bromophenyl-phenylether	ND	9.4	1.2
Hexachlorobenzene	ND	9.4	1.3
Pentachlorophenol	ND	19	1.3
Carbazole	ND	9.4	1.8
Di-n-butylphthalate	ND	9.4	1.3
Butylbenzylphthalate	ND	9.4	1.2
3,3'-Dichlorobenzidine	ND	19	1.4
bis(2-Ethylhexyl)phthalate	ND	9.4	1.8
Di-n-octylphthalate	ND	9.4	1.4

Surrogate	%REC	Limits
2-Fluorophenol	65	38-120
Phenol-d5	60	38-120
2,4,6-Tribromophenol	81	46-120
Nitrobenzene-d5	65	51-120
2-Fluorobiphenyl	75	54-120
Terphenyl-d14	41	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 B128	Batch#:	222270
Lab ID:	266091-004	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.4	2.1
Phenol	ND	9.4	0.76
bis(2-Chloroethyl)ether	ND	9.4	1.4
2-Chlorophenol	ND	9.4	0.86
1,3-Dichlorobenzene	ND	9.4	1.4
1,4-Dichlorobenzene	ND	9.4	1.4
Benzyl alcohol	ND	9.4	1.4
1,2-Dichlorobenzene	ND	9.4	1.4
2-Methylphenol	ND	9.4	0.66
bis(2-Chloroisopropyl) ether	ND	9.4	1.5
4-Methylphenol	ND	9.4	1.1
N-Nitroso-di-n-propylamine	ND	9.4	1.2
Hexachloroethane	ND	9.4	1.4
Nitrobenzene	ND	9.4	1.2
Isophorone	ND	9.4	1.6
2-Nitrophenol	ND	19	1.9
2,4-Dimethylphenol	ND	9.4	0.54
Benzoic acid	ND	47	6.5
bis(2-Chloroethoxy)methane	ND	9.4	1.3
2,4-Dichlorophenol	ND	9.4	0.75
1,2,4-Trichlorobenzene	ND	9.4	1.3
4-Chloroaniline	ND	9.4	1.3
Hexachlorobutadiene	ND	9.4	1.3
4-Chloro-3-methylphenol	ND	9.4	1.5
Hexachlorocyclopentadiene	ND	19	1.6
2,4,6-Trichlorophenol	ND	9.4	0.89
2,4,5-Trichlorophenol	ND	9.4	1.1
2-Chloronaphthalene	ND	9.4	1.2
2-Nitroaniline	ND	19	1.5
Dimethylphthalate	ND	9.4	1.5
2,6-Dinitrotoluene	ND	9.4	1.6
3-Nitroaniline	ND	19	3.6
2,4-Dinitrophenol	ND	19	2.5
4-Nitrophenol	ND	19	1.3
Dibenzofuran	ND	9.4	1.4
2,4-Dinitrotoluene	ND	9.4	1.3

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 B128	Batch#:	222270
Lab ID:	266091-004	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.4	1.4
4-Chlorophenyl-phenylether	ND	9.4	1.3
4-Nitroaniline	ND	19	2.0
2,3,4,6-Tetrachlorophenol	ND	9.4	2.0
4,6-Dinitro-2-methylphenol	ND	19	1.5
N-Nitrosodiphenylamine	ND	9.4	1.2
Azobenzene	ND	9.4	1.3
4-Bromophenyl-phenylether	ND	9.4	1.2
Hexachlorobenzene	ND	9.4	1.3
Pentachlorophenol	ND	19	1.3
Carbazole	ND	9.4	1.8
Di-n-butylphthalate	ND	9.4	1.3
Butylbenzylphthalate	ND	9.4	1.2
3,3'-Dichlorobenzidine	ND	19	1.4
bis(2-Ethylhexyl)phthalate	ND	9.4	1.8
Di-n-octylphthalate	ND	9.4	1.4

Surrogate	%REC	Limits
2-Fluorophenol	67	38-120
Phenol-d5	62	38-120
2,4,6-Tribromophenol	85	46-120
Nitrobenzene-d5	69	51-120
2-Fluorobiphenyl	79	54-120
Terphenyl-d14	68	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 B128D	Batch#:	222270
Lab ID:	266091-005	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.4	2.1
Phenol	ND	9.4	0.76
bis(2-Chloroethyl)ether	ND	9.4	1.4
2-Chlorophenol	ND	9.4	0.86
1,3-Dichlorobenzene	ND	9.4	1.4
1,4-Dichlorobenzene	ND	9.4	1.4
Benzyl alcohol	ND	9.4	1.4
1,2-Dichlorobenzene	ND	9.4	1.4
2-Methylphenol	ND	9.4	0.66
bis(2-Chloroisopropyl) ether	ND	9.4	1.5
4-Methylphenol	ND	9.4	1.1
N-Nitroso-di-n-propylamine	ND	9.4	1.2
Hexachloroethane	ND	9.4	1.4
Nitrobenzene	ND	9.4	1.2
Isophorone	ND	9.4	1.6
2-Nitrophenol	ND	19	1.9
2,4-Dimethylphenol	ND	9.4	0.54
Benzoic acid	ND	47	6.5
bis(2-Chloroethoxy)methane	ND	9.4	1.3
2,4-Dichlorophenol	ND	9.4	0.75
1,2,4-Trichlorobenzene	ND	9.4	1.3
4-Chloroaniline	ND	9.4	1.3
Hexachlorobutadiene	ND	9.4	1.3
4-Chloro-3-methylphenol	ND	9.4	1.5
Hexachlorocyclopentadiene	ND	19	1.6
2,4,6-Trichlorophenol	ND	9.4	0.89
2,4,5-Trichlorophenol	ND	9.4	1.1
2-Chloronaphthalene	ND	9.4	1.2
2-Nitroaniline	ND	19	1.5
Dimethylphthalate	ND	9.4	1.5
2,6-Dinitrotoluene	ND	9.4	1.6
3-Nitroaniline	ND	19	3.6
2,4-Dinitrophenol	ND	19	2.5
4-Nitrophenol	ND	19	1.3
Dibenzofuran	ND	9.4	1.4
2,4-Dinitrotoluene	ND	9.4	1.3

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 B128D	Batch#:	222270
Lab ID:	266091-005	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.4	1.4
4-Chlorophenyl-phenylether	ND	9.4	1.3
4-Nitroaniline	ND	19	2.0
2,3,4,6-Tetrachlorophenol	ND	9.4	2.0
4,6-Dinitro-2-methylphenol	ND	19	1.5
N-Nitrosodiphenylamine	ND	9.4	1.2
Azobenzene	ND	9.4	1.3
4-Bromophenyl-phenylether	ND	9.4	1.2
Hexachlorobenzene	ND	9.4	1.3
Pentachlorophenol	ND	19	1.3
Carbazole	ND	9.4	1.8
Di-n-butylphthalate	ND	9.4	1.3
Butylbenzylphthalate	ND	9.4	1.2
3,3'-Dichlorobenzidine	ND	19	1.4
bis(2-Ethylhexyl)phthalate	ND	9.4	1.8
Di-n-octylphthalate	ND	9.4	1.4

Surrogate	%REC	Limits
2-Fluorophenol	62	38-120
Phenol-d5	57	38-120
2,4,6-Tribromophenol	77	46-120
Nitrobenzene-d5	65	51-120
2-Fluorobiphenyl	72	54-120
Terphenyl-d14	57	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 SWB	Batch#:	222270
Lab ID:	266091-008	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.8	2.2
Phenol	ND	9.8	0.79
bis(2-Chloroethyl)ether	ND	9.8	1.5
2-Chlorophenol	ND	9.8	0.90
1,3-Dichlorobenzene	ND	9.8	1.5
1,4-Dichlorobenzene	ND	9.8	1.5
Benzyl alcohol	ND	9.8	1.5
1,2-Dichlorobenzene	ND	9.8	1.5
2-Methylphenol	ND	9.8	0.69
bis(2-Chloroisopropyl) ether	ND	9.8	1.5
4-Methylphenol	ND	9.8	1.1
N-Nitroso-di-n-propylamine	ND	9.8	1.3
Hexachloroethane	ND	9.8	1.4
Nitrobenzene	ND	9.8	1.2
Isophorone	ND	9.8	1.6
2-Nitrophenol	ND	20	2.0
2,4-Dimethylphenol	ND	9.8	0.57
Benzoic acid	ND	49	6.8
bis(2-Chloroethoxy)methane	ND	9.8	1.3
2,4-Dichlorophenol	ND	9.8	0.78
1,2,4-Trichlorobenzene	ND	9.8	1.4
4-Chloroaniline	ND	9.8	1.3
Hexachlorobutadiene	ND	9.8	1.4
4-Chloro-3-methylphenol	ND	9.8	1.5
Hexachlorocyclopentadiene	ND	20	1.6
2,4,6-Trichlorophenol	ND	9.8	0.93
2,4,5-Trichlorophenol	ND	9.8	1.1
2-Chloronaphthalene	ND	9.8	1.3
2-Nitroaniline	ND	20	1.6
Dimethylphthalate	ND	9.8	1.6
2,6-Dinitrotoluene	ND	9.8	1.7
3-Nitroaniline	ND	20	3.7
2,4-Dinitrophenol	ND	20	2.6
4-Nitrophenol	ND	20	1.4
Dibenzofuran	ND	9.8	1.5
2,4-Dinitrotoluene	ND	9.8	1.3

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 SWB	Batch#:	222270
Lab ID:	266091-008	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.8	1.5
4-Chlorophenyl-phenylether	ND	9.8	1.3
4-Nitroaniline	ND	20	2.1
2,3,4,6-Tetrachlorophenol	ND	9.8	2.1
4,6-Dinitro-2-methylphenol	ND	20	1.6
N-Nitrosodiphenylamine	ND	9.8	1.3
Azobenzene	ND	9.8	1.3
4-Bromophenyl-phenylether	ND	9.8	1.3
Hexachlorobenzene	ND	9.8	1.3
Pentachlorophenol	ND	20	1.4
Carbazole	ND	9.8	1.9
Di-n-butylphthalate	ND	9.8	1.3
Butylbenzylphthalate	ND	9.8	1.2
3,3'-Dichlorobenzidine	ND	20	1.5
bis(2-Ethylhexyl)phthalate	ND	9.8	1.9
Di-n-octylphthalate	ND	9.8	1.4

Surrogate	%REC	Limits
2-Fluorophenol	63	38-120
Phenol-d5	60	38-120
2,4,6-Tribromophenol	76	46-120
Nitrobenzene-d5	66	51-120
2-Fluorobiphenyl	75	54-120
Terphenyl-d14	64	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 BULB2	Batch#:	222270
Lab ID:	266091-009	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.6	2.1
Phenol	ND	9.6	0.77
bis(2-Chloroethyl)ether	ND	9.6	1.5
2-Chlorophenol	ND	9.6	0.88
1,3-Dichlorobenzene	ND	9.6	1.4
1,4-Dichlorobenzene	ND	9.6	1.5
Benzyl alcohol	ND	9.6	1.4
1,2-Dichlorobenzene	ND	9.6	1.5
2-Methylphenol	ND	9.6	0.67
bis(2-Chloroisopropyl) ether	ND	9.6	1.5
4-Methylphenol	ND	9.6	1.1
N-Nitroso-di-n-propylamine	ND	9.6	1.2
Hexachloroethane	ND	9.6	1.4
Nitrobenzene	ND	9.6	1.2
Isophorone	ND	9.6	1.6
2-Nitrophenol	ND	19	2.0
2,4-Dimethylphenol	ND	9.6	0.56
Benzoic acid	ND	48	6.6
bis(2-Chloroethoxy)methane	ND	9.6	1.3
2,4-Dichlorophenol	ND	9.6	0.77
1,2,4-Trichlorobenzene	ND	9.6	1.4
4-Chloroaniline	ND	9.6	1.3
Hexachlorobutadiene	ND	9.6	1.3
4-Chloro-3-methylphenol	ND	9.6	1.5
Hexachlorocyclopentadiene	ND	19	1.6
2,4,6-Trichlorophenol	ND	9.6	0.91
2,4,5-Trichlorophenol	ND	9.6	1.1
2-Chloronaphthalene	ND	9.6	1.2
2-Nitroaniline	ND	19	1.5
Dimethylphthalate	ND	9.6	1.6
2,6-Dinitrotoluene	ND	9.6	1.6
3-Nitroaniline	ND	19	3.7
2,4-Dinitrophenol	ND	19	2.5
4-Nitrophenol	ND	19	1.4
Dibenzofuran	ND	9.6	1.5
2,4-Dinitrotoluene	ND	9.6	1.3

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 BULB2	Batch#:	222270
Lab ID:	266091-009	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.6	1.5
4-Chlorophenyl-phenylether	ND	9.6	1.3
4-Nitroaniline	ND	19	2.1
2,3,4,6-Tetrachlorophenol	ND	9.6	2.1
4,6-Dinitro-2-methylphenol	ND	19	1.6
N-Nitrosodiphenylamine	ND	9.6	1.2
Azobenzene	ND	9.6	1.3
4-Bromophenyl-phenylether	ND	9.6	1.3
Hexachlorobenzene	ND	9.6	1.3
Pentachlorophenol	ND	19	1.3
Carbazole	ND	9.6	1.9
Di-n-butylphthalate	ND	9.6	1.3
Butylbenzylphthalate	ND	9.6	1.2
3,3'-Dichlorobenzidine	ND	19	1.4
bis(2-Ethylhexyl)phthalate	ND	9.6	1.8
Di-n-octylphthalate	ND	9.6	1.4

Surrogate	%REC	Limits
2-Fluorophenol	64	38-120
Phenol-d5	60	38-120
2,4,6-Tribromophenol	77	46-120
Nitrobenzene-d5	65	51-120
2-Fluorobiphenyl	75	54-120
Terphenyl-d14	53	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 MFA	Batch#:	222270
Lab ID:	266091-011	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.4	2.1
Phenol	ND	9.4	0.76
bis(2-Chloroethyl)ether	ND	9.4	1.4
2-Chlorophenol	ND	9.4	0.86
1,3-Dichlorobenzene	ND	9.4	1.4
1,4-Dichlorobenzene	ND	9.4	1.4
Benzyl alcohol	ND	9.4	1.4
1,2-Dichlorobenzene	ND	9.4	1.4
2-Methylphenol	ND	9.4	0.66
bis(2-Chloroisopropyl) ether	ND	9.4	1.5
4-Methylphenol	ND	9.4	1.1
N-Nitroso-di-n-propylamine	ND	9.4	1.2
Hexachloroethane	ND	9.4	1.4
Nitrobenzene	ND	9.4	1.2
Isophorone	ND	9.4	1.6
2-Nitrophenol	ND	19	1.9
2,4-Dimethylphenol	ND	9.4	0.54
Benzoic acid	ND	47	6.5
bis(2-Chloroethoxy)methane	ND	9.4	1.3
2,4-Dichlorophenol	ND	9.4	0.75
1,2,4-Trichlorobenzene	ND	9.4	1.3
4-Chloroaniline	ND	9.4	1.3
Hexachlorobutadiene	ND	9.4	1.3
4-Chloro-3-methylphenol	ND	9.4	1.5
Hexachlorocyclopentadiene	ND	19	1.6
2,4,6-Trichlorophenol	ND	9.4	0.89
2,4,5-Trichlorophenol	ND	9.4	1.1
2-Chloronaphthalene	ND	9.4	1.2
2-Nitroaniline	ND	19	1.5
Dimethylphthalate	ND	9.4	1.5
2,6-Dinitrotoluene	ND	9.4	1.6
3-Nitroaniline	ND	19	3.6
2,4-Dinitrophenol	ND	19	2.5
4-Nitrophenol	ND	19	1.3
Dibenzofuran	ND	9.4	1.4
2,4-Dinitrotoluene	ND	9.4	1.3

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 MFA	Batch#:	222270
Lab ID:	266091-011	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.4	1.4
4-Chlorophenyl-phenylether	ND	9.4	1.3
4-Nitroaniline	ND	19	2.0
2,3,4,6-Tetrachlorophenol	ND	9.4	2.0
4,6-Dinitro-2-methylphenol	ND	19	1.5
N-Nitrosodiphenylamine	ND	9.4	1.2
Azobenzene	ND	9.4	1.3
4-Bromophenyl-phenylether	ND	9.4	1.2
Hexachlorobenzene	ND	9.4	1.3
Pentachlorophenol	ND	19	1.3
Carbazole	ND	9.4	1.8
Di-n-butylphthalate	ND	9.4	1.3
Butylbenzylphthalate	ND	9.4	1.2
3,3'-Dichlorobenzidine	ND	19	1.4
bis(2-Ethylhexyl)phthalate	ND	9.4	1.8
Di-n-octylphthalate	ND	9.4	1.4

Surrogate	%REC	Limits
2-Fluorophenol	48	38-120
Phenol-d5	43	38-120
2,4,6-Tribromophenol	63	46-120
Nitrobenzene-d5	67	51-120
2-Fluorobiphenyl	78	54-120
Terphenyl-d14	63	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 ER	Batch#:	222270
Lab ID:	266091-012	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.8	2.2
Phenol	ND	9.8	0.79
bis(2-Chloroethyl)ether	ND	9.8	1.5
2-Chlorophenol	ND	9.8	0.90
1,3-Dichlorobenzene	ND	9.8	1.5
1,4-Dichlorobenzene	ND	9.8	1.5
Benzyl alcohol	ND	9.8	1.5
1,2-Dichlorobenzene	ND	9.8	1.5
2-Methylphenol	ND	9.8	0.69
bis(2-Chloroisopropyl) ether	ND	9.8	1.5
4-Methylphenol	ND	9.8	1.1
N-Nitroso-di-n-propylamine	ND	9.8	1.3
Hexachloroethane	ND	9.8	1.4
Nitrobenzene	ND	9.8	1.2
Isophorone	ND	9.8	1.6
2-Nitrophenol	ND	20	2.0
2,4-Dimethylphenol	ND	9.8	0.57
Benzoic acid	ND	49	6.8
bis(2-Chloroethoxy)methane	ND	9.8	1.3
2,4-Dichlorophenol	ND	9.8	0.78
1,2,4-Trichlorobenzene	ND	9.8	1.4
4-Chloroaniline	ND	9.8	1.3
Hexachlorobutadiene	ND	9.8	1.4
4-Chloro-3-methylphenol	ND	9.8	1.5
Hexachlorocyclopentadiene	ND	20	1.6
2,4,6-Trichlorophenol	ND	9.8	0.93
2,4,5-Trichlorophenol	ND	9.8	1.1
2-Chloronaphthalene	ND	9.8	1.3
2-Nitroaniline	ND	20	1.6
Dimethylphthalate	ND	9.8	1.6
2,6-Dinitrotoluene	ND	9.8	1.7
3-Nitroaniline	ND	20	3.7
2,4-Dinitrophenol	ND	20	2.6
4-Nitrophenol	ND	20	1.4
Dibenzofuran	ND	9.8	1.5
2,4-Dinitrotoluene	ND	9.8	1.3

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	2015 0413 ER	Batch#:	222270
Lab ID:	266091-012	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.8	1.5
4-Chlorophenyl-phenylether	ND	9.8	1.3
4-Nitroaniline	ND	20	2.1
2,3,4,6-Tetrachlorophenol	ND	9.8	2.1
4,6-Dinitro-2-methylphenol	ND	20	1.6
N-Nitrosodiphenylamine	ND	9.8	1.3
Azobenzene	ND	9.8	1.3
4-Bromophenyl-phenylether	ND	9.8	1.3
Hexachlorobenzene	ND	9.8	1.3
Pentachlorophenol	ND	20	1.4
Carbazole	ND	9.8	1.9
Di-n-butylphthalate	ND	9.8	1.3
Butylbenzylphthalate	ND	9.8	1.2
3,3'-Dichlorobenzidine	ND	20	1.5
bis(2-Ethylhexyl)phthalate	ND	9.8	1.9
Di-n-octylphthalate	ND	9.8	1.4

Surrogate	%REC	Limits
2-Fluorophenol	58	38-120
Phenol-d5	59	38-120
2,4,6-Tribromophenol	79	46-120
Nitrobenzene-d5	67	51-120
2-Fluorobiphenyl	76	54-120
Terphenyl-d14	66	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784342	Batch#:	222270
Matrix:	Water	Prepared:	04/14/15
Units:	ug/L	Analyzed:	04/15/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	10	2.2
Phenol	ND	10	0.80
bis(2-Chloroethyl)ether	ND	10	1.5
2-Chlorophenol	ND	10	0.91
1,3-Dichlorobenzene	ND	10	1.5
1,4-Dichlorobenzene	ND	10	1.5
Benzyl alcohol	ND	10	1.5
1,2-Dichlorobenzene	ND	10	1.5
2-Methylphenol	ND	10	0.70
bis(2-Chloroisopropyl) ether	ND	10	1.5
4-Methylphenol	ND	10	1.2
N-Nitroso-di-n-propylamine	ND	10	1.3
Hexachloroethane	ND	10	1.5
Nitrobenzene	ND	10	1.3
Isophorone	ND	10	1.7
2-Nitrophenol	ND	20	2.0
2,4-Dimethylphenol	ND	10	0.58
Benzoic acid	ND	50	6.9
bis(2-Chloroethoxy)methane	ND	10	1.3
2,4-Dichlorophenol	ND	10	0.80
1,2,4-Trichlorobenzene	ND	10	1.4
4-Chloroaniline	ND	10	1.4
Hexachlorobutadiene	ND	10	1.4
4-Chloro-3-methylphenol	ND	10	1.5
Hexachlorocyclopentadiene	ND	20	1.7
2,4,6-Trichlorophenol	ND	10	0.94
2,4,5-Trichlorophenol	ND	10	1.1
2-Chloronaphthalene	ND	10	1.3
2-Nitroaniline	ND	20	1.6
Dimethylphthalate	ND	10	1.6
2,6-Dinitrotoluene	ND	10	1.7
3-Nitroaniline	ND	20	3.8
2,4-Dinitrophenol	ND	20	2.6
4-Nitrophenol	ND	20	1.4
Dibenzofuran	ND	10	1.5
2,4-Dinitrotoluene	ND	10	1.4

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784342	Batch#:	222270
Matrix:	Water	Prepared:	04/14/15
Units:	ug/L	Analyzed:	04/15/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	10	1.5
4-Chlorophenyl-phenylether	ND	10	1.4
4-Nitroaniline	ND	20	2.2
2,3,4,6-Tetrachlorophenol	ND	10	2.1
4,6-Dinitro-2-methylphenol	ND	20	1.6
N-Nitrosodiphenylamine	ND	10	1.3
Azobenzene	ND	10	1.4
4-Bromophenyl-phenylether	ND	10	1.3
Hexachlorobenzene	ND	10	1.4
Pentachlorophenol	ND	20	1.4
Carbazole	ND	10	1.9
Di-n-butylphthalate	ND	10	1.3
Butylbenzylphthalate	ND	10	1.3
3,3'-Dichlorobenzidine	ND	20	1.5
bis(2-Ethylhexyl)phthalate	ND	10	1.9
Di-n-octylphthalate	ND	10	1.4

Surrogate	%REC	Limits
2-Fluorophenol	70	38-120
Phenol-d5	67	38-120
2,4,6-Tribromophenol	81	46-120
Nitrobenzene-d5	74	51-120
2-Fluorobiphenyl	80	54-120
Terphenyl-d14	73	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	222270
Units:	ug/L	Prepared:	04/14/15
Diln Fac:	1.000	Analyzed:	04/15/15

Type: BS Lab ID: QC784343

Analyte	Spiked	Result	%REC	Limits
N-Nitrosodimethylamine	80.00	71.34	89	45-120
Phenol	80.00	72.19	90	46-120
bis(2-Chloroethyl)ether	80.00	75.86	95	59-120
2-Chlorophenol	80.00	74.67	93	48-120
1,3-Dichlorobenzene	80.00	59.66	75	50-120
1,4-Dichlorobenzene	80.00	63.27	79	52-120
Benzyl alcohol	80.00	75.67	95	64-120
1,2-Dichlorobenzene	80.00	63.63	80	53-120
2-Methylphenol	80.00	73.77	92	40-120
bis(2-Chloroisopropyl) ether	80.00	65.16	81	43-120
4-Methylphenol	80.00	74.23	93	46-120
N-Nitroso-di-n-propylamine	80.00	70.58	88	46-120
Hexachloroethane	80.00	55.31	69	42-120
Nitrobenzene	80.00	75.20	94	63-120
Isophorone	80.00	74.26	93	62-120
2-Nitrophenol	80.00	76.22	95	43-122
2,4-Dimethylphenol	80.00	57.37	72	47-120
Benzoic acid	120.0	44.19	37	20-120
bis(2-Chloroethoxy)methane	30.00	27.95	93	62-120
2,4-Dichlorophenol	80.00	78.96	99	50-120
1,2,4-Trichlorobenzene	80.00	64.25	80	53-120
4-Chloroaniline	80.00	57.66	72	39-120
Hexachlorobutadiene	80.00	55.63	70	42-120
4-Chloro-3-methylphenol	80.00	79.76	100	40-120
Hexachlorocyclopentadiene	80.00	28.75	36	13-120
2,4,6-Trichlorophenol	80.00	81.08	101	49-120
2,4,5-Trichlorophenol	80.00	76.68	96	49-120
2-Chloronaphthalene	30.00	27.61	92	61-120
2-Nitroaniline	80.00	73.32	92	56-120
Dimethylphthalate	80.00	79.34	99	43-120
2,6-Dinitrotoluene	80.00	80.40	100	65-120
3-Nitroaniline	80.00	75.88	95	55-120
2,4-Dinitrophenol	80.00	70.80	89	45-120
4-Nitrophenol	80.00	74.87	94	40-120
Dibenzofuran	30.00	28.81	96	65-120

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	222270
Units:	ug/L	Prepared:	04/14/15
Diln Fac:	1.000	Analyzed:	04/15/15

Analyte	Spiked	Result	%REC	Limits
2,4-Dinitrotoluene	80.00	83.09	104	64-120
Diethylphthalate	30.00	30.74	102	45-120
4-Chlorophenyl-phenylether	30.00	29.67	99	64-120
4-Nitroaniline	80.00	64.58	81	50-120
2,3,4,6-Tetrachlorophenol	80.00	82.36	103	42-126
4,6-Dinitro-2-methylphenol	80.00	86.92	109	45-131
N-Nitrosodiphenylamine	30.00	26.63	89	54-120
Azobenzene	30.00	28.77	96	55-120
4-Bromophenyl-phenylether	30.00	30.74	102	63-120
Hexachlorobenzene	80.00	80.19	100	59-120
Pentachlorophenol	80.00	80.29	100	47-120
Carbazole	80.00	66.00	82	50-120
Di-n-butylphthalate	30.00	30.48	102	56-120
Butylbenzylphthalate	30.00	30.75	102	51-120
3,3'-Dichlorobenzidine	80.00	58.59	73	30-120
bis(2-Ethylhexyl)phthalate	30.00	32.37	108	58-126
Di-n-octylphthalate	30.00	29.44	98	54-120

Surrogate	%REC	Limits
2-Fluorophenol	96	38-120
Phenol-d5	96	38-120
2,4,6-Tribromophenol	110	46-120
Nitrobenzene-d5	86	51-120
2-Fluorobiphenyl	84	54-120
Terphenyl-d14	101	21-120

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	222270
Units:	ug/L	Prepared:	04/14/15
Diln Fac:	1.000	Analyzed:	04/15/15

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
2,4-Dinitrotoluene	80.00	78.19	98	64-120	6	32
Diethylphthalate	30.00	29.13	97	45-120	5	46
4-Chlorophenyl-phenylether	30.00	28.60	95	64-120	4	24
4-Nitroaniline	80.00	66.39	83	50-120	3	37
2,3,4,6-Tetrachlorophenol	80.00	77.39	97	42-126	6	62
4,6-Dinitro-2-methylphenol	80.00	83.37	104	45-131	4	55
N-Nitrosodiphenylamine	30.00	26.27	88	54-120	1	31
Azobenzene	30.00	27.48	92	55-120	5	23
4-Bromophenyl-phenylether	30.00	29.28	98	63-120	5	25
Hexachlorobenzene	80.00	76.57	96	59-120	5	24
Pentachlorophenol	80.00	77.48	97	47-120	4	48
Carbazole	80.00	63.53	79	50-120	4	35
Di-n-butylphthalate	30.00	28.85	96	56-120	5	36
Butylbenzylphthalate	30.00	29.34	98	51-120	5	34
3,3'-Dichlorobenzidine	80.00	63.75	80	30-120	8	44
bis(2-Ethylhexyl)phthalate	30.00	30.35	101	58-126	6	56
Di-n-octylphthalate	30.00	27.91	93	54-120	5	37

Surrogate	%REC	Limits
2-Fluorophenol	88	38-120
Phenol-d5	90	38-120
2,4,6-Tribromophenol	102	46-120
Nitrobenzene-d5	80	51-120
2-Fluorobiphenyl	79	54-120
Terphenyl-d14	92	21-120

RPD= Relative Percent Difference

CURTIS & TOMPKINS DFTPP TUNE FOR 266091 MSBNA Water
EPA 8270C

Inst : MSBNA06 Run Name : DFTPP IDF : 1.0
Seqnum : 555120229009 File : yco09 Time : 24-MAR-2015 15:50

Standards: S26170

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	173190	44.21	
68	< 2% of mass 69	0	0.00	
69		171552	100.00	
70	< 2% of mass 69	137	0.08	
127	40% - 60% of mass 198	173290	44.24	
197	< 1% of mass 198	0	0.00	
198		391701	100.00	
199	5% - 9% of mass 198	27384	6.99	
275	10% - 30% of mass 198	97650	24.93	
365	> 1% of mass 198	11479	2.93	
441	Present, < mass 443	43290	74.41	
442	> 40% and < 100% of mass 198	295808	75.52	
443	17% - 23% of mass 442	58178	19.67	

Analyst: NPM Date: 03/25/15 Reviewer: LW Date: 03/26/15

PEM Report

File Name : G:\msbna06\032415\YCO09.D
 Date Acquired : 24 Mar 2015 3:50 pm
 Sample Name : TUN,S26170
 Misc. Info : DFTPP
 Calib. Title : MSBNA06 BNA DFTPP/PEM
 Inst. Name : MSBNA06
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	0.881	5.49	736084
Benzidine	0.569	7.35	2546584
4,4'-DDT		8.37	1789243
4,4'-DDE		7.58	19791
4,4'-DDD		8.00	86883
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	6%	PASS
Tailing: Pentachlorophenol	8270C <5.0	0.9	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.6	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 266091 MSBNA Water
EPA 8270C

Inst : MSBNA06 Run Name : DFTPP IDF : 1.0
Seqnum : 555151818002 File : ydf02 Time : 15-APR-2015 10:47

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	139952	40.85	
68	< 2% of mass 69	0	0.00	
69		144429	100.00	
70	< 2% of mass 69	609	0.42	
127	40% - 60% of mass 198	148888	43.46	
197	< 1% of mass 198	0	0.00	
198		342570	100.00	
199	5% - 9% of mass 198	23672	6.91	
275	10% - 30% of mass 198	88834	25.93	
365	> 1% of mass 198	11167	3.26	
441	Present, < mass 443	43066	75.27	
442	> 40% and < 100% of mass 198	288192	84.13	
443	17% - 23% of mass 442	57213	19.85	

Analyst: NPM Date: 04/15/15 Reviewer: LW Date: 04/15/15

PEM Report

File Name : G:\msbna06\041515\YDF02.D
 Date Acquired : 15 Apr 2015 10:47 am
 Sample Name : TUN,S26814
 Misc. Info : DFTPP
 Calib. Title : MSBNA06 BNA DFTPP/PEM
 Inst. Name : MSBNA06
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.341	5.47	509191
Benzidine	0.706	7.34	2298248
4,4'-DDT		8.35	1483111
4,4'-DDE		7.56	4897
4,4'-DDD		7.98	40810
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	3%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.3	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 266091 MSBNA Water
EPA 8270C

Inst : MSBNA06 Run Name : DFTPP IDF : 1.0
Seqnum : 555153274002 File : ydg02 Time : 16-APR-2015 11:03

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	137731	40.60	
68	< 2% of mass 69	1110	0.80	
69		138792	100.00	
70	< 2% of mass 69	754	0.54	
127	40% - 60% of mass 198	150058	44.23	
197	< 1% of mass 198	0	0.00	
198		339242	100.00	
199	5% - 9% of mass 198	23640	6.97	
275	10% - 30% of mass 198	88866	26.20	
365	> 1% of mass 198	10478	3.09	
441	Present, < mass 443	41810	77.74	
442	> 40% and < 100% of mass 198	285653	84.20	
443	17% - 23% of mass 442	53784	18.83	

Analyst: KMH Date: 04/16/15 Reviewer: LW Date: 04/20/15

PEM Report

File Name : G:\msbna06\041615\YDG02.D
 Date Acquired : 16 Apr 2015 11:03 am
 Sample Name : TUN,S26814
 Misc. Info : DFTPP
 Calib. Title : MSBNA06 BNA DFTPP/PEM
 Inst. Name : MSBNA06
 AcquisitionMeth: DFTPP06.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.258	5.47	515334
Benzidine	0.733	7.34	2278652
4,4'-DDT		8.35	1464545
4,4'-DDE		7.56	7142
4,4'-DDD		7.98	57256
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	4%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.3	PASS
	8270D <=2	1	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266091 MSBNA Water: EPA 8270C

Inst : MSBNA06
 Calnum : 555120229001
 Units : ug/mL

Name : 6PTBNA6
 Date : 24-MAR-2015 16:49
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Std
L1	Yco11	555120229011	ICAL 24-MAR-2015 16:49	S26474
L2	Yco12	555120229012	ICAL 24-MAR-2015 17:25	S26475
L3	Yco13	555120229013	ICAL 24-MAR-2015 18:01	S26476
L4	Yco14	555120229014	ICAL 24-MAR-2015 18:37	S26477
L5	Yco15	555120229015	ICAL 24-MAR-2015 19:14	S26478
L6	Yco16	555120229016	ICAL 24-MAR-2015 19:50	S26479
L7	Yco17	555120229017	ICAL 24-MAR-2015 20:28	S26480
L8	Yco18	555120229018	ICAL 24-MAR-2015 21:07	S26481
L9	Yco19	555120229019	ICAL 24-MAR-2015 21:45	S26482

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
N-Nitrosodimethylamine		1.3307	1.5049	1.5667	1.5813	1.5648	1.5018	1.4510	1.4252	AVRG	0.67079	0.67079	1.4908	6	15	0.05	0.99		
Phenol		1.9695	2.0270	2.0160	2.0056	1.9671	1.8901m	1.8366	1.8444	AVRG	0.51426	0.51426	1.9445	4	15	0.05	0.99		
bis(2-Chloroethyl) ether		1.4461m	1.4290	1.3624	1.3572	1.3154	1.2739m	1.2380m	1.1616m	AVRG	0.75588	0.75588	1.3230	7	15	0.05	0.99		
2-Chlorophenol		1.4296	1.4027	1.3955	1.3856	1.3703	1.3500	1.3245	1.3346	AVRG	0.72775	0.72775	1.3741	3	15	0.05	0.99		
1,3-Dichlorobenzene		1.6099	1.5785	1.6009	1.5877	1.5642	1.5471	1.5097	1.5014	AVRG	0.64003	0.64003	1.5624	3	15	0.05	0.99		
1,4-Dichlorobenzene		1.3648	1.4121	1.4292	1.4382	1.4403	1.4327	1.3968	1.3932	AVRG	0.70751	0.70751	1.4134	2	15	0.05	0.99		
Benzyl alcohol		0.8185	0.8487	0.8633	0.8820	0.8744	0.8778	0.8696	0.9000	AVRG	1.15369	1.15369	0.8668	3	15	0.05	0.99		
1,2-Dichlorobenzene		1.3102	1.3492	1.3631	1.3718	1.3595	1.3462	1.3013	1.2875	AVRG	0.74844	0.74844	1.3361	2	15	0.05	0.99		
2-Methylphenol		0.9195	0.9763	1.0087	1.0056	1.0074	0.9979	0.9952	0.9896	AVRG	1.01263	1.01263	0.9875	3	15	0.05	0.99		
bis(2-Chloroisopropyl) ether		2.2241	2.2134	2.1602	2.1669	2.0843	1.9565	1.8476	1.7731	AVRG	0.48703	0.48703	2.0533	8	15	0.05	0.99		
4-Methylphenol		1.3922	1.4729	1.5322	1.5346	1.5309	1.5442			AVRG	0.66614	0.66614	1.5012	4	15	0.05	0.99		
N-Nitroso-di-n-propylamine		0.7996	0.8268	0.8338	0.8228	0.8144	0.8159	0.8207	0.8394	AVRG	1.21704	1.21704	0.8217	1	15	0.050	0.99		
Hexachloroethane		0.6099	0.6399	0.6636	0.6651	0.6567	0.6506	0.6292	0.6224	AVRG	1.55722	1.55722	0.6422	3	15	0.05	0.99		
Nitrobenzene		0.4583	0.4571	0.4507	0.4481	0.4352	0.4306	0.4150	0.4084	AVRG	2.28354	2.28354	0.4379	4	15	0.05	0.99		
Isophorone		0.8707	0.8475	0.8545	0.8571	0.8579	0.8761	0.8670	0.8633	AVRG	1.16040	1.16040	0.8618	1	15	0.05	0.99		
2-Nitrophenol			0.2131	0.2163	0.2150	0.2127	0.2127	0.1999	0.1979m	AVRG	4.76986	4.76986	0.2096	4	15	0.05	0.99		
2,4-Dimethylphenol		0.4380	0.4121	0.4151	0.4090	0.3974	0.3924	0.3815	0.3748	AVRG	2.48433	2.48433	0.4025	5	15	0.05	0.99		
bis(2-Chloroethoxy)methane			0.4570	0.4568	0.4590	0.4562	0.4473	0.4452	0.4523	AVRG	2.20555	2.20555	0.4534	1	15	0.05	0.99		
Benzoic acid		0.2757	0.2779	0.2941	0.2980	0.3000	0.3133	0.3098	0.3153	AVRG	3.35561	3.35561	0.2980	5	15	0.05	0.99		
2,4-Dichlorophenol		0.3561	0.3561	0.3505	0.3486	0.3438	0.3395	0.3273	0.3274	AVRG	2.90992	2.90992	0.3437	3	15	0.05	0.99		
1,2,4-Trichlorobenzene		0.4247	0.4272	0.4262	0.4240	0.4170	0.4107	0.3941	0.3797	AVRG	2.42160	2.42160	0.4130	4	15	0.05	0.99		
4-Chloroaniline		0.2778m	0.4133	0.4290	0.4372	0.4397	0.4464	0.4483	0.4484	LINEAR	2.53671	2.17378	0.4175	1.000	15	0.05	0.99		
Hexachlorobutadiene		0.2729	0.2791	0.2765	0.2751	0.2735	0.2641	0.2475	0.2390	AVRG	3.75983	3.75983	0.2660	6	15	0.05	0.99		
4-Chloro-3-methylphenol		0.3650	0.3791	0.3879	0.3929	0.3867	0.3839	0.3692	0.3635	AVRG	2.64186	2.64186	0.3785	3	15	0.05	0.99		

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r ² %RSD	Max %RSD	Min RF	Min r ²	Flg
Hexachlorocyclopentadiene			0.4175	0.4629	0.4606	0.4598	0.4657	0.4554	0.4526	AVRG	2.20520			0.4535	4	15	0.050	0.99	
2,4,6-Trichlorophenol		0.5108	0.5151	0.5253	0.5305	0.5212	0.5223	0.5169	0.5141	AVRG	1.92486			0.5195	1	15	0.05	0.99	
2,4,5-Trichlorophenol		0.5272	0.5254	0.5407	0.5269	0.5333	0.5193m	0.5067m	0.5018m	AVRG	1.91329			0.5227	2	15	0.05	0.99	
2-Chloronaphthalene			1.2826	1.2727	1.2799	1.2731	1.3165	1.3135	1.3197	AVRG	0.77280			1.2940	2	15	0.05	0.99	
2-Nitroaniline			0.4727	0.4755	0.4756	0.4714	0.4714	0.4687	0.4649	AVRG	2.12101			0.4715	1	15	0.05	0.99	
Dimethylphthalate		1.6348	1.5826	1.6120	1.5945	1.5671	1.5458	1.5182	1.4903	AVRG	0.63769			1.5682	3	15	0.05	0.99	
2,6-Dinitrotoluene		0.3531	0.3472	0.3519	0.3515	0.3490	0.3529	0.3508	0.3508	AVRG	2.84971			0.3509	1	15	0.05	0.99	
3-Nitroaniline			0.3257	0.3567	0.3422	0.3477	0.3703	0.3726	0.3817	AVRG	2.80345			0.3567	6	15	0.05	0.99	
2,4-Dinitrophenol			0.1275	0.1699	0.1861	0.2018	0.2276	0.2439	0.2520	LINR	12.6402			0.2013	0.999	15	0.050	0.99	
4-Nitrophenol			0.2513	0.2633	0.2634	0.2588	0.2656	0.2618	0.2665	AVRG	3.82385			0.2615	2	15	0.050	0.99	
Dibenzofuran			1.7589	1.8052	1.7751	1.7665	1.7223	1.6703	1.6326	AVRG	0.57705			1.7330	4	15	0.05	0.99	
2,4-Dinitrotoluene		0.4359	0.4485	0.4708	0.4706	0.4627	0.4710	0.4598	0.4515	AVRG	2.117929			0.4589	3	15	0.05	0.99	
2,3,4,6-Tetrachlorophenol		0.4338	0.4525	0.4747	0.4702	0.4699	0.4712	0.4715	0.4738	AVRG	2.15194			0.4647	3	15	0.05	0.99	
Diethylphthalate			1.6170	1.6367	1.6220	1.6175	1.6078	1.5897	1.5792	AVRG	0.62112			1.6100	1	15	0.05	0.99	
4-Chlorophenyl-phenylether			0.8797	0.9042	0.9056	0.9012	0.9076	0.9000	0.8836	AVRG	1.11432			0.8974	1	15	0.05	0.99	
4-Nitroaniline			0.2764	0.3172	0.3121	0.3216	0.3229	0.3471m	0.3557m	AVRG	3.10689			0.3219	8	15	0.05	0.99	
4,6-Dinitro-2-methylphenol			0.1206	0.1336	0.1366	0.1373	0.1398	0.1387		AVRG	7.43742			0.1345	5	15	0.05	0.99	
N-Nitrosodiphenylamine			0.5197	0.5248	0.5079	0.5025	0.4914	0.4764	0.4736	AVRG	2.00213			0.4995	4	15	0.05	0.99	
Azobenzene			0.7569	0.7592	0.7378	0.7211	0.6852	0.6636	0.6477	AVRG	1.40800			0.7102	6	15	0.05	0.99	
4-Bromophenyl-phenylether			0.2626	0.2680	0.2714	0.2623	0.2604	0.2594	0.2577	AVRG	3.80070			0.2631	2	15	0.05	0.99	
Hexachlorobenzene		0.2648	0.2682	0.2661	0.2635	0.2590	0.2491	0.2397	0.2356	AVRG	3.91004			0.2558	5	15	0.05	0.99	
Pentachlorophenol			0.1812	0.1931	0.1936	0.1948	0.1900	0.1854	0.1865	AVRG	5.28472			0.1892	3	15	0.05	0.99	
Carbazole		0.8721	0.9055	0.9292	0.9298	0.9256	0.8996	0.8629	0.8470	AVRG	1.11550			0.8965	4	15	0.05	0.99	
Di-n-butylphthalate			1.4071	1.4334	1.3907	1.3864	1.3197	1.2570	1.2310	AVRG	0.74268			1.3465	6	15	0.05	0.99	
Butylbenzylphthalate			0.6557	0.6894	0.6917	0.6817	0.6832	0.6651	0.6668	AVRG	1.47877			0.6762	2	15	0.05	0.99	
3,3'-Dichlorobenzidine			0.4727	0.5582	0.5682	0.5739	0.5553	0.5292	0.5140	AVRG	1.85603			0.5388	7	15	0.05	0.99	
bis(2-Ethylhexyl)phthalate			0.8762	0.8850	0.8678	0.8522	0.7779	0.7434	0.7394	AVRG	1.21911			0.8203	8	15	0.05	0.99	
Di-n-octylphthalate			1.4977	1.5796	1.5701	1.5542	1.5191	1.4824	1.4551	AVRG	0.65678			1.5226	3	15	0.05	0.99	
2-Fluorophenol	1.4394	1.5826	1.6954	1.7335	1.7446	1.6983	1.6762	1.6688	1.6873	AVRG	0.60297			1.6585	6	15	0.05	0.99	
Phenol-d5	1.8330	1.9930	2.1586	2.1984	2.1661	2.1589	2.1145	2.0687	2.0608	AVRG	0.47995			2.0836	5	15	0.05	0.99	
Nitrobenzene-d5	0.5404	0.5262	0.5215	0.5153	0.5180	0.5049	0.5102	0.5004	0.4983	AVRG	1.94163			0.5150	3	15	0.05	0.99	
2-Fluorobiphenyl	1.7758	1.7475	1.6289	1.6053	1.5848	1.5576	1.5885	1.5622	1.5587	AVRG	0.61604			1.6233	5	15	0.05	0.99	
2,4,6-Tribromophenol	0.2560	0.2710	0.2730	0.2806	0.2830	0.2810	0.2965	0.2989	0.3019	AVRG	3.54068			0.2824	5	15	0.05	0.99	
Terphenyl-d14	1.0974	1.1340	1.1399	1.1837	1.1796	1.1680	1.1436	1.1164	1.1239	AVRG	0.87494			1.1429	3	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
N-Nitrosodimethylamine			10.000	-11	20.000	1	32.000	5	40.000	6	50.000	5	80.000	1	100.00	-3	120.00	-4
Phenol			10.000	1	20.000	4	32.000	4	40.000	3	50.000	4	80.000	1	100.00	-6	120.00	-5
bis(2-Chloroethyl) ether			10.000	9	20.000	8	32.000	3	40.000	3	50.000	-1	80.000	-4	100.00	-6	120.00	-12
2-Chlorophenol			10.000	4	20.000	2	32.000	2	40.000	1	50.000	0	80.000	0	100.00	-4	120.00	-3
1,3-Dichlorobenzene			10.000	3	20.000	1	32.000	2	40.000	2	50.000	0	80.000	0	100.00	-3	120.00	-4
1,4-Dichlorobenzene			10.000	-3	20.000	0	32.000	1	40.000	2	50.000	2	80.000	1	100.00	-1	120.00	-1
Benzyl alcohol			10.000	-6	20.000	-2	32.000	0	40.000	2	50.000	1	80.000	1	100.00	0	120.00	4
1,2-Dichlorobenzene			10.000	-2	20.000	1	32.000	2	40.000	3	50.000	2	80.000	1	100.00	-3	120.00	-4
2-Methylphenol			10.000	-7	20.000	-1	32.000	2	40.000	2	50.000	2	80.000	1	100.00	1	120.00	0
bis(2-Chloroisopropyl) ether			10.000	8	20.000	8	32.000	5	40.000	6	50.000	2	80.000	2	100.00	-10	120.00	-14
4-Methylphenol			10.000	-7	20.000	-2	32.000	2	40.000	2	50.000	2	80.000	2	100.00	3		
N-Nitroso-di-n-propylamine			10.000	-3	20.000	1	32.000	1	40.000	0	50.000	-1	80.000	-1	100.00	0	120.00	2
Hexachloroethane			10.000	-5	20.000	0	32.000	3	40.000	4	50.000	2	80.000	1	100.00	-2	120.00	-3
Nitrobenzene			10.000	5	20.000	4	32.000	3	40.000	2	50.000	-1	80.000	-2	100.00	-5	120.00	-7
Isophorone			10.000	1	20.000	-2	32.000	-1	40.000	-1	50.000	0	80.000	2	100.00	1	120.00	0
2-Nitrophenol			10.000		20.000	2	32.000	3	40.000	3	50.000	1	80.000	1	100.00	-5	120.00	-6
2,4-Dimethylphenol			10.000	9	20.000	2	32.000	3	40.000	2	50.000	-1	80.000	-3	100.00	-5	120.00	-7
bis(2-Chloroethoxy)methane			10.000		10.000	1	16.000	1	20.000	1	25.000	1	40.000	1	50.000	-2	60.000	0
Benzoic acid			50.000	-7	60.000	-7	80.000	-1	90.000	0	100.00	1	120.00	5	130.00	4	140.00	6
2,4-Dichlorophenol			10.000	4	20.000	4	32.000	2	40.000	1	50.000	0	80.000	0	100.00	-5	120.00	-5
1,2,4-Trichlorobenzene			10.000	3	20.000	3	32.000	3	40.000	3	50.000	1	80.000	1	100.00	-5	120.00	-8
4-Chloroaniline			10.000	-13	20.000	3	32.000	1	40.000	1	50.000	1	80.000	0	100.00	0	120.00	0
Hexachlorobutadiene			10.000	3	20.000	5	32.000	4	40.000	3	50.000	3	80.000	3	100.00	-7	120.00	-10
4-Chloro-3-methylphenol			10.000	-4	20.000	0	32.000	2	40.000	4	50.000	2	80.000	2	100.00	-2	120.00	-4
Hexachlorocyclopentadiene			10.000		20.000	-8	32.000	2	40.000	2	50.000	1	80.000	3	100.00	0	120.00	0
2,4,6-Trichlorophenol			10.000	-2	20.000	-1	32.000	1	40.000	2	50.000	0	80.000	0	100.00	-1	120.00	-1
2,4,5-Trichlorophenol			10.000	1	20.000	1	32.000	3	40.000	1	50.000	2	80.000	2	100.00	-3	120.00	-4
2-Chloronaphthalene					10.000	-1	16.000	-2	20.000	-1	25.000	-2	40.000	2	50.000	2	60.000	2
2-Nitroaniline					20.000	0	32.000	1	40.000	1	50.000	0	80.000	0	100.00	-1	120.00	-1
Dimethylphthalate			10.000	4	20.000	1	32.000	3	40.000	2	50.000	0	80.000	0	100.00	-3	120.00	-5
2,6-Dinitrotoluene			10.000	1	20.000	-1	32.000	0	40.000	0	50.000	-1	80.000	1	100.00	0	120.00	0
3-Nitroaniline					20.000	-9	32.000	0	40.000	-4	50.000	-3	80.000	4	100.00	4	120.00	7
2,4-Dinitrophenol					20.000	9	32.000	1	40.000	-2	50.000	-2	80.000	-2	100.00	0	120.00	1
4-Nitrophenol					20.000	-4	32.000	1	40.000	1	50.000	-1	80.000	2	100.00	0	120.00	2
Dibenzofuran					10.000	1	16.000	4	20.000	2	25.000	2	40.000	-1	50.000	-4	60.000	-6
2,4-Dinitrotoluene			10.000	-5	20.000	-2	32.000	3	40.000	3	50.000	1	80.000	3	100.00	0	120.00	-2
2,3,4,6-Tetrachlorophenol			10.000	-7	20.000	-3	32.000	2	40.000	1	50.000	1	80.000	1	100.00	1	120.00	2
Diethylphthalate					10.000	0	16.000	2	20.000	1	25.000	0	40.000	0	50.000	-1	60.000	-2
4-Chlorophenyl-phenylether					10.000	-2	16.000	1	20.000	1	25.000	0	40.000	1	50.000	0	60.000	-2
4-Nitroaniline					20.000	-14	32.000	-1	40.000	-3	50.000	0	80.000	0	100.00	8	120.00	11
4,6-Dinitro-2-methylphenol					20.000	-10	32.000	-1	40.000	2	50.000	2	80.000	4	100.00	3		
N-Nitrosodiphenylamine					10.000	4	16.000	5	20.000	2	25.000	1	40.000	1	50.000	-5	60.000	-5

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Azobenzene					10.000	7	16.000	7	20.000	4	25.000	4	40.000	-4	50.000	-7	60.000	-9
4-Bromophenyl-phenylether					10.000	0	16.000	2	20.000	3	25.000	0	40.000	-1	50.000	-1	60.000	-2
Hexachlorobenzene			10.000	4	20.000	5	32.000	4	40.000	3	50.000	1	80.000	-3	100.000	-6	120.000	-8
Pentachlorophenol					20.000	-4	32.000	2	40.000	2	50.000	3	80.000	0	100.000	-2	120.000	-1
Carbazole			10.000	-3	20.000	1	32.000	4	40.000	4	50.000	3	80.000	0	100.000	-4	120.000	-6
Di-n-butylphthalate					10.000	5	16.000	6	20.000	3	25.000	3	40.000	-2	50.000	-7	60.000	-9
Butylbenzylphthalate					10.000	-3	16.000	2	20.000	2	25.000	1	40.000	1	50.000	-2	60.000	-1
3,3'-Dichlorobenzidine					20.000	-12	32.000	4	40.000	5	50.000	7	80.000	3	100.000	-2	120.000	-5
bis(2-Ethylhexyl)phthalate					10.000	7	16.000	8	20.000	6	25.000	4	40.000	-5	50.000	-9	60.000	-10
Di-n-octylphthalate					10.000	-2	16.000	4	20.000	3	25.000	2	40.000	0	50.000	-3	60.000	-4
2-Fluorophenol	2.0000	-13	5.0000	-5	10.000	2	16.000	5	20.000	5	25.000	2	40.000	1	50.000	1	60.000	2
Phenol-d5	2.0000	-12	5.0000	-4	10.000	4	16.000	6	20.000	4	25.000	4	40.000	1	50.000	-1	60.000	-1
Nitrobenzene-d5	2.0000	5	5.0000	2	10.000	1	16.000	0	20.000	1	25.000	-2	40.000	-1	50.000	-3	60.000	-3
2-Fluorobiphenyl	2.0000	9	5.0000	8	10.000	0	16.000	-1	20.000	-1	25.000	-4	40.000	-2	50.000	-4	60.000	-4
2,4,6-Tribromophenol	2.0000	-9	5.0000	-4	10.000	-3	16.000	-1	20.000	0	25.000	-1	40.000	5	50.000	6	60.000	7
Terphenyl-d14	2.0000	-4	5.0000	-1	10.000	0	16.000	4	20.000	3	25.000	2	40.000	0	50.000	-2	60.000	-2

NPM 03/25/15 [Aniline]: Picked or reassigned peak in multiple levels.

NPM 03/25/15 [bis(2-Chloroethyl)ether]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [2,4,5-Trichlorophenol]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [Benzo(k)fluoranthene]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [4-Chloroaniline]: Corrected automatically drawn baseline in ICAL (yco12).

NPM 03/25/15 [Benzidine]: Corrected automatically drawn baseline in ICAL (yco12).

NPM 03/25/15 [Phenol]: Picked or reassigned peak in ICAL (yco17).

NPM 03/25/15 [4-Methylphenol]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [Aniline]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [4-Nitroaniline]: Corrected automatically drawn baseline in multiple levels.

NPM 03/25/15 [Benzo(k)fluoranthene]: Picked or reassigned peak in multiple levels.

NPM 03/25/15 [Pyridine]: Corrected automatically drawn baseline in ICAL (yco19).

NPM 03/25/15 [2-Nitrophenol]: Corrected automatically drawn baseline in ICAL (yco19).

NPM 03/25/15 [Resorcinol]: Corrected automatically drawn baseline in ICAL (yco19).

NPM 03/25/15 [4,6-Dinitro-2-methylphenol]: Corrected automatically drawn baseline in ICAL (yco19).

Analyst: NPM

Date: 03/25/15

Reviewer: IW

Date: 03/26/15

m>manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor; LINR=Linear regression

Page 5 of 5

555120229001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266091 MSBNA Water
EPA 8270C

Inst : MSBNA06
Calnum : 555120229001

Name : 6PTBNA6
Cal Date : 24-MAR-2015

ICV 555120229020 (yco20 24-MAR-2015) stds: S26696

Analyte	Spiked	Quant	Units	%D	Max	Flags
N-Nitrosodimethylamine	40.00	40.57	ug/mL	1	30	
Phenol	40.00	37.01	ug/mL	-7	20	
bis(2-Chloroethyl)ether	40.00	37.87	ug/mL	-5	30	
2-Chlorophenol	40.00	37.60	ug/mL	-6	30	
1,3-Dichlorobenzene	40.00	38.61	ug/mL	-3	30	
1,4-Dichlorobenzene	40.00	38.94	ug/mL	-3	20	
Benzyl alcohol	40.00	38.78	ug/mL	-3	30	
1,2-Dichlorobenzene	40.00	39.81	ug/mL	0	30	
2-Methylphenol	40.00	39.37	ug/mL	-2	30	
bis(2-Chloroisopropyl) ether	40.00	38.86	ug/mL	-3	30	
4-Methylphenol	40.00	35.55	ug/mL	-11	30	
N-Nitroso-di-n-propylamine	40.00	38.03	ug/mL	-5	30	
Hexachloroethane	40.00	39.27	ug/mL	-2	30	
Nitrobenzene	40.00	37.56	ug/mL	-6	30	
Isophorone	40.00	37.96	ug/mL	-5	30	
2-Nitrophenol	40.00	39.52	ug/mL	-1	20	
2,4-Dimethylphenol	40.00	38.75	ug/mL	-3	30	
bis(2-Chloroethoxy)methane	40.00	37.43	ug/mL	-6	30	
Benzoic acid	100.0	98.65	ug/mL	-1	40	
2,4-Dichlorophenol	40.00	38.04	ug/mL	-5	20	
1,2,4-Trichlorobenzene	40.00	39.93	ug/mL	0	30	
4-Chloroaniline	40.00	38.21	ug/mL	-4	30	
Hexachlorobutadiene	40.00	40.43	ug/mL	1	20	
4-Chloro-3-methylphenol	40.00	38.65	ug/mL	-3	20	
Hexachlorocyclopentadiene	40.00	37.15	ug/mL	-7	40	
2,4,6-Trichlorophenol	40.00	38.55	ug/mL	-4	20	
2,4,5-Trichlorophenol	40.00	38.89	ug/mL	-3	30	
2-Chloronaphthalene	40.00	37.40	ug/mL	-7	30	
2-Nitroaniline	40.00	37.59	ug/mL	-6	30	
Dimethylphthalate	40.00	37.77	ug/mL	-6	30	
2,6-Dinitrotoluene	40.00	37.29	ug/mL	-7	30	
3-Nitroaniline	40.00	36.42	ug/mL	-9	30	
2,4-Dinitrophenol	40.00	39.87	ug/mL	0	40	
4-Nitrophenol	40.00	37.10	ug/mL	-7	40	
Dibenzofuran	40.00	39.34	ug/mL	-2	30	
2,4-Dinitrotoluene	40.00	40.78	ug/mL	2	30	
2,3,4,6-Tetrachlorophenol	40.00	37.98	ug/mL	-5	30	
Diethylphthalate	40.00	36.54	ug/mL	-9	30	
4-Chlorophenyl-phenylether	40.00	37.82	ug/mL	-5	40	
4-Nitroaniline	40.00	37.61	ug/mL	-6	30	
4,6-Dinitro-2-methylphenol	40.00	37.56	ug/mL	-6	30	
N-Nitrosodiphenylamine	40.00	43.60	ug/mL	9	20	
Azobenzene	40.00	35.74	ug/mL	-11	30	
4-Bromophenyl-phenylether	40.00	36.77	ug/mL	-8	30	
Hexachlorobenzene	40.00	37.86	ug/mL	-5	30	
Pentachlorophenol	40.00	38.02	ug/mL	-5	20	
Carbazole	40.00	40.51	ug/mL	1	30	
Di-n-butylphthalate	40.00	36.66	ug/mL	-8	30	
Butylbenzylphthalate	40.00	37.87	ug/mL	-5	30	

Analyte	Spiked	Quant	Units	%D	Max	Flags
3,3'-Dichlorobenzidine	60.00	58.22	ug/mL	-3	40	
bis(2-Ethylhexyl)phthalate	40.00	37.26	ug/mL	-7	30	
Di-n-octylphthalate	40.00	36.91	ug/mL	-8	20	

Analyst: NPM

Date: 03/25/15

Reviewer: LW

Date: 03/26/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 MSBNA Water
EPA 8270C

Inst : MSBNA06
Seqnum : 555151818003
Cal : 555120229001
Standards: S26478

File : ydf03
Caldate : 24-MAR-2015

IDF : 1.0
Time : 15-APR-2015 11:06

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
N-Nitrosodimethylamine	1.4908	1.3777	40.00	36.97	ug/mL	-8	30	0.0500	
Phenol	1.9445	1.9374	40.00	39.85	ug/mL	0	20	0.0500	
bis(2-Chloroethyl)ether	1.3230	1.3134	40.00	39.71	ug/mL	-1	30	0.0500	
2-Chlorophenol	1.3741	1.3541	40.00	39.42	ug/mL	-1	30	0.0500	
1,3-Dichlorobenzene	1.5624	1.5649	40.00	40.06	ug/mL	0	30	0.0500	
1,4-Dichlorobenzene	1.4134	1.4312	40.00	40.50	ug/mL	1	20	0.0500	
Benzyl alcohol	0.8668	0.8291	40.00	38.26	ug/mL	-4	30	0.0500	
1,2-Dichlorobenzene	1.3361	1.3437	40.00	40.23	ug/mL	1	30	0.0500	
2-Methylphenol	0.9875	0.9797	40.00	39.69	ug/mL	-1	30	0.0500	
bis(2-Chloroisopropyl) ether	2.0533	1.9124	40.00	37.26	ug/mL	-7	30	0.0500	
4-Methylphenol	1.5012	1.4752	40.00	39.31	ug/mL	-2	30	0.0500	
N-Nitroso-di-n-propylamine	0.8217	0.8043	40.00	39.15	ug/mL	-2	30	0.0500	
Hexachloroethane	0.6422	0.6496	40.00	40.46	ug/mL	1	30	0.0500	
Nitrobenzene	0.4379	0.4280	40.00	39.09	ug/mL	-2	30	0.0500	
Isophorone	0.8618	0.8292	40.00	38.49	ug/mL	-4	30	0.0500	
2-Nitrophenol	0.2096	0.2143	40.00	40.88	ug/mL	2	20	0.0500	
2,4-Dimethylphenol	0.4025	0.3973	40.00	39.48	ug/mL	-1	30	0.0500	
bis(2-Chloroethoxy)methane	0.4534	0.4504	20.00	19.87	ug/mL	-1	30	0.0500	
Benzoic acid	0.2980	0.2591	90.00	78.23	ug/mL	-13	40	0.0500	
2,4-Dichlorophenol	0.3437	0.3500	40.00	40.74	ug/mL	2	20	0.0500	
1,2,4-Trichlorobenzene	0.4130	0.4247	40.00	41.13	ug/mL	3	30	0.0500	
4-Chloroaniline	0.4175	0.4321	40.00	40.10	ug/mL	0	30	0.0500	
Hexachlorobutadiene	0.2660	0.2786	40.00	41.91	ug/mL	5	20	0.0500	
4-Chloro-3-methylphenol	0.3785	0.3796	40.00	40.11	ug/mL	0	20	0.0500	
Hexachlorocyclopentadiene	0.4535	0.5177	40.00	45.66	ug/mL	14	40	0.0500	
2,4,6-Trichlorophenol	0.5195	0.5190	40.00	39.96	ug/mL	0	20	0.0500	
2,4,5-Trichlorophenol	0.5227	0.5348	40.00	40.93	ug/mL	2	30	0.0500	
2-Chloronaphthalene	1.2940	1.2860	20.00	19.88	ug/mL	-1	30	0.0500	
2-Nitroaniline	0.4715	0.4465	40.00	37.88	ug/mL	-5	30	0.0500	
Dimethylphthalate	1.5682	1.6092	40.00	41.05	ug/mL	3	30	0.0500	
2,6-Dinitrotoluene	0.3509	0.3609	40.00	41.14	ug/mL	3	30	0.0500	
3-Nitroaniline	0.3567	0.3252	40.00	36.46	ug/mL	-9	30	0.0500	
2,4-Dinitrophenol	0.2013	0.2107	40.00	42.93	ug/mL	7	40	0.0500	
4-Nitrophenol	0.2615	0.2286	40.00	34.97	ug/mL	-13	40	0.0500	
Dibenzofuran	1.7330	1.7655	20.00	20.38	ug/mL	2	30	0.0500	
2,4-Dinitrotoluene	0.4589	0.4766	40.00	41.55	ug/mL	4	30	0.0500	
2,3,4,6-Tetrachlorophenol	0.4647	0.4689	40.00	40.36	ug/mL	1	30	0.0500	
Diethylphthalate	1.6100	1.6517	20.00	20.52	ug/mL	3	30	0.0500	
4-Chlorophenyl-phenylether	0.8974	0.9246	20.00	20.61	ug/mL	3	40	0.0500	
4-Nitroaniline	0.3219	0.2864	40.00	35.60	ug/mL	-11	30	0.0500	
4,6-Dinitro-2-methylphenol	0.1345	0.1448	40.00	43.07	ug/mL	8	30	0.0500	
N-Nitrosodiphenylamine	0.4995	0.5131	20.00	20.55	ug/mL	3	20	0.0500	
Azobenzene	0.7102	0.6981	20.00	19.66	ug/mL	-2	30	0.0500	
4-Bromophenyl-phenylether	0.2631	0.2706	20.00	20.57	ug/mL	3	30	0.0500	
Hexachlorobenzene	0.2558	0.2776	40.00	43.42	ug/mL	9	30	0.0500	
Pentachlorophenol	0.1892	0.1882	40.00	39.78	ug/mL	-1	20	0.0500	
Carbazole	0.8965	0.8941	40.00	39.89	ug/mL	0	30	0.0500	
Di-n-butylphthalate	1.3465	1.4000	20.00	20.79	ug/mL	4	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Butylbenzylphthalate	0.6762	0.6977	20.00	20.64	ug/mL	3	30	0.0500	
3,3'-Dichlorobenzidine	0.5388	0.5468	40.00	40.60	ug/mL	1	40	0.0500	
bis(2-Ethylhexyl)phthalate	0.8203	0.8976	20.00	21.89	ug/mL	9	30	0.0500	
Di-n-octylphthalate	1.5226	1.5799	20.00	20.75	ug/mL	4	20	0.0500	
2-Fluorophenol	1.6585	1.6545	20.00	19.95	ug/mL	0	30	0.0500	
Phenol-d5	2.0836	2.0850	20.00	20.01	ug/mL	0	30	0.0500	
Nitrobenzene-d5	0.5150	0.5001	20.00	19.42	ug/mL	-3	30	0.0500	
2-Fluorobiphenyl	1.6233	1.6003	20.00	19.72	ug/mL	-1	30	0.0500	
2,4,6-Tribromophenol	0.2824	0.2865	20.00	20.29	ug/mL	1	30	0.0500	
Terphenyl-d14	1.1429	1.2354	20.00	21.62	ug/mL	8	30	0.0500	

NPM 04/15/15 [Aniline]: Picked or reassigned peak.

Analyst: NPM

Date: 04/15/15

Reviewer: LW

Date: 04/15/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 MSBNA Water
EPA 8270C

Inst : MSBNA06
Seqnum : 555153274003
Cal : 555120229001
Standards: S26477

File : ydg03
Caldate : 24-MAR-2015

IDF : 1.0
Time : 16-APR-2015 11:27

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
N-Nitrosodimethylamine	1.4908	1.3955	32.00	29.95	ug/mL	-6	30	0.0500	
Phenol	1.9445	2.0070	32.00	33.03	ug/mL	3	20	0.0500	
bis(2-Chloroethyl)ether	1.3230	1.3689	32.00	33.11	ug/mL	3	30	0.0500	
2-Chlorophenol	1.3741	1.3874	32.00	32.31	ug/mL	1	30	0.0500	
1,3-Dichlorobenzene	1.5624	1.5738	32.00	32.23	ug/mL	1	30	0.0500	
1,4-Dichlorobenzene	1.4134	1.4189	32.00	32.12	ug/mL	0	20	0.0500	
Benzyl alcohol	0.8668	0.8625	32.00	31.84	ug/mL	0	30	0.0500	
1,2-Dichlorobenzene	1.3361	1.3656	32.00	32.71	ug/mL	2	30	0.0500	
2-Methylphenol	0.9875	0.9710	32.00	31.46	ug/mL	-2	30	0.0500	
bis(2-Chloroisopropyl) ether	2.0533	1.9702	32.00	30.71	ug/mL	-4	30	0.0500	
4-Methylphenol	1.5012	1.4925	32.00	31.82	ug/mL	-1	30	0.0500	
N-Nitroso-di-n-propylamine	0.8217	0.8141	32.00	31.71	ug/mL	-1	30	0.0500	
Hexachloroethane	0.6422	0.6524	32.00	32.51	ug/mL	2	30	0.0500	
Nitrobenzene	0.4379	0.4461	32.00	32.60	ug/mL	2	30	0.0500	
Isophorone	0.8618	0.8471	32.00	31.45	ug/mL	-2	30	0.0500	
2-Nitrophenol	0.2096	0.2164	32.00	33.03	ug/mL	3	20	0.0500	
2,4-Dimethylphenol	0.4025	0.3869	32.00	30.76	ug/mL	-4	30	0.0500	
bis(2-Chloroethoxy)methane	0.4534	0.4598	16.00	16.22	ug/mL	1	30	0.0500	
Benzoic acid	0.2980	0.2662	80.00	71.45	ug/mL	-11	40	0.0500	
2,4-Dichlorophenol	0.3437	0.3553	32.00	33.08	ug/mL	3	20	0.0500	
1,2,4-Trichlorobenzene	0.4130	0.4324	32.00	33.51	ug/mL	5	30	0.0500	
4-Chloroaniline	0.4175	0.4289	32.00	32.37	ug/mL	1	30	0.0500	
Hexachlorobutadiene	0.2660	0.2811	32.00	33.82	ug/mL	6	20	0.0500	
4-Chloro-3-methylphenol	0.3785	0.3880	32.00	32.80	ug/mL	2	20	0.0500	
Hexachlorocyclopentadiene	0.4535	0.4848	32.00	34.21	ug/mL	7	40	0.0500	
2,4,6-Trichlorophenol	0.5195	0.5123	32.00	31.56	ug/mL	-1	20	0.0500	
2,4,5-Trichlorophenol	0.5227	0.5266	32.00	32.24	ug/mL	1	30	0.0500	
2-Chloronaphthalene	1.2940	1.2775	16.00	15.80	ug/mL	-1	30	0.0500	
2-Nitroaniline	0.4715	0.4497	32.00	30.52	ug/mL	-5	30	0.0500	
Dimethylphthalate	1.5682	1.6004	32.00	32.66	ug/mL	2	30	0.0500	
2,6-Dinitrotoluene	0.3509	0.3582	32.00	32.67	ug/mL	2	30	0.0500	
3-Nitroaniline	0.3567	0.3139	32.00	28.16	ug/mL	-12	30	0.0500	
2,4-Dinitrophenol	0.2013	0.1971	32.00	35.31	ug/mL	10	40	0.0500	
4-Nitrophenol	0.2615	0.2245	32.00	27.48	ug/mL	-14	40	0.0500	
Dibenzofuran	1.7330	1.7812	16.00	16.45	ug/mL	3	30	0.0500	
2,4-Dinitrotoluene	0.4589	0.4703	32.00	32.80	ug/mL	2	30	0.0500	
2,3,4,6-Tetrachlorophenol	0.4647	0.4636	32.00	31.92	ug/mL	0	30	0.0500	
Diethylphthalate	1.6100	1.6441	16.00	16.34	ug/mL	2	30	0.0500	
4-Chlorophenyl-phenylether	0.8974	0.8980	16.00	16.01	ug/mL	0	40	0.0500	
4-Nitroaniline	0.3219	0.2934	32.00	29.17	ug/mL	-9	30	0.0500	
4,6-Dinitro-2-methylphenol	0.1345	0.1454	32.00	34.61	ug/mL	8	30	0.0500	
N-Nitrosodiphenylamine	0.4995	0.5208	16.00	16.68	ug/mL	4	20	0.0500	
Azobenzene	0.7102	0.7251	16.00	16.34	ug/mL	2	30	0.0500	
4-Bromophenyl-phenylether	0.2631	0.2741	16.00	16.67	ug/mL	4	30	0.0500	
Hexachlorobenzene	0.2558	0.2781	32.00	34.79	ug/mL	9	30	0.0500	
Pentachlorophenol	0.1892	0.1891	32.00	31.98	ug/mL	0	20	0.0500	
Carbazole	0.8965	0.8870	32.00	31.66	ug/mL	-1	30	0.0500	
Di-n-butylphthalate	1.3465	1.4363	16.00	17.07	ug/mL	7	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Butylbenzylphthalate	0.6762	0.7227	16.00	17.10	ug/mL	7	30	0.0500	
3,3'-Dichlorobenzidine	0.5388	0.5543	32.00	32.92	ug/mL	3	40	0.0500	
bis(2-Ethylhexyl)phthalate	0.8203	0.9257	16.00	18.06	ug/mL	13	30	0.0500	
Di-n-octylphthalate	1.5226	1.5937	16.00	16.75	ug/mL	5	20	0.0500	
2-Fluorophenol	1.6585	1.6909	16.00	16.31	ug/mL	2	30	0.0500	
Phenol-d5	2.0836	2.1385	16.00	16.42	ug/mL	3	30	0.0500	
Nitrobenzene-d5	0.5150	0.5116	16.00	15.89	ug/mL	-1	30	0.0500	
2-Fluorobiphenyl	1.6233	1.5962	16.00	15.73	ug/mL	-2	30	0.0500	
2,4,6-Tribromophenol	0.2824	0.2823	16.00	15.99	ug/mL	0	30	0.0500	
Terphenyl-d14	1.1429	1.2399	16.00	17.36	ug/mL	8	30	0.0500	

KMH 04/16/15 [Aniline]: Picked or reassigned peak.

Analyst: KMH

Date: 04/16/15

Reviewer: LW

Date: 04/20/15

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 555151818

Date : 04/15/15
 Sequence : MSBNA06 ydf

Reference : ydf03
 Analyzed : 04/15/15 11:06

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV/BS+ICV/ICV/CCV+ICV/LCS+RCCV+RICV STD	425756	6.08	1388464	7.57	829991	9.73	1823327	11.58	1751191	14.98	1879534	17.87
	LOWER LIMIT		212878	5.58	694232	7.07	414996	9.23	911664	11.08	875596	14.48	939767	17.37
	UPPER LIMIT		851512	6.58	2776928	8.07	1659982	10.23	3646654	12.08	3502382	15.48	3759068	18.37
003	CCV		425756	6.08	1388464	7.57	829991	9.73	1823327	11.58	1751191	14.98	1879534	17.87
004	BS	QC784311	447949	6.08	1464105	7.57	881273	9.73	1881866	11.58	1896730	14.98	2158608	17.88
005	BLANK	QC784342	523315	6.08	1772445	7.57	983937	9.72	1972496	11.58	2210351	14.98	2310839	17.87
006	BS	QC784343	411017	6.08	1375859	7.58	820585	9.73	1839713	11.58	1752383	14.98	2030874	17.88
007	BSD	QC784344	424271	6.08	1411835	7.58	851924	9.73	1893996	11.58	1810134	14.98	2093532	17.88
008	BLANK	QC784456	503209	6.09	1794291	7.57	1041615	9.73	1986252	11.58	2243200	14.98	2334540	17.88
009	LCS	QC784457	392060	6.09	1315032	7.58	823760	9.73	1807827	11.58	1707928	14.98	1973980	17.88

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 555153274

Date : 04/16/15
 Sequence : MSBNA06 ydg

Reference : ydg03
 Analyzed : 04/16/15 11:27

#	Type	Sample ID	DCBZ14D4	RT	NAPH8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+R1CV STD	469278	6.08	1508691	7.57	913630	9.73	1961864	11.58	1888170	14.98	2017927	17.88
	LOWER LIMIT		234639	5.58	754346	7.07	456815	9.23	980932	11.08	944085	14.48	1008964	17.38
	UPPER LIMIT		938556	6.58	3017382	8.07	1827260	10.23	3923728	12.08	3776340	15.48	4035854	18.38
003	CCV		469278	6.08	1508691	7.57	913630	9.73	1961864	11.58	1888170	14.98	2017927	17.88
005	SAMPLE	266094-002	500587	6.08	1760984	7.57	941204	9.73	1863154	11.58	1773790	14.98	1733475	17.88
006	SAMPLE	266087-005	604505	6.08	2075702	7.57	1136011	9.73	2371674	11.58	2331401	14.98	2325405	17.88
007	SAMPLE	266087-007	622555	6.08	2064334	7.57	1141838	9.73	2424707	11.58	2555122	14.98	2514795	17.88
008	SAMPLE	266087-009	592327	6.08	1999218	7.57	1100299	9.73	2321869	11.58	2370403	14.98	2488385	17.88
009	SAMPLE	266091-003	595531	6.08	2044338	7.57	1101338	9.73	2315466	11.58	2385635	14.98	2431926	17.88
010	SAMPLE	266091-004	590258	6.08	2033212	7.57	1103932	9.73	2352362	11.58	2392149	14.98	2424340	17.88
011	SAMPLE	266091-005	613590	6.08	2075463	7.57	1166300	9.73	2464523	11.58	2516033	14.98	2562290	17.88
012	SAMPLE	266091-008	632240	6.08	2118252	7.57	1159138	9.73	2431841	11.58	2703331	14.98	2648871	17.88
013	SAMPLE	266091-009	600297	6.08	2071863	7.57	1141378	9.73	2423040	11.58	2577080	14.98	2646932	17.88
014	SAMPLE	266091-011	570843	6.08	2034000	7.57	1130116	9.73	2431544	11.58	2511232	14.98	2558625	17.88
015	SAMPLE	266091-012	577099	6.08	2009094	7.57	1126047	9.73	2378486	11.58	2597725	14.98	2554774	17.88

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 555120229

Instrument : MSBNA06 Begun : 03/24/15 11:49
 Method : EPA 8270C SOP Version : bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	yco01	IB	IB			03/24/15 11:49	1.0		?t
002	yco02	TUN	DFTPP			03/24/15 12:18	1.0	1	
003	yco03	CCV				03/24/15 12:38	1.0	2	cc+
004	yco04	TUN	DFTPP			03/24/15 13:15	1.0	1	t
005	yco05	TUN	DFTPP			03/24/15 13:30	1.0	1	
006	yco06	CCV				03/24/15 13:51	1.0	2	cc+
007	yco07	TUN	DFTPP			03/24/15 14:39	1.0	1	
008	yco08	CCV				03/24/15 14:57	1.0	2	cc+
009	yco09	TUN	DFTPP			03/24/15 15:50	1.0	1	
010	yco10	CCV				03/24/15 16:12	1.0	2	cc+
011	yco11	ICAL	ICAL			03/24/15 16:49	1.0	3	
012	yco12	ICAL	ICAL			03/24/15 17:25	1.0	4	
013	yco13	ICAL	ICAL			03/24/15 18:01	1.0	5	
014	yco14	ICAL	ICAL			03/24/15 18:37	1.0	6	
015	yco15	ICAL	ICAL			03/24/15 19:14	1.0	2	
016	yco16	ICAL	ICAL			03/24/15 19:50	1.0	7	
017	yco17	ICAL	ICAL			03/24/15 20:28	1.0	8	
018	yco18	ICAL	ICAL			03/24/15 21:07	1.0	9	
019	yco19	ICAL	ICAL			03/24/15 21:45	1.0	10	
020	yco20	ICV	ICV			03/24/15 22:23	1.0	11	

KMH 03/24/15 : tune adjusted after runs 3, 4 & 6. maint done after run 8

NPM 03/25/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 20.

Standards used: 1=S26170 2=S26478 3=S26474 4=S26475 5=S26476 6=S26477 7=S26479 8=S26480 9=S26481 10=S26482 11=S26696

Flags used: +=high bias ?t=missing tune cc=CCV CCC failure t=tune failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 555151818

Instrument : MSBNA06 Begun : 04/15/15 10:18
 Method : EPA 8270C SOP Version : bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	ydf01	IB	IB			04/15/15 10:18	1.0		?t
002	ydf02	TUN	DFTPP			04/15/15 10:47	1.0	1	
003	ydf03	CCV				04/15/15 11:06	1.0	2	
004	ydf04	BS	QC784311	Miscell.	222259	04/15/15 14:14	1.0	3	spk , 6:PH246BR=83
005	ydf05	BLANK	QC784342	Water	222270	04/15/15 14:51	1.0	3	
006	ydf06	BS	QC784343	Water	222270	04/15/15 15:27	1.0	3	
007	ydf07	BSD	QC784344	Water	222270	04/15/15 16:04	1.0	3	
008	ydf08	BLANK	QC784456	Soil	222300	04/15/15 18:15	1.0	3	
009	ydf09	LCS	QC784457	Soil	222300	04/15/15 18:52	1.0	3	

KMH 04/16/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 9.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 555153274

Instrument : MSBNA06 Begun : 04/16/15 10:34
 Method : EPA 8270C SOP Version : bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	ydg01	IB	IB			04/16/15 10:34	1.0		?t
002	ydg02	TUN	DFTPP			04/16/15 11:03	1.0	1	
003	ydg03	CCV				04/16/15 11:27	1.0	2	
004	ydg04	CHECK	MDLCHECK			04/16/15 12:05	1.0	3 4	
005	ydg05	SAMPLE	266094-002	Soil	222300	04/16/15 12:42	2.0	5	
006	ydg06	SAMPLE	266087-005	Water	222270	04/16/15 13:18	1.0	5	
007	ydg07	SAMPLE	266087-007	Water	222270	04/16/15 13:54	1.0	5	
008	ydg08	SAMPLE	266087-009	Water	222270	04/16/15 14:30	1.0	5	
009	ydg09	SAMPLE	266091-003	Water	222270	04/16/15 15:06	1.0	5	
010	ydg10	SAMPLE	266091-004	Water	222270	04/16/15 15:41	1.0	5	
011	ydg11	SAMPLE	266091-005	Water	222270	04/16/15 16:17	1.0	5	
012	ydg12	SAMPLE	266091-008	Water	222270	04/16/15 16:52	1.0	5	
013	ydg13	SAMPLE	266091-009	Water	222270	04/16/15 17:27	1.0	5	
014	ydg14	SAMPLE	266091-011	Water	222270	04/16/15 18:03	1.0	5	
015	ydg15	SAMPLE	266091-012	Water	222270	04/16/15 18:39	1.0	5	

KMH 04/17/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 15.

Standards used: 1=S26814 2=S26477 3=S27067 4=S26738 5=S26428

Flags used: ?t=missing tune

SAMPLE PREPARATION SUMMARY

Batch # : 222270
 Started By : ARW
 Method : 3520C
 Spike #1 ID : S26606

Prep Date : 14-APR-2015 18:00
 SOP Version : 8270_3520_rv20
 Spike #2 ID : S26837

Analysis : 8270-1
 Finished By : JCD
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266025-002		Water	1020	1	1	0.0009804	10	.4				625	
266025-003		Water	1020	1	1	0.0009804	7	.4				625	
266027-001		Water	1000	2	1	0.002	10	.4				8270-1	
266086-001		Water	1000	5	1	0.005	10	.4				625	
266087-005		Water	1040	1	1	0.0009615	7	.4				8270-1	Prepped 15-APR-2015 14:52
266087-007		Water	1040	1	1	0.0009615	5	.4				8270-1	Prepped 15-APR-2015 14:52
266087-009		Water	1000	1	1	0.001	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-003		Water	1060	1	1	0.0009434	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-004		Water	1060	1	1	0.0009434	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-005		Water	1060	1	1	0.0009434	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-008		Water	1020	1	1	0.0009804	5	.4				8270-1	Prepped 15-APR-2015 14:52
266091-009		Water	1040	1	1	0.0009615	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-011		Water	1060	1	1	0.0009434	7	.4				8270-1	Prepped 15-APR-2015 14:52
266091-012		Water	1020	1	1	0.0009804	5	.4				8270-1	Prepped 15-APR-2015 14:52
QC784342	BLANK	Water	1000	1	1	0.001		.4				8270-1	
QC784343	BS	Water	1000	1	1	0.001		.4	1			8270-1	
QC784344	BSD	Water	1000	1	1	0.001		.4	1			8270-1	

KMH 04/16/15 : Matrix spikes were not performed for this analysis in batch 222270 due to insufficient sample amount.

Analyst: KMH

Date: 04/16/15

Reviewer: LW

Date: 04/16/15

LIMS Batch No: 22220
 LIMS Analysis: 82701
 Date Extracted: 4/14/15

Extraction Method:
 EPA 3520c cont. L/L

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Confirmed pH ≤2	Comments
266025-002	H	1020	7.10	1.0	≤2	
↓ 3	F	1020	7	1.0	≤2	
266087-001	E	1000	7.10	1.0	≤2	
266086-001	F	1000	7.10	1.0	≤2	
MS Q178M3V	WT	1000	7	1.0	≤2	
BS ↓ 3	J	1000	7	1.0	≤2	
BS ↓ 4	J	1000	7	1.0	≤2	
266087-005	A	1040	7	1.0	≤2	n/a @ 14:52, 4/15/15 by KKL
↓ 7	F	1040	7.5	1.0	≤2	
↓ 9	↓	1000	7	1.0	≤2	
266091-003	D	1060	7	1.0	≤2	
↓ 4	B	1060	7	1.0	≤2	
↓ 5	C	1060	7	1.0	≤2	
↓ 8	F	1020	7.5	1.0	≤2	
↓ 9	↓	1040	7	1.0	≤2	
↓ 11	E	1060	7	1.0	≤2	
↓ 12	F	1020	7.5	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	
			7	1.0	≤2	

MS/MSD not included due to: insufficient volume, or other (reason)

0.4 mL of surrogate solution was added to all samples
 10 mL of matrix spiking solution was added to all spikes
 pH of all samples adjusted to pH ≤ 2 with H₂SO₄
 Cont. L/L extracted with 450mL of CH₂Cl₂
 Extraction Start Time:
 Extraction End Time:
 pH of all samples adjusted to pH ≥ 11 with 10 N NaOH
 Extraction Start Time:
 Extraction End Time:
 Extracts filtered through baked, CH₂Cl₂-rinsed granular Na₂SO₄
 Concentrated to final volume at temperature (degrees C)
 Relinquished to BNA department

Lot# / LIMS # / Time	Date / Initials
S26606B	APW 4/14/15
S26637A	
F3140056	
KMS4281	
1000 / 14:52	
1201 8:52	KLG 4/15/15
NA	
EMXF27F	JCO 4/15/15
70	
✓	

Jim R. Wyz 4/14/2015
 Extraction Chemist Date
 Continued from Page _____
 Continued on Page _____

APW 4/16/15
 Reviewed by Date



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266091

ANALYTICAL REPORT

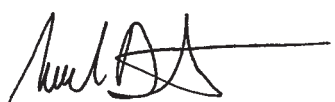
Semivolatile Organics by GC/MS SIM

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

<u>Sample ID</u>	<u>Lab ID</u>
2015 0413 WTA	266091-003
2015 0413 B128	266091-004
2015 0413 B128D	266091-005
2015 0413 SWB	266091-008
2015 0413 BULB2	266091-009
2015 0413 MFA	266091-011
2015 0413 ER	266091-012

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/29/2015

CA ELAP# 2896, NELAP# 4044-001

**CASE NARRATIVE
SEMIVOLATILE ORGANICS BY GC/MS SIM (EPA 8270C-SIM)**

Laboratory number: 266091
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/14/15
Samples Received: 04/14/15

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 04/14/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Semivolatile Organics by GC/MS SIM (EPA 8270C-SIM):

No analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266091

Chain of Custody Record No. 6877

Page 1 of 1

Project name: 2015 Groundwater	Lab PO#: 15 OAK 32	Lab: Card T	Field samplers: Mark Duffy Dayno Aragon		No./Container Types	Analysis Required	Preservative Added				
Project (CTO) number: 1035225323.05	TIEMI technical contact: Sara Woolley	TIEMI project manager: Jason Brubaker	Field samplers' signatures: <i>Mark Duffy</i> <i>Dayno Aragon</i>								
Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	VOA	Pest/PCBs	Metals	TPH Purgeables	TPH Extractables	PHH
1 20150413 TB		4/13/15	0900	water	3	X					
2 20150413 DHR			0925		1	X					
3 20150413 WTA			1020		3	X					
4 20150413 B128			1145		2	X					
5 20150413 B128D			1140		2	X					
6 20150413 BULB1			1235		3	X					
7 20150413 BULB1D			1240		1	X					
8 20150413 SWB			1300		3	X					
9 20150413 BULB2			1320		3	X					
10 20150413 ETA			1510		3	X					
11 20150413 MFA H10			1418		3	X					
12 20150413 ER			1545		3	X					

Relinquished by: <i>Mark Duffy</i>	Name (print): Mark Duffy	Company Name: Tetra Tech	Date: 4/14/15	Time: 1617
Received by: <i>Mikella Cheong</i>	Mikella Cheong	Card T	4/14	1617
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Turnaround time/remarks: * metals were field-filtered				
Fed Ex #: N/A				

COOLER RECEIPT CHECKLIST



Login # 266091 Date Received 4/14/15 Number of coolers 3
 Client Tetra Tech EM Inc. Project 2015 Ground Water

Date Opened 4/14 By (print) BL (sign) [Signature]
 Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) _____ YES NO
 Shipping info _____

2A. Were custody seals present? YES (circle) on cooler on samples NO
 How many _____ Name _____ Date _____

2B. Were custody seals intact upon arrival? _____ YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap Foam blocks Bags None
- Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 5.3°C, 2.0°C, 6.0°C

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES NO
 If YES, what time were they transferred to freezer? _____

9. Did all bottles arrive unbroken/unopened? _____ YES NO

10. Are there any missing / extra samples? _____ ~~YES~~ NO

11. Are samples in the appropriate containers for indicated tests? _____ YES NO

12. Are sample labels present, in good condition and complete? _____ YES NO

13. Do the sample labels agree with custody papers? _____ YES NO

14. Was sufficient amount of sample sent for tests requested? _____ YES NO

15. Are the samples appropriately preserved? _____ YES NO N/A

16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A

17. Did you document your preservative check? _____ YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A

21. Was the client contacted concerning this sample delivery? _____ YES NO
 If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Curtis & Tompkins Sample Preservation for 266091

Sample	pH: <2	>9	>12	Other
-002a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-004a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-005a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-006a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-007a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-008a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Sample	pH: <2	>9	>12	Other
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-009a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-010a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-012a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: BL
 Date: 4/14/15

Results & QC Summary

Semivolatile Organics by GC/MS SIM

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	2015 0413 WTA	Batch#:	222297
Lab ID:	266091-003	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Analyte	Result	RL	MDL
1,4-Dioxane	0.03 J	1.0	0.03
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.02
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.02
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.02
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	66	45-120
2-Fluorobiphenyl	84	46-120
Terphenyl-d14	71	30-120

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	2015 0413 B128	Batch#:	222297
Lab ID:	266091-004	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/17/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	1.0	0.03
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.02
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.02
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.02
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	69	45-120
2-Fluorobiphenyl	86	46-120
Terphenyl-d14	83	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	2015 0413 B128D	Batch#:	222297
Lab ID:	266091-005	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/17/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	0.9	0.03
Naphthalene	ND	0.09	0.02
1-Methylnaphthalene	ND	0.09	0.02
2-Methylnaphthalene	ND	0.09	0.02
Acenaphthylene	ND	0.09	0.02
Acenaphthene	ND	0.09	0.02
Fluorene	ND	0.09	0.02
Phenanthrene	ND	0.09	0.02
Anthracene	ND	0.09	0.02
Fluoranthene	ND	0.09	0.02
Pyrene	ND	0.09	0.02
Benzo(a)anthracene	ND	0.09	0.02
Chrysene	ND	0.09	0.02
Benzo(b)fluoranthene	ND	0.09	0.02
Benzo(k)fluoranthene	ND	0.09	0.02
Benzo(a)pyrene	ND	0.09	0.02
Indeno(1,2,3-cd)pyrene	ND	0.09	0.02
Dibenz(a,h)anthracene	ND	0.09	0.02
Benzo(g,h,i)perylene	ND	0.09	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	58	45-120
2-Fluorobiphenyl	74	46-120
Terphenyl-d14	74	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	2015 0413 SWB	Batch#:	222297
Lab ID:	266091-008	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/17/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	0.9	0.03
Naphthalene	ND	0.09	0.02
1-Methylnaphthalene	ND	0.09	0.02
2-Methylnaphthalene	ND	0.09	0.02
Acenaphthylene	ND	0.09	0.02
Acenaphthene	ND	0.09	0.02
Fluorene	ND	0.09	0.02
Phenanthrene	ND	0.09	0.02
Anthracene	ND	0.09	0.02
Fluoranthene	ND	0.09	0.02
Pyrene	ND	0.09	0.02
Benzo(a)anthracene	ND	0.09	0.02
Chrysene	ND	0.09	0.02
Benzo(b)fluoranthene	ND	0.09	0.02
Benzo(k)fluoranthene	ND	0.09	0.02
Benzo(a)pyrene	ND	0.09	0.02
Indeno(1,2,3-cd)pyrene	ND	0.09	0.02
Dibenz(a,h)anthracene	ND	0.09	0.02
Benzo(g,h,i)perylene	ND	0.09	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	58	45-120
2-Fluorobiphenyl	75	46-120
Terphenyl-d14	73	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	2015 0413 BULB2	Batch#:	222297
Lab ID:	266091-009	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/17/15

Analyte	Result	RL	MDL
1,4-Dioxane	0.8 J	1.0	0.03
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.02
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.02
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.02
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	61	45-120
2-Fluorobiphenyl	79	46-120
Terphenyl-d14	77	30-120

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	2015 0413 MFA	Batch#:	222297
Lab ID:	266091-011	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/17/15

Analyte	Result	RL	MDL
1,4-Dioxane	1.6	1.0	0.03
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.02
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.02
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.02
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	62	45-120
2-Fluorobiphenyl	80	46-120
Terphenyl-d14	76	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	2015 0413 ER	Batch#:	222297
Lab ID:	266091-012	Sampled:	04/13/15
Matrix:	Water	Received:	04/14/15
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/17/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	0.9	0.03
Naphthalene	ND	0.09	0.02
1-Methylnaphthalene	ND	0.09	0.02
2-Methylnaphthalene	ND	0.09	0.02
Acenaphthylene	ND	0.09	0.02
Acenaphthene	ND	0.09	0.02
Fluorene	ND	0.09	0.02
Phenanthrene	ND	0.09	0.02
Anthracene	ND	0.09	0.02
Fluoranthene	ND	0.09	0.02
Pyrene	ND	0.09	0.02
Benzo(a)anthracene	ND	0.09	0.02
Chrysene	ND	0.09	0.02
Benzo(b)fluoranthene	ND	0.09	0.02
Benzo(k)fluoranthene	ND	0.09	0.02
Benzo(a)pyrene	ND	0.09	0.02
Indeno(1,2,3-cd)pyrene	ND	0.09	0.02
Dibenz(a,h)anthracene	ND	0.09	0.02
Benzo(g,h,i)perylene	ND	0.09	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	58	45-120
2-Fluorobiphenyl	79	46-120
Terphenyl-d14	79	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784446	Batch#:	222297
Matrix:	Water	Prepared:	04/15/15
Units:	ug/L	Analyzed:	04/16/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	1.0	0.03
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.02
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.02
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.02
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	64	45-120
2-Fluorobiphenyl	79	46-120
Terphenyl-d14	82	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report
Semivolatile Organics by GC/MS SIM

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Matrix:	Water	Batch#:	222297
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Type: BS Lab ID: QC784447

Analyte	Spiked	Result	%REC	Limits
1,4-Dioxane	3.000	2.160	72	44-120
Naphthalene	1.000	0.7289	73	59-120
1-Methylnaphthalene	1.000	0.8052	81	62-120
2-Methylnaphthalene	1.000	0.7789	78	62-120
Acenaphthylene	1.000	0.7974	80	60-120
Acenaphthene	1.000	0.7838	78	61-120
Fluorene	1.000	0.8169	82	63-120
Phenanthrene	1.000	0.7271	73	60-120
Anthracene	1.000	0.7029	70	58-120
Fluoranthene	1.000	0.7137	71	60-120
Pyrene	1.000	0.8180	82	53-120
Benzo(a)anthracene	1.000	0.7087	71	57-120
Chrysene	1.000	0.6155	62	54-120
Benzo(b)fluoranthene	1.000	0.7486	75	54-120
Benzo(k)fluoranthene	1.000	0.7664	77	50-120
Benzo(a)pyrene	1.000	0.7317	73	53-120
Indeno(1,2,3-cd)pyrene	1.000	0.6816	68	49-120
Dibenz(a,h)anthracene	1.000	0.6516	65	47-120
Benzo(g,h,i)perylene	1.000	0.6512	65	48-120

Surrogate	%REC	Limits
Nitrobenzene-d5	58	45-120
2-Fluorobiphenyl	74	46-120
Terphenyl-d14	74	30-120

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Matrix:	Water	Batch#:	222297
Units:	ug/L	Prepared:	04/15/15
Diln Fac:	1.000	Analyzed:	04/16/15

Type: BSD Lab ID: QC784448

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,4-Dioxane	3.000	2.479	83	44-120	14	43
Naphthalene	1.000	0.8238	82	59-120	12	37
1-Methylnaphthalene	1.000	0.9017	90	62-120	11	35
2-Methylnaphthalene	1.000	0.8767	88	62-120	12	37
Acenaphthylene	1.000	0.8929	89	60-120	11	32
Acenaphthene	1.000	0.8977	90	61-120	14	30
Fluorene	1.000	0.9127	91	63-120	11	27
Phenanthrene	1.000	0.8412	84	60-120	15	24
Anthracene	1.000	0.8152	82	58-120	15	25
Fluoranthene	1.000	0.8287	83	60-120	15	25
Pyrene	1.000	0.9245	92	53-120	12	27
Benzo(a)anthracene	1.000	0.7892	79	57-120	11	25
Chrysene	1.000	0.6926	69	54-120	12	26
Benzo(b)fluoranthene	1.000	0.8328	83	54-120	11	27
Benzo(k)fluoranthene	1.000	0.8642	86	50-120	12	32
Benzo(a)pyrene	1.000	0.8051	81	53-120	10	28
Indeno(1,2,3-cd)pyrene	1.000	0.7740	77	49-120	13	27
Dibenz(a,h)anthracene	1.000	0.7415	74	47-120	13	28
Benzo(g,h,i)perylene	1.000	0.7381	74	48-120	13	27

Surrogate	%REC	Limits
Nitrobenzene-d5	66	45-120
2-Fluorobiphenyl	83	46-120
Terphenyl-d14	83	30-120

RPD= Relative Percent Difference

CURTIS & TOMPKINS DFTPP TUNE FOR 266091 MSSIM Water
EPA 8270C

Inst : MSBNA03 Run Name : DFTPP IDF : 1.0
Seqnum : 525131701005 File : vd105 Time : 01-APR-2015 12:58

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	144572	42.83	
68	< 2% of mass 69	0	0.00	
69		166261	100.00	
70	< 2% of mass 69	1218	0.73	
127	40% - 60% of mass 198	186729	55.32	
197	< 1% of mass 198	0	0.00	
198		337514	100.00	
199	5% - 9% of mass 198	24104	7.14	
275	10% - 30% of mass 198	74893	22.19	
365	> 1% of mass 198	12658	3.75	
441	Present, < mass 443	47405	74.51	
442	> 40% and < 100% of mass 198	315029	93.34	
443	17% - 23% of mass 442	63621	20.20	

Analyst: KMH Date: 04/01/15 Reviewer: LW Date: 04/02/15

CURTIS & TOMPKINS DFTPP TUNE FOR 266091 MSSIM Water
EPA 8270C

Inst : MSBNA03 Run Name : DFTPP IDF : 1.0
Seqnum : 525153256002 File : vdg02 Time : 16-APR-2015 10:42

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	95005	43.63	
68	< 2% of mass 69	0	0.00	
69		111800	100.00	
70	< 2% of mass 69	808	0.72	
127	40% - 60% of mass 198	126170	57.94	
197	< 1% of mass 198	1376	0.63	
198		217749	100.00	
199	5% - 9% of mass 198	14279	6.56	
275	10% - 30% of mass 198	54448	25.00	
365	> 1% of mass 198	7901	3.63	
441	Present, < mass 443	30872	81.08	
442	> 40% and < 100% of mass 198	195712	89.88	
443	17% - 23% of mass 442	38077	19.46	

Analyst: KMH Date: 04/16/15 Reviewer: LW Date: 04/17/15

CURTIS & TOMPKINS DFTPP TUNE FOR 266091 MSSIM Water
EPA 8270C

Inst : MSBNA03 Run Name : DFTPP IDF : 1.0
Seqnum : 525154695002 File : vdh02 Time : 17-APR-2015 10:41

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	104653	42.10	
68	< 2% of mass 69	0	0.00	
69		125170	100.00	
70	< 2% of mass 69	513	0.41	
127	40% - 60% of mass 198	139917	56.28	
197	< 1% of mass 198	491	0.20	
198		248597	100.00	
199	5% - 9% of mass 198	16410	6.60	
275	10% - 30% of mass 198	55200	22.20	
365	> 1% of mass 198	7618	3.06	
441	Present, < mass 443	30245	80.93	
442	> 40% and < 100% of mass 198	191680	77.10	
443	17% - 23% of mass 442	37373	19.50	

Analyst: KMH Date: 04/17/15 Reviewer: LW Date: 04/20/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266091 MSSIM Water: EPA 8270C-SIM

Inst : MSBNA03
 Calnum : 525131701001
 Units : ug/mL

Name : 3PAHSIM
 Date : 01-APR-2015 13:17
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	vd106	525131701006	ICAL 01-APR-2015 13:17	S26126
L2	vd107	525131701007	ICAL 01-APR-2015 13:50	S26127
L3	vd108	525131701008	ICAL 01-APR-2015 14:24	S26919
L4	vd109	525131701009	ICAL 01-APR-2015 14:57	S26920
L5	vd110	525131701010	ICAL 01-APR-2015 15:30	S26130
L6	vd111	525131701011	ICAL 01-APR-2015 16:03	S26131
L7	vd112	525131701012	ICAL 01-APR-2015 16:36	S26132

Analyte	L1	L2	L3	L4	L5	L6	L7	Type	a0	a1	a2	Avg	r^2	Max	Min	Min	Flg
1,4-Dioxane	0.3884m	0.3959m	0.4095m	0.4030m	0.3911	0.4012	0.4179	AVRG		2.49376		0.4010	3	15	0.05	0.99	
Naphthalene	1.0149	1.0289	1.0641	1.0871	1.0618	1.0776	1.1597	AVRG		0.93405		1.0706	4	15	0.05	0.99	
2-Methylnaphthalene	0.6287	0.6326	0.6663	0.6791	0.6667	0.6827	0.7441	AVRG		1.48929		0.6715	6	15	0.05	0.99	
1-Methylnaphthalene	0.6083	0.6009	0.6337	0.6524	0.6379	0.6566	0.7009	AVRG		1.55872		0.6416	5	15	0.05	0.99	
Acenaphthylene	1.7445	1.7619	2.0357	2.0852	1.8385	1.8877	2.0244	AVRG		0.52325		1.9111	7	15	0.05	0.99	
Acenaphthene	1.1518	1.1546	1.3343	1.3635	1.2251	1.2296	1.3413	AVRG		0.79544		1.2572	7	15	0.05	0.99	
Fluorene	1.2852	1.3126	1.5176	1.5180	1.3771	1.4726	1.6612	AVRG		0.69005		1.4492	9	15	0.05	0.99	
Phenanthrene	1.0751	1.0919	1.1075	1.1303	1.1292	1.1693	1.2351	AVRG		0.88179		1.1341	5	15	0.05	0.99	
Anthracene	1.0472	1.0715	1.0845	1.0926	1.1015	1.1636	1.2267	AVRG		0.89886		1.1125	6	15	0.05	0.99	
Fluoranthene	1.2044	1.2242	1.2327	1.2515	1.2696	1.3195	1.4104	AVRG		0.78542		1.2732	6	15	0.05	0.99	
Pyrene	1.2698	1.2713	1.3017	1.2862	1.2973	1.2606	1.3668	AVRG		0.77316		1.2934	3	15	0.05	0.99	
Benzo(a)anthracene	1.1612	1.1342	1.1513	1.1677	1.1912	1.2423	1.3566	AVRG		0.83290		1.2006	6	15	0.05	0.99	
Chrysene	1.0584	1.0738	1.0954	1.1042	1.1142	1.1056	1.1762	AVRG		0.90581		1.1040	3	15	0.05	0.99	
Benzo(b)fluoranthene	1.0931	1.1271	1.1614	1.1894	1.2318	1.3145	1.4314	AVRG		0.81883		1.2213	10	15	0.05	0.99	
Benzo(k)fluoranthene	1.0825	1.1143	1.1019	1.2027	1.2171	1.2750	1.4384	AVRG		0.83017		1.2046	10	15	0.05	0.99	
Benzo(a)pyrene	0.9393	0.9772	1.0307	1.0484	1.0950	1.1681	1.2650	AVRG		0.93039		1.0748	10	15	0.05	0.99	
Indeno(1,2,3-cd)pyrene	1.1076	1.1400	1.1697	1.2539	1.3238	1.4807		AVRG		0.80260		1.2459	11	15	0.05	0.99	
Dibenz(a,h)anthracene	0.8945	0.9304	0.9427	1.0116	1.0792	1.2108		AVRG		0.98859		1.0115	12	15	0.05	0.99	
Benzo(g,h,i)perylene	0.9997	1.0119	1.0071	1.0727	1.1105	1.1724	1.2619	AVRG		0.91668		1.0909	9	15	0.05	0.99	
Nitrobenzene-d5	0.2927	0.2862	0.3037	0.3172	0.3142	0.3243	0.3460	AVRG		3.20468		0.3120	6	15	0.05	0.99	
2-Fluorobiphenyl	1.5354	1.5623	1.8123	1.8183	1.6439	1.6800	1.8067	AVRG		0.59027		1.6941	7	15	0.05	0.99	
Terphenyl-d14	0.9490	0.9736	0.9598	0.9801	0.9874	0.9955	1.0694	AVRG		1.01233		0.9878	4	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D
1,4-Dioxane	0.5000	-3	1.0000	-1	2.5000	2	5.0000	1	10.0000	-2	25.0000	0	50.0000	4
Naphthalene	0.1000	-5	0.2000	-4	0.5000	-1	1.0000	2	2.0000	-1	5.0000	1	10.0000	8
2-Methylnaphthalene	0.1000	-6	0.2000	-6	0.5000	-1	1.0000	1	2.0000	-1	5.0000	2	10.0000	11
1-Methylnaphthalene	0.1000	-5	0.2000	-6	0.5000	-1	1.0000	2	2.0000	-1	5.0000	2	10.0000	9
Acenaphthylene	0.1000	-9	0.2000	-8	0.5000	7	1.0000	9	2.0000	-4	5.0000	-1	10.0000	6
Acenaphthene	0.1000	-8	0.2000	-8	0.5000	6	1.0000	8	2.0000	-3	5.0000	-2	10.0000	7
Fluorene	0.1000	-11	0.2000	-9	0.5000	5	1.0000	5	2.0000	-5	5.0000	2	10.0000	15
Phenanthrene	0.1000	-5	0.2000	-4	0.5000	-2	1.0000	0	2.0000	0	5.0000	3	10.0000	9
Anthracene	0.1000	-6	0.2000	-4	0.5000	-3	1.0000	-2	2.0000	-1	5.0000	5	10.0000	10
Fluoranthene	0.1000	-5	0.2000	-4	0.5000	-3	1.0000	-2	2.0000	0	5.0000	4	10.0000	11
Pyrene	0.1000	-2	0.2000	-2	0.5000	1	1.0000	-1	2.0000	0	5.0000	-3	10.0000	6
Benzo(a)anthracene	0.1000	-3	0.2000	-6	0.5000	-4	1.0000	-3	2.0000	-1	5.0000	3	10.0000	13
Chrysene	0.1000	-4	0.2000	-3	0.5000	-1	1.0000	0	2.0000	1	5.0000	0	10.0000	7
Benzo(b)fluoranthene	0.1000	-10	0.2000	-8	0.5000	-5	1.0000	-3	2.0000	1	5.0000	8	10.0000	17
Benzo(k)fluoranthene	0.1000	-10	0.2000	-7	0.5000	-9	1.0000	0	2.0000	1	5.0000	6	10.0000	19
Benzo(a)pyrene	0.1000	-13	0.2000	-9	0.5000	-4	1.0000	-2	2.0000	2	5.0000	9	10.0000	18
Indeno(1,2,3-cd)pyrene	0.1000	-11	0.2000	-9	0.5000	-6	1.0000	1	2.0000	6	5.0000	19		
Dibenz(a,h)anthracene	0.1000	-12	0.2000	-8	0.5000	-7	1.0000	0	2.0000	7	5.0000	20		
Benzo(g,h,i)perylene	0.1000	-8	0.2000	-7	0.5000	-8	1.0000	-2	2.0000	2	5.0000	7	10.0000	16
Nitrobenzene-d5	0.1000	-6	0.2000	-8	0.5000	-3	1.0000	2	2.0000	1	5.0000	4	10.0000	11
2-Fluorobiphenyl	0.1000	-9	0.2000	-8	0.5000	7	1.0000	7	2.0000	-3	5.0000	-1	10.0000	7
Terphenyl-d14	0.1000	-4	0.2000	-1	0.5000	-3	1.0000	-1	2.0000	0	5.0000	1	10.0000	8

KMH 04/02/15 [1,4-Dioxane]: Corrected automatically drawn baseline in multiple levels.

Analyst: KMH

Date: 04/01/15

Reviewer: LW

Date: 04/02/15

m=manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor

Page 2 of 2

525131701001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266091 MSSIM Water
EPA 8270C-SIM

Inst : MSBNA03
Calnum : 525131701001

Name : 3PAHSIM
Cal Date : 01-APR-2015

ICV 525131701013 (vd113 01-APR-2015) stds: S26530

Analyte	Spiked	Quant	Units	%D	Max	Flags
1,4-Dioxane	10.00	10.24	ug/mL	2	30	
Naphthalene	1.000	0.8880	ug/mL	-11	30	
2-Methylnaphthalene	1.000	0.9439	ug/mL	-6	30	
1-Methylnaphthalene	1.000	0.9391	ug/mL	-6	30	
Acenaphthylene	1.000	0.9299	ug/mL	-7	30	
Acenaphthene	1.000	0.8706	ug/mL	-13	20	
Fluorene	1.000	0.8700	ug/mL	-13	30	
Phenanthrene	1.000	0.9112	ug/mL	-9	30	
Anthracene	1.000	0.9398	ug/mL	-6	30	
Fluoranthene	1.000	0.9169	ug/mL	-8	20	
Pyrene	1.000	1.016	ug/mL	2	30	
Benzo(a)anthracene	1.000	0.8835	ug/mL	-12	30	
Chrysene	1.000	0.9391	ug/mL	-6	30	
Benzo(b)fluoranthene	1.000	0.9116	ug/mL	-9	30	
Benzo(k)fluoranthene	1.000	0.8596	ug/mL	-14	30	
Benzo(a)pyrene	1.000	0.9589	ug/mL	-4	20	
Indeno(1,2,3-cd)pyrene	1.000	0.9374	ug/mL	-6	30	
Dibenz(a,h)anthracene	1.000	0.9568	ug/mL	-4	30	
Benzo(g,h,i)perylene	1.000	0.9333	ug/mL	-7	30	

Analyst: KMH

Date: 04/01/15

Reviewer: LW

Date: 04/02/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 MSSIM Water
EPA 8270C-SIM

Inst : MSBNA03
Seqnum : 525153256004
Cal : 525131701001
Standards: S26920

File : vdg04
Caldate : 01-APR-2015

IDF : 1.0
Time : 16-APR-2015 11:36

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,4-Dioxane	0.4010	0.4010	5.000	5.000	ug/mL	0	30	0.0500	
Naphthalene	1.0706	1.0707	1.000	1.000	ug/mL	0	30	0.0500	
2-Methylnaphthalene	0.6715	0.6676	1.000	0.9943	ug/mL	-1	30	0.0500	
1-Methylnaphthalene	0.6416	0.6338	1.000	0.9880	ug/mL	-1	30	0.0500	
Acenaphthylene	1.9111	2.0480	1.000	1.072	ug/mL	7	30	0.0500	
Acenaphthene	1.2572	1.3562	1.000	1.079	ug/mL	8	20	0.0500	
Fluorene	1.4492	1.5380	1.000	1.061	ug/mL	6	30	0.0500	
Phenanthrene	1.1341	1.1450	1.000	1.010	ug/mL	1	30	0.0500	
Anthracene	1.1125	1.0942	1.000	0.9836	ug/mL	-2	30	0.0500	
Fluoranthene	1.2732	1.2332	1.000	0.9685	ug/mL	-3	20	0.0500	
Pyrene	1.2934	1.4364	1.000	1.111	ug/mL	11	30	0.0500	
Benzo(a)anthracene	1.2006	1.1919	1.000	0.9927	ug/mL	-1	30	0.0500	
Chrysene	1.1040	1.1327	1.000	1.026	ug/mL	3	30	0.0500	
Benzo(b)fluoranthene	1.2213	1.2732	1.000	1.043	ug/mL	4	30	0.0500	
Benzo(k)fluoranthene	1.2046	1.2236	1.000	1.016	ug/mL	2	30	0.0500	
Benzo(a)pyrene	1.0748	1.0876	1.000	1.012	ug/mL	1	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.2459	1.2054	1.000	0.9674	ug/mL	-3	30	0.0500	
Dibenz(a,h)anthracene	1.0115	1.0026	1.000	0.9912	ug/mL	-1	30	0.0500	
Benzo(g,h,i)perylene	1.0909	1.0009	1.000	0.9175	ug/mL	-8	30	0.0500	
Nitrobenzene-d5	0.3120	0.2727	1.000	0.8739	ug/mL	-13	30	0.0500	
2-Fluorobiphenyl	1.6941	1.8365	1.000	1.084	ug/mL	8	30	0.0500	
Terphenyl-d14	0.9878	1.0384	1.000	1.051	ug/mL	5	30	0.0500	

Analyst: KMH

Date: 04/16/15

Reviewer: LW

Date: 04/17/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 MSSIM Water
EPA 8270C-SIM

Inst : MSBNA03
Seqnum : 525154695003
Cal : 525131701001
Standards: S26128

File : vdh03
Caldate : 01-APR-2015

IDF : 1.0
Time : 17-APR-2015 11:02

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,4-Dioxane	0.4010	0.4044	2.500	2.521	ug/mL	1	30	0.0500	m
Naphthalene	1.0706	1.0515	0.5000	0.4911	ug/mL	-2	30	0.0500	
2-Methylnaphthalene	0.6715	0.6419	0.5000	0.4780	ug/mL	-4	30	0.0500	
1-Methylnaphthalene	0.6416	0.6052	0.5000	0.4717	ug/mL	-6	30	0.0500	
Acenaphthylene	1.9111	1.7911	0.5000	0.4686	ug/mL	-6	30	0.0500	
Acenaphthene	1.2572	1.2145	0.5000	0.4830	ug/mL	-3	20	0.0500	
Fluorene	1.4492	1.3351	0.5000	0.4606	ug/mL	-8	30	0.0500	
Phenanthrene	1.1341	1.1532	0.5000	0.5084	ug/mL	2	30	0.0500	
Anthracene	1.1125	1.1045	0.5000	0.4964	ug/mL	-1	30	0.0500	
Fluoranthene	1.2732	1.2648	0.5000	0.4967	ug/mL	-1	20	0.0500	
Pyrene	1.2934	1.3080	0.5000	0.5056	ug/mL	1	30	0.0500	
Benzo(a)anthracene	1.2006	1.1661	0.5000	0.4856	ug/mL	-3	30	0.0500	
Chrysene	1.1040	1.1188	0.5000	0.5067	ug/mL	1	30	0.0500	
Benzo(b)fluoranthene	1.2213	1.2062	0.5000	0.4939	ug/mL	-1	30	0.0500	
Benzo(k)fluoranthene	1.2046	1.1753	0.5000	0.4878	ug/mL	-2	30	0.0500	
Benzo(a)pyrene	1.0748	1.0546	0.5000	0.4906	ug/mL	-2	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.2459	1.1152	0.5000	0.4475	ug/mL	-10	30	0.0500	
Dibenz(a,h)anthracene	1.0115	0.9077	0.5000	0.4487	ug/mL	-10	30	0.0500	
Benzo(g,h,i)perylene	1.0909	0.9261	0.5000	0.4245	ug/mL	-15	30	0.0500	
Nitrobenzene-d5	0.3120	0.2533	0.5000	0.4058	ug/mL	-19	30	0.0500	
2-Fluorobiphenyl	1.6941	1.6472	0.5000	0.4861	ug/mL	-3	30	0.0500	
Terphenyl-d14	0.9878	0.9513	0.5000	0.4815	ug/mL	-4	30	0.0500	

KMH 04/17/15 [1,4-Dioxane]: Corrected automatically drawn baseline.

Analyst: KMH Date: 04/17/15 Reviewer: LW Date: 04/20/15

m=manual integration

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 525153256

Date : 04/16/15
 Sequence : MSBNA03 vdg

Reference : vdg04
 Analyzed : 04/16/15 11:36

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
	CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+RICV	STD	27161	7.30	105926	8.93	49494	11.23	99638	13.17	88160	16.62	75130	18.34
	LOWER LIMIT		13581	6.80	52963	8.43	24747	10.73	49819	12.67	44080	16.12	37565	17.84
	UPPER LIMIT		54322	7.80	211852	9.43	98988	11.73	199276	13.67	176320	17.12	150260	18.84
004	CCV		27161	7.30	105926	8.93	49494	11.23	99638	13.17	88160	16.62	75130	18.34
005	BLANK	QC784474	22244	7.30	88699	8.93	42962	11.23	90400	13.17	80686	16.62	69945	18.34
006	LCS	QC784475	22851	7.31	89624	8.93	44189	11.22	93116	13.17	84577	16.62	70554	18.34
007	SAMPLE	266078-003	22688	7.31	89889	8.93	43851	11.23	91446	13.17	80420	16.61	66671	18.34
008	SAMPLE	266078-004	23133	7.30	92225	8.93	45134	11.23	95429	13.17	82172	16.61	68857	18.34
009	SAMPLE	266094-003	21846	7.30	87827	8.93	43004	11.22	91540	13.17	78647	16.61	66168	18.34
010	SAMPLE	266078-002	22463	7.30	89254	8.93	42835	11.22	91364	13.17	76167	16.61	63477	18.34
011	SAMPLE	266078-001	21895	7.30	88343	8.93	42906	11.22	89072	13.17	69515	16.62	57396	18.35
012	MSS	266094-002	20274	7.30	82369	8.93	39451	11.22	82814	13.17	69709	16.62	61307	18.34
013	SAMPLE	266094-001	20719	7.30	82908	8.92	39750	11.22	82571	13.17	68210	16.61	60728	18.34
014	MSS	266094-002	20377	7.30	80771	8.92	38774	11.22	81816	13.17	70908	16.61	62298	18.34
015	MS	QC784476	21338	7.30	84762	8.92	40770	11.22	85439	13.17	74736	16.61	65386	18.34
016	MSD	QC784477	21808	7.30	86970	8.92	41596	11.22	87242	13.17	78500	16.61	67967	18.34
017	BLANK	QC784446	23097	7.30	90404	8.92	44144	11.22	92196	13.17	80909	16.61	70152	18.34
018	BS	QC784447	23912	7.30	93977	8.92	45031	11.22	96643	13.17	85606	16.61	73872	18.34
019	BSD	QC784448	23059	7.30	90357	8.92	43531	11.22	90982	13.17	83265	16.61	71944	18.34
020	SAMPLE	266087-005	23552	7.30	91353	8.92	44037	11.22	92792	13.16	87875	16.61	71421	18.34
021	SAMPLE	266087-007	23201	7.30	91047	8.92	44625	11.22	91990	13.17	87322	16.61	70631	18.34
022	SAMPLE	266087-009	22220	7.30	85973	8.92	41177	11.22	86753	13.17	85955	16.61	66824	18.34
023	SAMPLE	266091-003	21908	7.30	85511	8.92	41191	11.22	85909	13.17	79358	16.61	65366	18.34
024	MS	QC784476	20985	7.30	82260	8.92	39819	11.22	83769	13.17	72603	16.61	63855	18.34
025	MSD	QC784477	21053	7.30	83520	8.92	39939	11.22	85465	13.17	73111	16.61	64541	18.34

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 525154695

Date : 04/17/15
 Sequence : MSBNA03 vdh

Reference : vdh03
 Analyzed : 04/17/15 11:02

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+RICV STD	25279	7.30	99099	8.93	50014	11.22	90675	13.17	91655	16.61	82202	18.34
		LOWER LIMIT	12640	6.80	49550	8.43	25007	10.72	45338	12.67	45828	16.11	41101	17.84
		UPPER LIMIT	50558	7.80	198198	9.43	100028	11.72	181350	13.67	183310	17.11	164404	18.84
003	CCV		25279	7.30	99099	8.93	50014	11.22	90675	13.17	91655	16.61	82202	18.34
004	SAMPLE	266091-004	23196	7.30	92762	8.93	43175	11.22	88949	13.17	88600	16.61	77190	18.34
005	SAMPLE	266091-005	24403	7.30	97245	8.93	45129	11.22	92519	13.17	91012	16.61	79997	18.34
006	SAMPLE	266091-008	23140	7.30	91905	8.92	42623	11.22	88230	13.17	88153	16.61	76146	18.34
007	SAMPLE	266091-009	23827	7.30	94891	8.92	44015	11.22	90908	13.17	89293	16.61	77275	18.33
008	SAMPLE	266091-011	22876	7.30	89421	8.93	41576	11.22	86458	13.17	84418	16.61	70875	18.34
009	SAMPLE	266091-012	23341	7.30	91674	8.92	42636	11.22	88115	13.17	86518	16.61	76866	18.34
010	SAMPLE	266092-016	23446	7.30	92118	8.93	44114	11.22	74814	13.17	67596	16.62	62867	18.34
011	SAMPLE	266092-017	17134	7.30	73266	8.93	38644	11.22	64887	13.17	62040	16.62	57259	18.34

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 525131701

Instrument : MSBNA03 Begun : 04/01/15 11:01
 Method : EPA 8270C, EPA 8270C-SIM SOP Version : 8270-SIM_OBPA_rv1, bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	vd101	TUN	DFTPP			04/01/15 11:01	1.0	1
002	vd102	TUN	DFTPP			04/01/15 11:35	1.0	1
003	vd103	CCV	RTCHECK			04/01/15 11:55	1.0	2
004	vd104	IB	IB			04/01/15 12:32	1.0	
005	vd105	TUN	DFTPP			04/01/15 12:58	1.0	1
006	vd106	ICAL	ICAL			04/01/15 13:17	1.0	3
007	vd107	ICAL	ICAL			04/01/15 13:50	1.0	4
008	vd108	ICAL	ICAL			04/01/15 14:24	1.0	5
009	vd109	ICAL	ICAL			04/01/15 14:57	1.0	6
010	vd110	ICAL	ICAL			04/01/15 15:30	1.0	7
011	vd111	ICAL	ICAL			04/01/15 16:03	1.0	8
012	vd112	ICAL	ICAL			04/01/15 16:36	1.0	9
013	vd113	ICV	ICV			04/01/15 17:08	1.0	10
014	vd114	CCV	PAHDIOX			04/01/15 17:42	1.0	6
015	vd115	LOD	209076-066	Soil	221583	04/01/15 18:14	1.0	11
016	vd116	LOD	209076-067	Soil	221583	04/01/15 18:47	1.0	11
017	vd117	LOD	209076-068	Soil	221583	04/01/15 19:21	1.0	11

KMH 04/02/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 17.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 525153256

Instrument : MSBNA03 Begun : 04/16/15 10:16
 Method : EPA 8270C, EPA 8270C-SIM SOP Version : 8270-SIM_OBPA_rv1, bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	vdg01	IB	IB			04/16/15 10:16	1.0		?t
002	vdg02	TUN	DFTPP			04/16/15 10:42	1.0	1	
003	vdg03	CCV				04/16/15 11:02	1.0	2	
004	vdg04	CCV				04/16/15 11:36	1.0	2	
005	vdg05	BLANK	QC784474	Soil	222304	04/16/15 12:12	1.0	3	
006	vdg06	LCS	QC784475	Soil	222304	04/16/15 12:45	1.0	3	
007	vdg07	SAMPLE	266078-003	Soil	222216	04/16/15 13:19	1.0	3	
008	vdg08	SAMPLE	266078-004	Soil	222216	04/16/15 13:51	1.0	3	
009	vdg09	SAMPLE	266094-003	Soil	222304	04/16/15 14:24	1.0	3	
010	vdg10	SAMPLE	266078-002	Soil	222216	04/16/15 14:57	1.0	3	
011	vdg11	SAMPLE	266078-001	Soil	222216	04/16/15 15:30	1.0	3	
012	vdg12	MSS	266094-002	Soil	222304	04/16/15 16:03	1.0	3	4:PHAN=18
013	vdg13	SAMPLE	266094-001	Soil	222304	04/16/15 16:35	3.0	3	
014	vdg14	MSS	266094-002	Soil	222304	04/16/15 17:08	3.0	3	
015	vdg15	MS	QC784476	Soil	222304	04/16/15 17:41	5.0	3	
016	vdg16	MSD	QC784477	Soil	222304	04/16/15 18:14	5.0	3	
017	vdg17	BLANK	QC784446	Water	222297	04/16/15 18:47	1.0	3	
018	vdg18	BS	QC784447	Water	222297	04/16/15 19:20	1.0	3	
019	vdg19	BSD	QC784448	Water	222297	04/16/15 19:54	1.0	3	
020	vdg20	SAMPLE	266087-005	Water	222297	04/16/15 20:27	1.0	3	
021	vdg21	SAMPLE	266087-007	Water	222297	04/16/15 21:01	1.0	3	
022	vdg22	SAMPLE	266087-009	Water	222297	04/16/15 21:35	1.0	3	
023	vdg23	SAMPLE	266091-003	Water	222297	04/16/15 22:09	1.0	3	
024	vdg24	MS	QC784476	Soil	222304	04/16/15 22:43	5.0	3	<<t
025	vdg25	MSD	QC784477	Soil	222304	04/16/15 23:17	5.0	3	<<t

KMH 04/17/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 25.

Standards used: 1=S26814 2=S26920 3=S26588

Flags used: <<t=out of clock ?t=missing tune

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 525154695

Instrument : MSBNA03 Begun : 04/17/15 10:15
 Method : EPA 8270C, EPA 8270C-SIM SOP Version : 8270-SIM_OBPA_rv1, bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	vdh01	IB	IB			04/17/15 10:15	1.0		?t
002	vdh02	TUN	DFTPP			04/17/15 10:41	1.0	1	
003	vdh03	CCV				04/17/15 11:02	1.0	2	
004	vdh04	SAMPLE	266091-004	Water	222297	04/17/15 11:36	1.0	3	
005	vdh05	SAMPLE	266091-005	Water	222297	04/17/15 12:09	1.0	3	
006	vdh06	SAMPLE	266091-008	Water	222297	04/17/15 12:44	1.0	3	
007	vdh07	SAMPLE	266091-009	Water	222297	04/17/15 13:17	1.0	3	
008	vdh08	SAMPLE	266091-011	Water	222297	04/17/15 13:52	1.0	3	
009	vdh09	SAMPLE	266091-012	Water	222297	04/17/15 14:26	1.0	3	
010	vdh10	SAMPLE	266092-016	Water	222297	04/17/15 15:00	1.0	3	
011	vdh11	SAMPLE	266092-017	Water	222297	04/17/15 15:34	1.0	3	

NPM 04/17/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 11.

Standards used: 1=S26814 2=S26128 3=S26588

Flags used: ?t=missing tune

Page 1 of 1

SAMPLE PREPARATION SUMMARY

Batch #	: 222297				Analysis	: 8270-SIM
Started By	: KKL	Prep Date	: 15-APR-2015 14:52	Finished By	: JCD	
Method	: 3520C	SOP Version	: 8270-SIM_3520_rv5	Units	: mL	
Spike #1 ID	: S26499	Spike #2 ID	: S26609			

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266087-005		Water	1060	1	1	0.0009434	7	1				8270-SIM	
266087-007		Water	1020	1	1	0.0009804	5	1				8270-SIM	
266087-009		Water	1060	1	1	0.0009434	7	1				8270-SIM	
266091-003		Water	1020	1	1	0.0009804	7	1				8270-SIM	
266091-004		Water	1000	1	1	0.001	7	1				8270-SIM	
266091-005		Water	1070	1	1	0.0009346	7	1				8270-SIM	
266091-008		Water	1060	1	1	0.0009434	5	1				8270-SIM	
266091-009		Water	1020	1	1	0.0009804	7	1				8270-SIM	
266091-011		Water	1000	1	1	0.001	7	1				8270-SIM	
266091-012		Water	1060	1	1	0.0009434	5	1				8270-SIM	
266092-016		Water	1070	1	1	0.0009346	7	1				8270-SIM	
266092-017		Water	1070	1	1	0.0009346	7	1				8270-SIM	
QC784446	BLANK	Water	1000	1	1	0.001		1				8270-1	
QC784447	BS	Water	1000	1	1	0.001		1	1			8270-1	
QC784448	BSD	Water	1000	1	1	0.001		1	1			8270-1	

KMH 04/17/15 : Matrix spikes were not performed for this analysis in batch 222297 due to insufficient sample amount.

Analyst: KMH Date: 04/17/15 Reviewer: LW Date: 04/17/15

BNA (8270 & 625) Water Prep Log

Curtis & Tompkins, Ltd.

BNA (8

LIM
LIM
Date

LIMS Batch No: 222297
LIMS Analysis: 8270-SIM
Date Extracted: 4/15/15

Extraction Method:
 EPA 3520c cont. L/L

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Confirmed pH <= 2	Comments
266087-005	B	1060	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
7	E	1020	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
9		1060	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
266091-003		1020	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
4	C	1000	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
5	B	1070	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
8	E	1060	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
9		1020	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
11	D	1000	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
12	E	1060	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
266092-016	C	1070	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
17		1070	<input checked="" type="checkbox"/> 7 <input type="checkbox"/>	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
MB GC184446	N/A	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
BS	7	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
BSD	8	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> 1.0 <input type="checkbox"/>	<input checked="" type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	
			<input type="checkbox"/> 7 <input type="checkbox"/>	<input type="checkbox"/> 1.0 <input type="checkbox"/>	<input type="checkbox"/> <= 2	

Sample
266C
266C
266C
MB
BS
BSD
MS

MS/MSD not included due to: insufficient volume, or other (reason)

Lot# / LIMS # / Time	Date / Initials
326499 C	KKL 4/15/15
326609 B	
FS140636	
EM54351	
14:52	
08:52	WER 4/16/15
NA	SCD 4/16/15
EMXF27F	
70	
✓	

1.0 mL of surrogate solution was added to all samples
1.0 mL of matrix spiking solution was added to all spikes
pH of all samples adjusted to pH <= 2 with H₂SO₄
Cont. L/L extracted with 450mL of CH₂Cl₂
Extraction Start Time:
Extraction End Time:
pH of all samples adjusted to pH >= 11 with 10 N NaOH
Extraction Start Time:
Extraction End Time:
Extracts filtered through baked, CH₂Cl₂-rinsed granular Na₂SO₄
Concentrated to final volume at temperature (degrees C)
Relinquished to BNA department

Kristin Low 4/15/15
Extraction Chemist Date

Continued from Page
Continued on Page

John Q. Uy 4/16/15
Reviewed by Date

SLC
EX



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266091

ANALYTICAL REPORT


Metals

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

<u>Sample ID</u>	<u>Lab ID</u>
2015 0413 DHR	266091-002
2015 0413 B128	266091-004
2015 0413 B128D	266091-005
2015 0413 BULB1	266091-006
2015 0413 BULB1D	266091-007
2015 0413 SWB	266091-008
2015 0413 BULB2	266091-009
2015 0413 ETA	266091-010
2015 0413 ER	266091-012

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 04/29/2015

CA ELAP# 2896, NELAP# 4044-001

**CASE NARRATIVE
METALS (EPA 6020 AND EPA 7470A)**

Laboratory number: 266091
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/14/15
Samples Received: 04/14/15

This data package contains sample and QC results for nine water samples, requested for the above referenced project on 04/14/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Metals (EPA 6020 and EPA 7470A):

Low recoveries were observed for selenium in the MS/MSD of 20150414B197R (lab # 266087-001); the BS/BSD were within limits, and the associated RPD was within limits.

Responses exceeding the instrument's linear range were observed for a number of analytes in the MS/MSD of 20150414B197R (lab # 266087-001).

High % difference was observed for sodium in the serial dilution of 20150414B197R (lab # 266087-001).

A number of analytes were detected between the MDL and the RL in the method blank for batch 222325.

No other analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266091

Chain of Custody Record No. 6877

Page 1 of 1

Project name: 2015 Groundwater	Lab PO#: 15 OAK 32	Lab: Card T	No./Container Types		Preservative Added
TIEMI technical contact: Sara Woolley	Field samplers: Mark Duffy Dayno Aragon		40 ml VOA	1 liter Amber	500 ml Poly
Project (CTO) number: 1035225323.05	TIEMI project manager: Jason Brubaker	Field samplers' signatures: <i>Mark Duffy</i> <i>Dayno Aragon</i>	Sleeve	Glass Jar	
Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD
20150413TB		4/13/15	0900	water	3
20150413DHR			0925		3
20150413WTA			1020		2
20150413B128			1145		2
20150413B128D			1140		2
20150413BULB1			1235		3
20150413BULB1D			1240		3
20150413SWB			1300		3
20150413BULB2			1320		3
20150413ETA			1510		3
20150413MFAHHB			1418		3
20150413ER			1545		3
					VOA
					SVOA
					Pest/PCBs
					Metals
					District #
					TPH Purgeables
					TPH Extractables
					HH

Relinquished by:	Name (print):	Company Name:	Date:	Time:
<i>Mark Duffy</i>	Mark Duffy	Tetra Tech	4/14/15	1617
Received by:	<i>Mikella Cheong</i>	CT	4/14	1617
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks:
* metals were field-filtered

Fed Ex #: N/A

COOLER RECEIPT CHECKLIST



Login # 266091 Date Received 4/14/15 Number of coolers 3
 Client Tetra Tech EM Inc. Project 2015 Ground Water

Date Opened 4/14 By (print) BL (sign) [Signature]
 Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) _____ YES NO
 Shipping info _____

2A. Were custody seals present? YES (circle) on cooler on samples NO
 How many _____ Name _____ Date _____

2B. Were custody seals intact upon arrival? _____ YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap Foam blocks Bags None
- Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 5.3°C, 2.0°C, 6.0°C

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES NO
 If YES, what time were they transferred to freezer? _____

9. Did all bottles arrive unbroken/unopened? _____ YES NO

10. Are there any missing / extra samples? _____ ~~YES~~ NO

11. Are samples in the appropriate containers for indicated tests? _____ YES NO

12. Are sample labels present, in good condition and complete? _____ YES NO

13. Do the sample labels agree with custody papers? _____ YES NO

14. Was sufficient amount of sample sent for tests requested? _____ YES NO

15. Are the samples appropriately preserved? _____ YES NO N/A

16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A

17. Did you document your preservative check? _____ YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A

21. Was the client contacted concerning this sample delivery? _____ YES NO

If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Curtis & Tompkins Sample Preservation for 266091

Sample	pH: <2	>9	>12	Other
-002a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-004a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-005a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-006a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-007a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-008a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Sample	pH: <2	>9	>12	Other
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-009a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-010a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-012a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: BL
 Date: 4/14/15

Results & QC Summary

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	2015 0413 DHR	Units:	ug/L
Lab ID:	266091-002	Sampled:	04/13/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	9.8	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	71	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	0.16 J	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	710,000	6,000	2,000	500.0	222325	04/16/15	04/20/15	EPA 6020
Chromium	0.41 J	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	5.8	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/21/15	EPA 6020
Iron	7,200	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	510,000	5,000	1,200	500.0	222325	04/16/15	04/20/15	EPA 6020
Manganese	25,000	61	20	500.0	222325	04/16/15	04/20/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	0.78 J	1.0	0.23	5.000	222325	04/16/15	04/21/15	EPA 6020
Nickel	21	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	3,400	500	150	50.00	222325	04/16/15	04/28/15	EPA 6020
Selenium	0.60 J	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/21/15	EPA 6020
Sodium	610,000	50,000	1,200	500.0	222325	04/16/15	04/20/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	1.2	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	2015 0413 B128	Units:	ug/L
Lab ID:	266091-004	Sampled:	04/13/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	1.4	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	68	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	27,000	50	13	5.000	222325	04/16/15	04/17/15	EPA 6020
Chromium	1.3	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/21/15	EPA 6020
Iron	41 J	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	18,000	50	6.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Manganese	37	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	0.46 J	1.0	0.23	5.000	222325	04/16/15	04/21/15	EPA 6020
Nickel	10	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	270 J	500	150	50.00	222325	04/16/15	04/28/15	EPA 6020
Selenium	0.21 J	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/21/15	EPA 6020
Sodium	100,000	150	47	10.00	222325	04/16/15	04/24/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	2.0	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	2015 0413 B128D	Units:	ug/L
Lab ID:	266091-005	Sampled:	04/13/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	1.2	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	72	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	0.19 J	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	27,000	50	13	5.000	222325	04/16/15	04/17/15	EPA 6020
Chromium	1.2	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	0.057 J	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/21/15	EPA 6020
Iron	42 J	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	18,000	50	6.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Manganese	35	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	0.50 J	1.0	0.23	5.000	222325	04/16/15	04/21/15	EPA 6020
Nickel	11	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	210 J	500	150	50.00	222325	04/16/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/21/15	EPA 6020
Sodium	98,000	75	24	5.000	222325	04/16/15	04/22/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	1.8	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	2015 0413 BULB1	Units:	ug/L
Lab ID:	266091-006	Sampled:	04/13/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	6.4	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	100	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	0.28 J	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	220,000	50,000	13,000	5,000	222325	04/16/15	04/22/15	EPA 6020
Chromium	0.50 J	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/21/15	EPA 6020
Iron	240	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	920,000	50,000	6,600	5,000	222325	04/16/15	04/22/15	EPA 6020
Manganese	230	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	3.7	1.0	0.23	5.000	222325	04/16/15	04/21/15	EPA 6020
Nickel	0.61 J	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	300,000	50,000	15,000	5,000	222325	04/16/15	04/22/15	EPA 6020
Selenium	0.97 J	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/21/15	EPA 6020
Sodium	8,100,000	75,000	24,000	5,000	222325	04/16/15	04/22/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	2.0	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	2015 0413 BULB1D	Units:	ug/L
Lab ID:	266091-007	Sampled:	04/13/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	16 J	50	9.7	5.000	222325	04/16/15	04/21/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	6.6	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	99	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	0.25 J	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	210,000	50,000	13,000	5,000	222325	04/16/15	04/22/15	EPA 6020
Chromium	0.25 J	1.0	0.15	5.000	222325	04/16/15	04/21/15	EPA 6020
Cobalt	ND	1.0	0.13	5.000	222325	04/16/15	04/21/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/21/15	EPA 6020
Iron	240	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	930,000	50,000	6,600	5,000	222325	04/16/15	04/22/15	EPA 6020
Manganese	220	1.0	0.20	5.000	222325	04/16/15	04/21/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	3.8	1.0	0.23	5.000	222325	04/16/15	04/21/15	EPA 6020
Nickel	0.25 J	1.0	0.17	5.000	222325	04/16/15	04/21/15	EPA 6020
Potassium	310,000	50,000	15,000	5,000	222325	04/16/15	04/22/15	EPA 6020
Selenium	0.96 J	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/21/15	EPA 6020
Sodium	8,100,000	75,000	24,000	5,000	222325	04/16/15	04/22/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	1.6	1.0	0.14	5.000	222325	04/16/15	04/21/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	2015 0413 SWB	Units:	ug/L
Lab ID:	266091-008	Sampled:	04/13/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	ND	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	ND	50	13	5.000	222325	04/16/15	04/17/15	EPA 6020
Chromium	ND	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/21/15	EPA 6020
Iron	ND	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	46 J	50	6.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Manganese	0.60 J	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	ND	1.0	0.23	5.000	222325	04/16/15	04/21/15	EPA 6020
Nickel	ND	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	ND	500	150	50.00	222325	04/16/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/21/15	EPA 6020
Sodium	260 J	500	12	5.000	222325	04/16/15	04/21/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	0.95 J	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	2015 0413 BULB2	Units:	ug/L
Lab ID:	266091-009	Sampled:	04/13/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	3.3	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	53	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	29,000	50	13	5.000	222325	04/16/15	04/17/15	EPA 6020
Chromium	ND	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	0.72 J	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/21/15	EPA 6020
Iron	720	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	29,000	50	6.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Manganese	390	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	6.1	1.0	0.23	5.000	222325	04/16/15	04/21/15	EPA 6020
Nickel	1.8	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	11,000	500	150	50.00	222325	04/16/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/21/15	EPA 6020
Sodium	310,000	50,000	1,200	500.0	222325	04/16/15	04/20/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	2.1	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	2015 0413 ETA	Units:	ug/L
Lab ID:	266091-010	Sampled:	04/13/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	14 J	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	0.18 J	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	5.7	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	25	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	0.098 J	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	0.16 J	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	150,000	6,000	2,000	500.0	222325	04/16/15	04/20/15	EPA 6020
Chromium	0.14 J	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	2.7	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/21/15	EPA 6020
Iron	1,300	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	0.17 J	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	120,000	5,000	1,200	500.0	222325	04/16/15	04/20/15	EPA 6020
Manganese	7,100	61	20	500.0	222325	04/16/15	04/20/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	2.3	1.0	0.23	5.000	222325	04/16/15	04/21/15	EPA 6020
Nickel	3.1	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	1,300	500	150	50.00	222325	04/16/15	04/28/15	EPA 6020
Selenium	0.41 J	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222325	04/16/15	04/21/15	EPA 6020
Sodium	150,000	50,000	1,200	500.0	222325	04/16/15	04/20/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	1.7	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Zinc	30	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	2015 0413 ER	Units:	ug/L
Lab ID:	266091-012	Sampled:	04/13/15
Matrix:	Filtrate	Received:	04/14/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222325	04/16/15	04/17/15	EPA 6020
Arsenic	0.16 J	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Barium	ND	1.0	0.18	5.000	222325	04/16/15	04/17/15	EPA 6020
Beryllium	0.12 J	1.0	0.091	5.000	222325	04/16/15	04/17/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222325	04/16/15	04/17/15	EPA 6020
Calcium	260	50	13	5.000	222325	04/16/15	04/17/15	EPA 6020
Chromium	ND	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222325	04/16/15	04/17/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222325	04/16/15	04/21/15	EPA 6020
Iron	ND	50	16	5.000	222325	04/16/15	04/17/15	EPA 6020
Lead	0.12 J	1.0	0.074	5.000	222325	04/16/15	04/17/15	EPA 6020
Magnesium	160	50	6.6	5.000	222325	04/16/15	04/17/15	EPA 6020
Manganese	8.0	1.0	0.11	5.000	222325	04/16/15	04/17/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222394	04/20/15	04/20/15	EPA 7470A
Molybdenum	ND	1.0	0.27	5.000	222325	04/16/15	04/17/15	EPA 6020
Nickel	ND	1.0	0.34	5.000	222325	04/16/15	04/17/15	EPA 6020
Potassium	ND	500	150	50.00	222325	04/16/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222325	04/16/15	04/17/15	EPA 6020
Silver	0.59 J	1.0	0.040	5.000	222325	04/16/15	04/17/15	EPA 6020
Sodium	300	150	47	10.00	222325	04/16/15	04/24/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222325	04/16/15	04/17/15	EPA 6020
Vanadium	0.26 J	1.0	0.14	5.000	222325	04/16/15	04/21/15	EPA 6020
Zinc	ND	12	4.1	5.000	222325	04/16/15	04/17/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Type:	BLANK	Diln Fac:	5.000
Lab ID:	QC784570	Batch#:	222325
Matrix:	Filtrate	Prepared:	04/16/15
Units:	ug/L		

Analyte	Result	RL	MDL	Analyzed
Aluminum	ND	50	8.6	04/17/15
Antimony	ND	1.0	0.12	04/17/15
Arsenic	ND	1.0	0.14	04/17/15
Barium	ND	1.0	0.18	04/17/15
Beryllium	ND	1.0	0.091	04/17/15
Cadmium	ND	1.0	0.14	04/17/15
Calcium	ND	50	13	04/17/15
Chromium	ND	1.0	0.11	04/17/15
Cobalt	ND	1.0	0.056	04/17/15
Copper	0.32 J	1.0	0.26	04/20/15
Iron	ND	50	16	04/17/15
Lead	ND	1.0	0.074	04/17/15
Magnesium	ND	50	6.6	04/17/15
Manganese	ND	1.0	0.11	04/17/15
Molybdenum	0.43 J	1.0	0.23	04/20/15
Nickel	ND	1.0	0.34	04/17/15
Potassium	44 J	50	15	04/17/15
Selenium	0.53 J	1.0	0.20	04/17/15
Silver	ND	1.0	0.094	04/20/15
Sodium	ND	500	12	04/20/15
Thallium	ND	1.0	0.033	04/20/15
Vanadium	0.61 J	1.0	0.11	04/17/15
Zinc	ND	12	4.1	04/17/15

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Matrix:	Filtrate	Batch#:	222325
Units:	ug/L	Prepared:	04/16/15
Diln Fac:	5.000		

Type: BS Lab ID: QC784571

Analyte	Spiked	Result	%REC	Limits	Analyzed
Aluminum	10,000	10,750	108	80-124	04/17/15
Antimony	100.0	100.5	100	80-120	04/17/15
Arsenic	100.0	103.7	104	80-120	04/17/15
Barium	100.0	103.5	103	80-120	04/17/15
Beryllium	100.0	111.7	112	80-120	04/17/15
Cadmium	100.0	104.2	104	80-120	04/17/15
Calcium	10,000	10,330	103	80-124	04/20/15
Chromium	100.0	104.7	105	80-121	04/17/15
Cobalt	100.0	103.7	104	80-123	04/17/15
Copper	100.0	107.7	108	80-130	04/20/15
Iron	10,000	10,390	104	80-133	04/17/15
Lead	100.0	108.3	108	80-122	04/17/15
Magnesium	10,000	11,000	110	80-123	04/17/15
Manganese	100.0	103.1	103	80-125	04/17/15
Molybdenum	100.0	103.6	104	80-120	04/20/15
Nickel	100.0	105.5	106	80-129	04/17/15
Potassium	10,000	10,560	106	80-123	04/17/15
Selenium	100.0	101.9	102	80-126	04/17/15
Silver	100.0	104.4	104	79-120	04/20/15
Sodium	10,000	9,585	96	80-126	04/20/15
Thallium	50.00	50.05	100	80-120	04/20/15
Vanadium	100.0	101.8	102	80-120	04/17/15
Zinc	100.0	99.10	99	80-130	04/17/15

Type: BSD Lab ID: QC784572

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Aluminum	10,000	10,440	104	80-124	3	20	04/17/15
Antimony	100.0	97.65	98	80-120	3	20	04/17/15
Arsenic	100.0	103.8	104	80-120	0	20	04/17/15
Barium	100.0	99.00	99	80-120	4	20	04/17/15
Beryllium	100.0	106.1	106	80-120	5	20	04/17/15
Cadmium	100.0	98.90	99	80-120	5	20	04/17/15
Calcium	10,000	8,820	88	80-124	16	20	04/20/15
Chromium	100.0	101.6	102	80-121	3	20	04/17/15
Cobalt	100.0	103.1	103	80-123	1	20	04/17/15
Copper	100.0	111.0	111	80-130	3	20	04/20/15
Iron	10,000	10,340	103	80-133	1	20	04/17/15
Lead	100.0	104.3	104	80-122	4	20	04/17/15
Magnesium	10,000	10,640	106	80-123	3	20	04/17/15
Manganese	100.0	102.9	103	80-125	0	20	04/17/15
Molybdenum	100.0	101.2	101	80-120	2	20	04/20/15
Nickel	100.0	104.1	104	80-129	1	23	04/17/15
Potassium	10,000	10,200	102	80-123	4	20	04/17/15
Selenium	100.0	101.0	101	80-126	1	20	04/17/15
Silver	100.0	100.8	101	79-120	4	20	04/20/15
Sodium	10,000	10,460	105	80-126	9	20	04/20/15
Thallium	50.00	48.49	97	80-120	3	20	04/20/15
Vanadium	100.0	101.8	102	80-120	0	20	04/17/15
Zinc	100.0	101.2	101	80-130	2	20	04/17/15

RPD= Relative Percent Difference

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150414B197R	Batch#:	222325
MSS Lab ID:	266087-001	Sampled:	04/14/15
Matrix:	Filtrate	Received:	04/14/15
Units:	ug/L	Prepared:	04/16/15

Type: MS Lab ID: QC784573

Analyte	MSS Result	Spiked	Result	%REC	Limits	Diln Fac	Analyzed
Aluminum	30.08	10,000	10,950	109	80-123	5.000	04/17/15
Antimony	0.1640	100.0	105.1	105	75-120	5.000	04/17/15
Arsenic	2.336	100.0	112.3	110	80-120	5.000	04/17/15
Barium	23.53	100.0	130.6	107	80-122	5.000	04/17/15
Beryllium	0.1850	100.0	112.5	112	80-121	5.000	04/17/15
Cadmium	<0.1395	100.0	108.0	108	80-120	5.000	04/17/15
Calcium	184,700	10,000	169,100 >LR	-156 NM	65-136	5.000	04/20/15
Chromium	<0.1145	100.0	105.8	106	80-122	5.000	04/17/15
Cobalt	0.3465	100.0	104.6	104	80-121	5.000	04/17/15
Copper	<0.2604	100.0	97.35	97	76-124	5.000	04/20/15
Iron	1,322	10,000	11,680	104	80-132	5.000	04/17/15
Lead	<0.07440	100.0	106.9	107	80-120	5.000	04/17/15
Magnesium	166,300	10,000	145,000 >LR	-213 NM	74-129	5.000	04/20/15
Manganese	2,674	100.0	2,326 >LR	-349 NM	80-125	5.000	04/20/15
Molybdenum	0.8025	100.0	102.4	102	80-120	5.000	04/20/15
Nickel	2.209	100.0	104.5	102	79-126	5.000	04/17/15
Potassium	1,160	10,000	10,750	96	80-124	10.00	04/23/15
Selenium	1.071	100.0	45.78	45 *	77-125	5.000	04/17/15
Silver	<0.09399	100.0	99.55	100	66-120	5.000	04/20/15
Sodium	151,600	10,000	155,700 >LR	41 NM	71-129	5.000	04/20/15
Thallium	0.04200	50.00	52.75	105	80-120	5.000	04/17/15
Vanadium	1.537	100.0	108.8	107	80-121	5.000	04/17/15
Zinc	<4.068	100.0	103.0	103	75-126	5.000	04/17/15

*= Value outside of QC limits; see narrative

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150414B197R	Batch#:	222325
MSS Lab ID:	266087-001	Sampled:	04/14/15
Matrix:	Filtrate	Received:	04/14/15
Units:	ug/L	Prepared:	04/16/15

Type: MSD Lab ID: QC784574

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Diln	Fac	Analyzed
Aluminum	10,000	10,160	101	80-123	7	22	5.000		04/17/15
Antimony	100.0	98.95	99	75-120	6	20	5.000		04/17/15
Arsenic	100.0	105.7	103	80-120	6	26	5.000		04/17/15
Barium	100.0	119.7	96	80-122	9	28	5.000		04/17/15
Beryllium	100.0	105.1	105	80-121	7	23	5.000		04/17/15
Cadmium	100.0	99.65	100	80-120	8	21	5.000		04/17/15
Calcium	10,000	174,700 >LR	-100 NM	65-136	NC	37	5.000		04/20/15
Chromium	100.0	102.7	103	80-122	3	30	5.000		04/17/15
Cobalt	100.0	102.6	102	80-121	2	25	5.000		04/17/15
Copper	100.0	101.8	102	76-124	4	29	5.000		04/20/15
Iron	10,000	11,490	102	80-132	2	27	5.000		04/17/15
Lead	100.0	99.75	100	80-120	7	20	5.000		04/17/15
Magnesium	10,000	148,400 >LR	-179 NM	74-129	NC	27	5.000		04/20/15
Manganese	100.0	2,437 >LR	-238 NM	80-125	NC	25	5.000		04/20/15
Molybdenum	100.0	106.7	106	80-120	4	20	5.000		04/20/15
Nickel	100.0	103.2	101	79-126	1	30	5.000		04/17/15
Potassium	10,000	11,550	104	80-124	7	35	10.00		04/23/15
Selenium	100.0	43.55	42 *	77-125	5	28	5.000		04/17/15
Silver	100.0	101.6	102	66-120	2	29	5.000		04/20/15
Sodium	10,000	161,300 >LR	98 NM	71-129	NC	28	5.000		04/20/15
Thallium	50.00	50.35	101	80-120	5	20	5.000		04/17/15
Vanadium	100.0	104.5	103	80-121	4	31	5.000		04/17/15
Zinc	100.0	98.35	98	75-126	5	27	5.000		04/17/15

*= Value outside of QC limits; see narrative

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150414B197R	Units:	ug/L
Type:	Serial Dilution	Batch#:	222325
MSS Lab ID:	266087-001	Sampled:	04/14/15
Lab ID:	QC784575	Received:	04/14/15
Matrix:	Filtrate		

Analyte	MSS Result	MSS RL	Result	RL	% Diff	Lim	Diln	Fac	Analyzed
Aluminum	30.08	50.00	ND	250.0	NC	10	25.00		04/17/15
Antimony	0.1640	1.000	2.270 J	2.500	NC	10	25.00		04/17/15
Arsenic	2.336	1.000	1.760 J	2.500	NC	10	25.00		04/17/15
Barium	23.53	1.000	23.27	2.628	1	10	25.00		04/17/15
Beryllium	0.1850	1.000	ND	2.500	NC	10	25.00		04/17/15
Cadmium	ND	1.000	ND	2.500	NC	10	25.00		04/17/15
Calcium	184,700	6,011	180,300	30,050	2	10	2,500		04/20/15
Chromium	ND	1.000	ND	2.500	NC	10	25.00		04/17/15
Cobalt	0.3465	1.000	ND	2.500	NC	10	25.00		04/17/15
Copper	ND	1.000	ND	5.000	NC	10	25.00		04/20/15
Iron	1,322	50.00	1,395	250.0	6	10	25.00		04/17/15
Lead	ND	1.000	ND	2.500	NC	10	25.00		04/17/15
Magnesium	166,300	5,000	149,600	25,000	10	10	2,500		04/20/15
Manganese	2,674	60.83	2,640	304.2	1	10	2,500		04/20/15
Molybdenum	0.8025	1.000	ND	5.000	NC	10	25.00		04/20/15
Nickel	2.209	1.016	ND	5.078	NC	10	25.00		04/17/15
Potassium	1,160	100.0	2,594	500.0	NC	10	50.00		04/23/15
Selenium	1.071	1.000	ND	2.980	NC	10	25.00		04/21/15
Silver	ND	1.000	ND	2.500	NC	10	25.00		04/20/15
Sodium	151,600	50,000	111,900 J	250,000	26 *	10	2,500		04/20/15
Thallium	0.04200	1.000	0.3475 J	1.250	NC	10	25.00		04/17/15
Vanadium	1.537	1.000	ND	2.500	NC	10	25.00		04/20/15
Zinc	ND	12.21	ND	61.03	NC	10	25.00		04/17/15

*= Value outside of QC limits; see narrative

J= Estimated value

NC= Not Calculated

ND= Not Detected at or above MDL

RL= Reporting Limit

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150414B197R	Units:	ug/L
Type:	Post Digest Spike	Batch#:	222325
MSS Lab ID:	266087-001	Sampled:	04/14/15
Lab ID:	QC784576	Received:	04/14/15
Matrix:	Filtrate		

Analyte	MSS Result	Spiked	Result	%REC	Limits	Diln	Fac	Analyzed
Aluminum	30.08	25,000	25,230	101	75-125	5.000		04/17/15
Antimony	0.1640	250.0	242.5	97	75-125	5.000		04/17/15
Arsenic	2.336	250.0	261.9	104	75-125	5.000		04/17/15
Barium	23.53	250.0	267.4	98	75-125	5.000		04/17/15
Beryllium	0.1850	250.0	263.7	105	75-125	5.000		04/17/15
Cadmium	<0.1395	250.0	245.4	98	75-125	5.000		04/17/15
Calcium	184,700	2,500,000	2,683,000	100	75-125	500.0		04/20/15
Chromium	<0.1145	250.0	251.3	101	75-125	5.000		04/17/15
Cobalt	0.3465	250.0	246.7	99	75-125	5.000		04/17/15
Copper	<0.2604	250.0	259.7	104	75-125	5.000		04/20/15
Iron	1,322	25,000	23,340	88	75-125	5.000		04/17/15
Lead	<0.07440	250.0	253.2	101	75-125	5.000		04/17/15
Magnesium	166,300	2,500,000	2,671,000	100	75-125	500.0		04/20/15
Manganese	2,674	25,000	28,910	105	75-125	500.0		04/20/15
Molybdenum	0.8025	250.0	255.2	102	75-125	5.000		04/20/15
Nickel	2.209	250.0	247.8	98	75-125	5.000		04/17/15
Potassium	1,160	50,000	51,490	101	75-125	10.00		04/23/15
Selenium	1.071	250.0	222.0	88	75-125	5.000		04/17/15
Silver	<0.09399	250.0	251.7	101	75-125	5.000		04/20/15
Sodium	151,600	2,500,000	2,728,000	103	75-125	500.0		04/20/15
Thallium	0.04200	125.0	124.4	99	75-125	5.000		04/17/15
Vanadium	1.537	250.0	253.7	101	75-125	5.000		04/17/15
Zinc	<4.068	250.0	236.6	95	75-125	5.000		04/17/15

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	222394
Lab ID:	QC784841	Prepared:	04/20/15
Matrix:	Filtrate	Analyzed:	04/20/15
Units:	ug/L		

Result	RL	MDL
ND	0.20	0.021

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals			
Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	222394
Matrix:	Filtrate	Prepared:	04/20/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC784843	2.500	2.708	108	80-120		
BSD	QC784844	2.500	2.824	113	80-120	4	24

RPD= Relative Percent Difference

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	222394
Field ID:	20150414B163	Sampled:	04/14/15
MSS Lab ID:	266087-009	Received:	04/14/15
Matrix:	Filtrate	Prepared:	04/20/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC784845	0.05296	2.500	2.644	104	60-130		
MSD	QC784846		2.500	2.697	106	60-130	2	34

RPD= Relative Percent Difference

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266091	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Units:	ug/L
Field ID:	20150414B163	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	222394
MSS Lab ID:	266087-009	Sampled:	04/14/15
Lab ID:	QC784847	Received:	04/14/15
Matrix:	Filtrate	Analyzed:	04/20/15

MSS Result	MSS RL	Result	RL	% Diff	Lim
0.05296	0.2000	ND	1.000	NC	10

NC= Not Calculated
 ND= Not Detected at or above MDL
 RL= Reporting Limit

REPORTING SUMMARY FOR 266091 METALS Filtrate
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	A	S	A	B	B	C	C	C	C	C	F	P	M	M	H	M	N	K	S	A	N	T	V	Z
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	O	I	E	G	A	L	N		
266091-002	MET26	04/17/15	14:13	5.0	+	+	+	+	+	+	+	+	+	+	+				+	+				+	+	+	
266091-002	MET54	04/20/15	17:25	1.0															+								
266091-002	MET16	04/20/15	17:34	500.0					+						+	+								+			
266091-002	MET16	04/21/15	00:09	5.0									+						+				+				
266091-002	MET26	04/21/15	17:35	5.0																							
266091-002	MET26	04/22/15	14:27	5.0																							
266091-002	MET26	04/23/15	14:46	10.0																							
266091-002	MET26	04/24/15	12:27	10.0																							
266091-002	MET26	04/27/15	13:20	10.0																							
266091-002	MET26	04/28/15	15:45	50.0																							
266091-004	MET26	04/17/15	14:18	5.0	+	+	+	+	+	+	+	+	+	+	+	+			+	+				+	+	+	
266091-004	MET16	04/20/15	17:21	500.0																							
266091-004	MET54	04/20/15	17:26	1.0																+							
266091-004	MET16	04/21/15	00:22	5.0										+						+			+				
266091-004	MET26	04/21/15	17:01	500.0																							
266091-004	MET26	04/21/15	17:44	5.0																							
266091-004	MET26	04/22/15	12:36	5000																							
266091-004	MET26	04/22/15	14:32	5.0																							
266091-004	MET26	04/23/15	14:56	10.0																							
266091-004	MET26	04/24/15	12:37	10.0																					+		
266091-004	MET26	04/27/15	13:25	10.0																							
266091-004	MET26	04/28/15	15:50	50.0																							
266091-005	MET26	04/17/15	14:22	5.0	+	+	+	+	+	+	+	+	+	+	+	+			+	+				+	+	+	
266091-005	MET54	04/20/15	17:27	1.0																+							
266091-005	MET16	04/21/15	00:29	5.0										+						+			+				
266091-005	MET26	04/21/15	17:06	500.0																							
266091-005	MET26	04/21/15	17:54	5.0																							
266091-005	MET26	04/22/15	12:41	5000																							
266091-005	MET26	04/22/15	14:36	5.0																					+		
266091-005	MET26	04/23/15	15:05	10.0																							
266091-005	MET26	04/24/15	12:46	10.0																							
266091-005	MET26	04/27/15	13:30	10.0																							
266091-005	MET26	04/28/15	16:00	50.0																							
266091-006	MET26	04/17/15	14:27	5.0	+	+	+	+	+	+	+	+	+	+	+	+			+	+				+	+	+	
266091-006	MET54	04/20/15	17:28	1.0																+							
266091-006	MET16	04/21/15	00:35	5.0										+						+			+				
266091-006	MET26	04/21/15	17:10	500.0																							
266091-006	MET26	04/22/15	12:45	5000					+							+						+	+				
266091-007	MET26	04/17/15	14:32	5.0		+	+	+	+	+				+	+							+		+		+	
266091-007	MET54	04/20/15	17:30	1.0																+							
266091-007	MET16	04/21/15	00:42	5.0	+						+	+	+						+	+	+		+		+		
266091-007	MET26	04/21/15	17:15	500.0																							
266091-007	MET26	04/22/15	12:50	5000					+							+						+	+				
266091-008	MET26	04/17/15	14:37	5.0	+	+	+	+	+	+	+	+	+	+	+	+			+	+				+	+	+	
266091-008	MET54	04/20/15	17:35	1.0																+							
266091-008	MET16	04/21/15	01:08	5.0										+						+			+	+			
266091-008	MET26	04/21/15	18:04	5.0																							
266091-008	MET26	04/22/15	14:41	5.0																							

REPORTING SUMMARY FOR 266091 METALS Filtrate
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	A	S	A	B	B	C	C	C	C	C	F	P	M	M	H	M	N	K	S	A	N	T	V	Z	
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	O	I	E	G	A	L	N			
266091-008	MET26	04/23/15	15:15	10.0																								
266091-008	MET26	04/24/15	12:56	10.0																								
266091-008	MET26	04/27/15	13:34	10.0																								
266091-008	MET26	04/28/15	16:05	50.0																								
266091-009	MET26	04/17/15	14:41	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266091-009	MET54	04/20/15	17:36	1.0																								
266091-009	MET16	04/20/15	17:40	500.0																								
266091-009	MET16	04/21/15	01:15	5.0										+														
266091-009	MET26	04/21/15	18:14	5.0																								
266091-009	MET26	04/22/15	14:46	5.0																								
266091-009	MET26	04/23/15	15:24	10.0																								
266091-009	MET26	04/24/15	13:06	50.0																								
266091-009	MET26	04/27/15	13:39	50.0																								
266091-009	MET26	04/28/15	16:09	50.0																								
266091-010	MET26	04/17/15	15:01	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266091-010	MET54	04/20/15	17:37	1.0																								
266091-010	MET16	04/20/15	17:47	500.0																								
266091-010	MET16	04/21/15	01:28	5.0										+														
266091-010	MET26	04/21/15	18:23	5.0																								
266091-010	MET26	04/22/15	14:50	5.0																								
266091-010	MET26	04/23/15	15:34	10.0																								
266091-010	MET26	04/24/15	13:15	10.0																								
266091-010	MET26	04/27/15	13:44	10.0																								
266091-010	MET26	04/28/15	16:14	50.0																								
266091-010	MET26	04/28/15	19:48	50.0																								
266091-012	MET26	04/17/15	15:06	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266091-012	MET54	04/20/15	17:39	1.0																								
266091-012	MET16	04/21/15	01:41	5.0										+														
266091-012	MET26	04/21/15	18:33	5.0																								
266091-012	MET26	04/22/15	14:55	5.0																								
266091-012	MET26	04/23/15	15:43	10.0																								
266091-012	MET26	04/24/15	13:25	10.0																								
266091-012	MET26	04/27/15	13:49	10.0																								
266091-012	MET26	04/28/15	16:19	50.0																								
QC784570	MET26	04/17/15	12:29	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
QC784570	MET16	04/20/15	14:56	5.0										+														
QC784571	MET26	04/17/15	12:33	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
QC784571	MET16	04/20/15	15:03	5.0										+														
QC784572	MET26	04/17/15	12:38	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
QC784572	MET16	04/20/15	15:09	5.0										+														
QC784573	MET26	04/17/15	13:02	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
QC784573	MET16	04/20/15	21:34	5.0										+														
QC784573	MET26	04/21/15	13:32	5.0																								
QC784573	MET26	04/22/15	13:13	5.0																								
QC784573	MET26	04/23/15	12:43	10.0																								

REPORTING SUMMARY FOR 266091 METALS Filtrate
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	A	S	A	B	B	C	C	C	C	F	P	M	M	H	M	N	K	S	A	N	T	V	Z
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	O	I	E	G	A	L	N	
QC784574	MET26	04/17/15	13:07	5.0	+	+	+	+	+	+	+	+	+	+					+	+			+	+	+	
QC784574	MET16	04/20/15	21:47	5.0						+		+			+	+			+				+	+		
QC784574	MET26	04/21/15	13:42	5.0																						
QC784574	MET26	04/22/15	13:18	5.0																						
QC784574	MET26	04/23/15	12:52	10.0																	+					
QC784575	MET26	04/17/15	13:11	25.0	+	+	+	+	+	+	+	+	+	+					+				+	+	+	
QC784575	MET16	04/20/15	17:08	2500						+					+	+							+			
QC784575	MET16	04/20/15	22:00	25.0									+						+			+		+		
QC784575	MET26	04/21/15	13:52	25.0																		+				
QC784575	MET26	04/22/15	13:22	25.0																						
QC784575	MET26	04/23/15	13:02	50.0																	+					
QC784575	MET26	04/24/15	11:30	50.0																						
QC784575	MET26	04/27/15	12:47	50.0																						
QC784576	MET26	04/17/15	13:16	5.0	+	+	+	+	+	+	+	+	+	+					+	+			+	+	+	
QC784576	MET16	04/20/15	17:14	500.0						+					+	+							+			
QC784576	MET16	04/20/15	22:07	5.0									+						+			+				
QC784576	MET26	04/21/15	14:01	5.0																						
QC784576	MET26	04/22/15	13:27	5.0																						
QC784576	MET26	04/23/15	13:11	10.0																		+				
QC784841	MET54	04/20/15	17:00	1.0															+							
QC784842	MET54	04/20/15	17:02	1.0															+							
QC784843	MET54	04/20/15	17:03	1.0															+							
QC784844	MET54	04/20/15	17:04	1.0															+							
QC784845	MET54	04/20/15	17:06	1.0															+							
QC784845	MET54	04/20/15	17:33	1.0															+							
QC784846	MET54	04/20/15	17:07	1.0															+							
QC784846	MET54	04/20/15	17:34	1.0															+							
QC784847	MET54	04/20/15	17:08	5.0															+							

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015154524

Instrument : MET26
 Method : EPA 6020

Begun : 04/17/15 07:24
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d17h00001	X	RINSE			04/17/15 07:24	1.0	1	
002	15d17h00002	TUN				04/17/15 07:28	1.0	2	
003	15d17h00003	X	RINSE			04/17/15 07:33	1.0	1	
004	15d17h00004	ICALBLK	CALBLANK			04/17/15 07:38	1.0	1	
005	15d17h00005	ICAL				04/17/15 07:43	1.0	3 1	
006	15d17h00006	ICAL				04/17/15 07:47	1.0	4 1	
007	15d17h00007	ICAL				04/17/15 07:52	1.0	5 1	
008	15d17h00008	ICAL				04/17/15 07:57	1.0	6 1	
009	15d17h00009	ICAL				04/17/15 08:01	1.0	7 1	
010	15d17h00010	ICAL				04/17/15 08:08	1.0	8 1	
011	15d17h00011	X	RINSE			04/17/15 08:13	1.0	1	
012	15d17h00012	ICV				04/17/15 08:19	1.0	9 1	
013	15d17h00013	XCRI				04/17/15 08:24	1.0	10 1	
014	15d17h00014	XICB				04/17/15 08:29	1.0	1	
015	15d17h00015	ICB				04/17/15 08:34	1.0	1	
016	15d17h00016	CRI				04/17/15 08:38	1.0	10 1	
017	15d17h00017	ICSA				04/17/15 08:43	1.0	11 1	8:CA=280000
018	15d17h00018	ICSAB				04/17/15 08:48	1.0	12 1	13:CA=290000
019	15d17h00019	X	RINSE			04/17/15 08:53	1.0	1	
020	15d17h00020	X	RINSE			04/17/15 09:00	1.0	1	
021	15d17h00021	X	RINSE			04/17/15 09:05	1.0	1	
022	15d17h00022	X	RINSE			04/17/15 09:10	1.0	1	
023	15d17h00023	X	RINSE			04/17/15 09:15	1.0	1	
024	15d17h00024	BLANK	QC784300	Filtrate	222258	04/17/15 09:19	5.0	1	
025	15d17h00025	BLANK	QC784301	Filtrate	222258	04/17/15 09:24	5.0	1	
026	15d17h00026	BS	QC784302	Filtrate	222258	04/17/15 09:29	5.0	1	
027	15d17h00027	BSD	QC784303	Filtrate	222258	04/17/15 09:33	5.0	1	
028	15d17h00028	X	RINSE			04/17/15 09:38	1.0	1	
029	15d17h00029	BLANK	QC784300	Filtrate	222258	04/17/15 09:43	5.0	1	
030	15d17h00030	BLANK	QC784301	Filtrate	222258	04/17/15 09:48	5.0	1	
031	15d17h00031	CCV				04/17/15 09:53	1.0	13 1	
032	15d17h00032	X	XCCB			04/17/15 09:58	1.0	1	
033	15d17h00033	CCB				04/17/15 10:03	1.0	1	
034	15d17h00034	MSS	265932-004	Filtrate	222258	04/17/15 10:07	5.0	1	4:NA=850000
035	15d17h00035	MS	QC784304	Filtrate	222258	04/17/15 10:12	5.0	1	4:NA=870000
036	15d17h00036	MSD	QC784305	Filtrate	222258	04/17/15 10:17	5.0	1	4:NA=840000
037	15d17h00037	MSS	266019-005	Filtrate	222258	04/17/15 10:21	5.0	1	3:NA=33000
038	15d17h00038	MS	QC784306	Filtrate	222258	04/17/15 10:26	5.0	1	4:NA=34000
039	15d17h00039	MSD	QC784307	Filtrate	222258	04/17/15 10:31	5.0	1	4:NA=38000
040	15d17h00040	SER	QC784308	Filtrate	222258	04/17/15 10:35	25.0	1	
041	15d17h00041	PDS	QC784309	Filtrate	222258	04/17/15 10:40	5.0	14 15 16 1	1:NA=46000
042	15d17h00042	MSS	266019-005	Filtrate	222258	04/17/15 10:45	500.0	1	
043	15d17h00043	SER	QC784308	Filtrate	222258	04/17/15 10:50	2500	1	
044	15d17h00044	CCV				04/17/15 10:55	1.0	13 1	
045	15d17h00045	X	XCCB			04/17/15 10:59	1.0	1	
046	15d17h00046	CCB				04/17/15 11:04	1.0	1	
047	15d17h00047	PDS	QC784309	Filtrate	222258	04/17/15 11:09	500.0	14 15 16 1	
048	15d17h00048	SAMPLE	265932-001	Filtrate	222258	04/17/15 11:14	5.0	1	4:NA=160000
049	15d17h00049	SAMPLE	265932-003	Filtrate	222258	04/17/15 11:19	5.0	1	7:NA=310000
050	15d17h00050	SAMPLE	265932-003	Filtrate	222258	04/17/15 11:23	500.0	1	
051	15d17100001	X	RINSE			04/17/15 11:41	1.0	1	
052	15d17100002	SAMPLE	265939-001	Filtrate	222258	04/17/15 11:46	5.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015154524

Instrument : MET26
 Method : EPA 6020

Begun : 04/17/15 07:24
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d17100003	SAMPLE	265994-001	Filtrate	222258	04/17/15 11:50	5.0	1	4:NA=580000
054	15d17100004	CCV				04/17/15 11:55	1.0	13 1	
055	15d17100005	X	XCCB			04/17/15 12:00	1.0	1	
056	15d17100006	CCB				04/17/15 12:05	1.0	1	
057	15d17100007	ICSA				04/17/15 12:09	1.0	11 1	8:CA=270000
058	15d17100008	ICSAB				04/17/15 12:14	1.0	12 1	11:CA=270000
059	15d17100009	X	RINSE			04/17/15 12:19	1.0	1	
060	15d17100010	X	RINSE			04/17/15 12:24	1.0	1	
061	15d17100011	BLANK	QC784570	Filtrate	222325	04/17/15 12:29	5.0	1	
062	15d17100012	BS	QC784571	Filtrate	222325	04/17/15 12:33	5.0	1	
063	15d17100013	BSD	QC784572	Filtrate	222325	04/17/15 12:38	5.0	1	
064	15d17100014	CCV				04/17/15 12:43	1.0	13 1	
065	15d17100015	X	XCCB			04/17/15 12:48	1.0	1	
066	15d17100016	CCB				04/17/15 12:53	1.0	1	
067	15d17100017	MSS	266087-001	Filtrate	222325	04/17/15 12:57	5.0	1	4:NA=33000
068	15d17100018	MS	QC784573	Filtrate	222325	04/17/15 13:02	5.0	1	4:NA=35000
069	15d17100019	MSD	QC784574	Filtrate	222325	04/17/15 13:07	5.0	1	4:NA=33000
070	15d17100020	SER	QC784575	Filtrate	222325	04/17/15 13:11	25.0	1	
071	15d17100021	PDS	QC784576	Filtrate	222325	04/17/15 13:16	5.0	14 15 16 1	
072	15d17100022	SAMPLE	266068-003	Filtrate	222325	04/17/15 13:21	5.0	1	
073	15d17100023	SAMPLE	266068-005	Filtrate	222325	04/17/15 13:25	5.0	1	
074	15d17100024	SAMPLE	266087-002	Filtrate	222325	04/17/15 13:30	5.0	1	
075	15d17100025	SAMPLE	266087-003	Filtrate	222325	04/17/15 13:35	5.0	1	
076	15d17100026	SAMPLE	266087-004	Filtrate	222325	04/17/15 13:40	5.0	1	1:NA=20000
077	15d17100027	CCV				04/17/15 13:44	1.0	13 1	
078	15d17100028	X	XCCB			04/17/15 13:49	1.0	1	
079	15d17100029	CCB				04/17/15 13:54	1.0	1	
080	15d17100030	SAMPLE	266087-006	Filtrate	222325	04/17/15 13:59	5.0	1	
081	15d17100031	SAMPLE	266087-007	Filtrate	222325	04/17/15 14:04	5.0	1	
082	15d17100032	SAMPLE	266087-009	Filtrate	222325	04/17/15 14:08	5.0	1	4:CA=51000
083	15d17100033	SAMPLE	266091-002	Filtrate	222325	04/17/15 14:13	5.0	1	4:NA=130000
084	15d17100034	SAMPLE	266091-004	Filtrate	222325	04/17/15 14:18	5.0	1	1:NA=22000
085	15d17100035	SAMPLE	266091-005	Filtrate	222325	04/17/15 14:22	5.0	1	1:NA=21000
086	15d17100036	SAMPLE	266091-006	Filtrate	222325	04/17/15 14:27	5.0	1	4:NA=1500000
087	15d17100037	SAMPLE	266091-007	Filtrate	222325	04/17/15 14:32	5.0	1	4:NA=1500000
088	15d17100038	SAMPLE	266091-008	Filtrate	222325	04/17/15 14:37	5.0	1	
089	15d17100039	SAMPLE	266091-009	Filtrate	222325	04/17/15 14:41	5.0	1	1:NA=67000
090	15d17100040	CCV				04/17/15 14:46	1.0	13 1	
091	15d17100041	X	XCCB			04/17/15 14:51	1.0	1	
092	15d17100042	CCB				04/17/15 14:56	1.0	1	
093	15d17100043	SAMPLE	266091-010	Filtrate	222325	04/17/15 15:01	5.0	1	4:NA=38000
094	15d17100044	SAMPLE	266091-012	Filtrate	222325	04/17/15 15:06	5.0	1	
095	15d17100045	CCV				04/17/15 15:10	1.0	13 1	
096	15d17100046	X	XCCB			04/17/15 15:15	1.0	1	
097	15d17100047	CCB				04/17/15 15:20	1.0	1	
098	15d17100048	ICSA				04/17/15 15:25	1.0	11 1	8:CA=270000
099	15d17100049	ICSAB				04/17/15 15:30	1.0	12 1	8:CA=260000
100	15d17100050	X	RINSE			04/17/15 15:34	1.0	1	
101	15d17100051	X	RINSE			04/17/15 15:39	1.0	1	
102	15d17100052	CCV				04/17/15 15:44	1.0	13 1	
103	15d17100053	X	XCCB			04/17/15 15:49	1.0	1	
104	15d17100054	CCB				04/17/15 15:54	1.0	1	

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015154524

Date : 04/17/15
 Sequence : MET26 15d17h00

Reference : 15d17h00004
 Analyzed : 04/17/15 07:38

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	112485	303675	34509	236448	62158	17130	651653	701152	596632	1014322
		LOWER LIMIT	33746	91103	10353	70934	18647	5139	195496	210346	178990	304297
		UPPER LIMIT	134982	364410	41411	283738	74590	20556	781984	841382	715958	1217186
015	ICB		112798	304346	34452	227026	60973	17081	652261	702636	594809	1028178
017	ICSA		88192	265280	30598	217113	56542	17688	523441	540154	523288	863868
018	ICSAB		81483	246209	28720	203592	54188	16654	497556	513748	493160	851042
024	BLANK	QC784300	94489	264147	30993	195592	51813	14966	572480	620157	525477	893813
025	BLANK	QC784301	96229	268635	31212	204068	53756	15107	578016	628444	533112	904132
026	BS	QC784302	95964	270797	31082	207251	54388	15388	575582	623902	529443	909846
027	BSD	QC784303	95637	266392	31073	205652	54091	15204	571099	618537	526152	904112
029	BLANK	QC784300	96886	268117	31274	205781	53738	15097	574871	627472	531511	905569
030	BLANK	QC784301	96466	265119	31347	205233	54181	15200	574781	624029	527240	900439
031	CCV		91728	260876	30735	203168	53232	14885	552065	592639	516810	884753
033	CCB		99089	270340	31286	207872	54872	15394	587009	643260	536906	921958
034	MSS	265932-004	77715	243196	26363	182227	45336	12486	486115	490906	467504	806867
035	MS	QC784304	76631	240502	26918	186218	45929	13016	485595	495267	474565	814949
036	MSD	QC784305	77856	258282	28807	185006	46651	13390	508174	512906	496566	851271
037	MSS	266019-005	82760	247349	28414	192269	50362	13692	529646	568971	492772	832066
038	MS	QC784306	87751	252413	28300	196724	50891	13882	537998	574033	501757	865451
039	MSD	QC784307	85512	247208	27518	187125	49441	13673	523097	560564	491691	858980
040	SER	QC784308	89007	250884	28146	190305	51371	14101	546326	587927	502164	863583
041	PDS	QC784309	88065	253655	25983	187635	49159	13037	525784	559838	492228	861312
042	MSS	266019-005	90456	252297	26412	156442	44825	13710	549633	598645	501021	873699
043	SER	QC784308	90899	249805	28212	190121	50768	14088	545566	590770	499463	847526
044	CCV		93358	266746	29456	193961	50538	14379	560890	594935	525504	900811
046	CCB		89545	236910	28736	198498	51559	14048	520158	568444	473412	823316
047	PDS	QC784309	94039	261125	27648	191314	50265	13727	549851	590035	509368	885275
048	SAMPLE	265932-001	79664	228497	26178	178264	45889	12706	473339	494890	449693	783032
049	SAMPLE	265932-003	78302	240966	26279	182054	46338	13556	481848	193422 *	623720	817793
050	SAMPLE	265932-003	90899	249325	27489	187762	49941	13632	539862	591243	498135	874300
053	SAMPLE	265994-001	104056	313046	37755	232121	60438	17157	602004	614079	578095	951060
054	CCV		124661	350831	38996	260418	68103	19110	697984	808461	667266	1114439
056	CCB		126865	342737	39544	264029	68914	18929	704819	741117	652440	1101653
057	ICSA		106798	318293	35926	246420	62906	19851	603096	672824	605162	1018321
058	ICSAB		93084	284927	33537	234611	60783	18738	551622	614378	548142	925968
061	BLANK	QC784570	101750	289765	35232	218881	58507	16399	601238	653678	561012	944940
062	BS	QC784571	98821	279328	35274	229409	58967	16382	579608	636130	539306	917004
063	BSD	QC784572	101601	287185	35254	228328	58475	16493	595950	649635	553211	947442
064	CCV		97091	280900	34488	223517	56920	16064	568044	617933	538491	923700
066	CCB		103150	290740	35445	229085	59016	16459	607782	661375	561626	956307
067	MSS	266087-001	92962	269979	33179	222874	56552	15582	547365	577923	515226	880525
068	MS	QC784573	90042	257602	33391	215912	54505	15649	518028	564389	493107	845034
069	MSD	QC784574	100833	288546	33539	215902	55094	15947	578486	617874	548238	943948
070	SER	QC784575	100012	281859	33880	221352	58731	16327	584101	628501	540748	919280
071	PDS	QC784576	95285	275884	32978	239959	58471	15261	544018	597986	519984	895329
072	SAMPLE	266068-003	106438	292033	33934	225035	58284	16145	600131	665480	554877	950949
073	SAMPLE	266068-005	107740	295520	33778	223409	58000	16181	608720	673262	560806	964831
074	SAMPLE	266087-002	104958	291553	34733	232446	59098	16581	598064	645452	553759	952094
075	SAMPLE	266087-003	101260	291238	33577	220172	56943	15951	586581	637450	544959	936986
076	SAMPLE	266087-004	103104	285924	33620	222676	57828	16244	592574	637923	546312	948422
077	CCV		110506	297679	36444	231228	59379	17021	610595	662364	572477	989569

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015154524

Date : 04/17/15
 Sequence : MET26 15d17h00

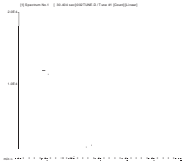
Reference : 15d17h00004
 Analyzed : 04/17/15 07:38

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
079	CCB		114255	305587	34450	248060	63273	16519	636580	691490	585027	1020517
080	SAMPLE	266087-006	106768	298072	33642	218455	57415	16113	596759	648757	552661	963678
081	SAMPLE	266087-007	112017	308332	34159	221308	57216	16020	633704	687432	585243	1005656
082	SAMPLE	266087-009	104622	294807	32655	213567	55224	15744	593599	638623	557319	964018
083	SAMPLE	266091-002	106014	293388	32172	221271	55616	15467	572817	590576	554173	946606
084	SAMPLE	266091-004	126463	324823	32284	221347	58574	16241	657056	710675	606547	1051871
085	SAMPLE	266091-005	122591	321198	33486	240199	63393	16787	652610	704048	602390	1045448
086	SAMPLE	266091-006	125320	350071	36227	234189	58616	17151	651284	602057	643936	1030363
087	SAMPLE	266091-007	124927	384207 *	42035 *	278379	67286	19127	709563	634797	705034	1112220
088	SAMPLE	266091-008	96443	299819	37270	260461	65841	17063	633358	672811	588679	999944
089	SAMPLE	266091-009	88994	285343	35545	232361	59142	16396	580909	621123	547442	929504
090	CCV		96280	297098	35951	234568	59344	16979	611549	646705	580399	997753
092	CCB		93910	280447	34627	225620	58154	16291	588058	636474	547785	918549
093	SAMPLE	266091-010	89818	270511	33180	215785	55667	15637	553117	588479	521248	886789
094	SAMPLE	266091-012	94865	285257	34257	220301	57196	16188	597067	642372	555717	936111
095	CCV		96154	292348	36116	230327	58798	16845	594809	631091	567207	958412
097	CCB		101569	294784	35870	238735	61572	17012	619023	663783	572295	959423
098	ICSA		85811	277038	33481	225242	57577	18561	531669	546905	534717	899151
099	ICSAB		85059	273326	31969	219557	56939	17899	533339	549791	536271	900695
102	CCV		92489	279245	32022	232426	58910	15482	579458	613252	545460	935336
104	CCB		95103	279544	33329	220071	57403	15726	592389	642183	548361	933170
105	ICSA		73507	237425	29495	157606	43654	16363	460903	478843	464079	786901
106	ICSAB		77170	246259	28916	198630	51503	16070	490189	504716	485907	835026

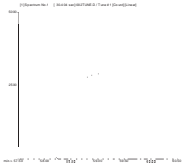
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D17h00.B\002TUNE.D
 Date Acquired: Apr 17 2015 07:28 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

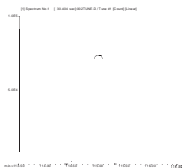
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	10839	10967	10969	11195	10773	0.23	5.00	
59 Co	16781	16626	16799	16605	16526	1.51	5.00	
115 In	366874	366447	372198	370343	374536	1.12	5.00	
205 Tl	21859	21868	21778	21811	21485	1.50	5.00	



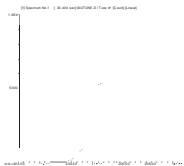
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266091 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015154524001
 Units : ug/L
 Date : 17-APR-2015 07:38
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d17h00005	1015154524005	17-APR-2015 07:43	S27043, S26751	
L2	15d17h00006	1015154524006	17-APR-2015 07:47	S27044, S26751	
L3	15d17h00007	1015154524007	17-APR-2015 07:52	S27045, S26751	
L4	15d17h00008	1015154524008	17-APR-2015 07:57	S27046, S26751	
L5	15d17h00009	1015154524009	17-APR-2015 08:01	S27041, S26751	
L6	15d17h00010	1015154524010	17-APR-2015 08:08	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0054	0.0055	0.0055	0.0046	0.0045	0.0045	BLNK	-0.5249	221.861		0.0050	1.000	0.995	
Antimony	A	0.0030	0.0030	0.0029	0.0028	0.0029	0.0029	BLNK	-0.0191	350.085		0.0029	1.000	0.995	
Barium	A	7.3E-4	6.1E-4	6.9E-4	6.7E-4	6.9E-4	6.8E-4	BLNK	-0.0145	1464.36		6.8E-4	1.000	0.995	
Beryllium	A	0.0038	0.0037	0.0038	0.0038	0.0038	0.0039	BLNK	-0.0153	257.404		0.0038	1.000	0.995	
Cadmium	A	8.4E-4	7.8E-4	7.2E-4	7.4E-4	7.4E-4	7.3E-4	BLNK	-0.0047	1365.09		7.6E-4	1.000	0.995	
Calcium	A	6.3E-4	3.0E-4	2.3E-4	1.9E-4	1.8E-4	1.7E-4	BLNK	-27.198	5938.57		2.8E-4	0.998	0.995	
Lead	A	0.0159	0.0083	0.0076	0.0068	0.0065	0.0063	BLNK	-0.1420	157.027		0.0086	1.000	0.995	
Magnesium	A	0.0068	0.0050	0.0046	0.0038	0.0037	0.0036	BLNK	-6.3703	274.163		0.0046	1.000	0.995	
Molybdenum	A	0.0035	0.0023	0.0023	0.0021	0.0021	0.0021	BLNK	-0.0771	465.697		0.0024	1.000	0.995	
Potassium	A	0.1047	0.0262	0.0159	0.0060	0.0051	0.0050	BLNK	-205.98	201.745		0.0272	1.000	0.995	
Silver	A	0.0041	0.0033	0.0035	0.0034	0.0034	0.0033	BLNK	-0.0056	298.062		0.0035	1.000	0.995	
Thallium	A	0.0083	0.0072	0.0070	0.0069	0.0071	0.0072	BLNK	-0.0091	139.942		0.0073	1.000	0.995	
Arsenic	E	0.0091	0.0060	0.0057	0.0053	0.0052	0.0050	BLNK	-0.1185	198.292		0.0061	1.000	0.995	
Chromium	E	0.0633	0.0311	0.0257	0.0223	0.0216	0.0204	BLNK	-0.1998	48.5186		0.0307	0.999	0.995	
Cobalt	E	0.0440	0.0371	0.0351	0.0332	0.0324	0.0304	BLNK	-0.0338	32.4714		0.0354	0.999	0.995	
Copper	E	0.7928	0.1665	0.0923	0.0302	0.0233	0.0215	BLNK	-4.4859	47.0674		0.1878	0.999	0.995	
Manganese	E	0.0328	0.0175	0.0165	0.0149	0.0146	0.0139	BLNK	-0.1575	71.3080		0.0184	0.999	0.995	
Nickel	E	0.0196	0.0120	0.0108	0.0091	0.0086	0.0080	BLNK	-0.1449	122.765		0.0114	0.999	0.995	
Sodium	E	0.0234	0.0089	0.0067	0.0049	0.0043	0.0040	BLNK	-47.266	247.777		0.0087	0.999	0.995	
Vanadium	E	0.0607	0.0267	0.0232	0.0182	0.0179	0.0171	BLNK	-0.2712	57.9786		0.0273	0.999	0.995	
Zinc	E		0.0158	0.0056	0.0046	0.0043	0.0040	BLNK	-0.2807	246.665		0.0069	0.998	0.995	
Iron	H	0.0130	0.0089	0.0084	0.0066	0.0065	0.0062	BLNK	-8.2896	159.480		0.0083	1.000	0.995	
Selenium	H	0.0011	9.8E-4	0.0011	9.9E-4	9.6E-4	9.4E-4	BLNK	-0.0152	1061.23		0.0010	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	15	50.000	20	100.00	21	1000.0	3	10000	0	20000	0
Antimony	A	0.1000	-15	0.5000	2	1.0000	-2	10.000	-1	100.00	0	200.00	0
Barium	A	0.1000	-8	0.5000	-14	1.0000	0	10.000	-1	100.00	1	200.00	0
Beryllium	A	0.1000	-17	0.5000	-7	1.0000	-4	10.000	-3	100.00	-1	200.00	0
Cadmium	A	0.1000	10	0.5000	6	1.0000	-2	10.000	1	100.00	1	200.00	0
Calcium	A	10.000	5	50.000	23	100.00	10	1000.0	8	10000	8	20000	-2
Lead	A	0.1000	8	0.5000	2	1.0000	6	10.000	5	100.00	2	200.00	-1
Magnesium	A	10.000	23	50.000	24	100.00	20	1000.0	5	10000	0	20000	0
Molybdenum	A	0.1000	-15	0.5000	-7	1.0000	-1	10.000	-3	100.00	0	200.00	0
Potassium	A	10.000	-49	50.000	17	100.00	15	1000.0	1	10000	1	20000	0
Silver	A	0.1000	18	0.5000	-1	1.0000	5	10.000	3	100.00	2	200.00	0
Thallium	A	0.0500	-2	0.2500	-2	0.5000	-4	5.0000	-3	50.000	-1	100.00	0
Arsenic	E	0.1000	-39	0.5000	-4	1.0000	1	10.000	4	100.00	3	200.00	-1
Chromium	E	0.1000	8	0.5000	11	1.0000	5	10.000	6	100.00	5	200.00	-1
Cobalt	E	0.1000	9	0.5000	14	1.0000	11	10.000	7	100.00	5	200.00	-1
Copper	E	0.1000	-854	0.5000	-213	1.0000	-114	10.000	-3	100.00	5	200.00	-1
Manganese	E	0.1000	-23	0.5000	-7	1.0000	2	10.000	5	100.00	4	200.00	-1
Nickel	E	0.1000	-4	0.5000	19	1.0000	18	10.000	10	100.00	6	200.00	-1
Sodium	E	10.000	6	50.000	26	100.00	19	1000.0	18	10000	5	20000	-1
Vanadium	E	0.1000	-19	0.5000	1	1.0000	7	10.000	3	100.00	4	200.00	-1
Zinc	E			0.5000	233	1.0000	11	10.000	10	100.00	6	200.00	-2
Iron	H	10.000	25	50.000	25	100.00	26	1000.0	4	10000	3	20000	-1
Selenium	H	0.1000	6	0.5000	1	1.0000	13	10.000	5	100.00	2	200.00	-1

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015154524001

Cal Date : 17-APR-2015

ICV 1015154524012 (15d17h00012 17-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10120	ug/L	1	10	
Antimony	A	100.0	101.4	ug/L	1	10	
Barium	A	100.0	101.3	ug/L	1	10	
Beryllium	A	100.0	101.0	ug/L	1	10	
Cadmium	A	100.0	101.3	ug/L	1	10	
Calcium	A	10000	10810	ug/L	8	10	
Lead	A	100.0	101.7	ug/L	2	10	
Magnesium	A	10000	10160	ug/L	2	10	
Molybdenum	A	100.0	100.7	ug/L	1	10	
Potassium	A	10000	10120	ug/L	1	10	
Silver	A	100.0	102.0	ug/L	2	10	
Thallium	A	50.00	50.01	ug/L	0	10	
Arsenic	E	100.0	103.8	ug/L	4	10	
Chromium	E	100.0	103.7	ug/L	4	10	
Cobalt	E	100.0	104.4	ug/L	4	10	
Copper	E	100.0	103.7	ug/L	4	10	
Manganese	E	100.0	103.8	ug/L	4	10	
Nickel	E	100.0	105.2	ug/L	5	10	
Sodium	E	10000	10500	ug/L	5	10	
Vanadium	E	100.0	103.5	ug/L	4	10	
Zinc	E	100.0	106.4	ug/L	6	10	
Iron	H	10000	10120	ug/L	1	10	
Selenium	H	100.0	100.2	ug/L	0	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524015 File : 15d17h00015 Time : 17-APR-2015 08:34
 Cal : 1015154524001 Caldate : 17-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	---	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	112798	0.28
Scandium	A	303675	304346	0.22
Scandium	E	34509	34452	-0.17
Scandium	H	236448	227026	-3.98
Germanium	H	62158	60973	-1.91
Germanium	E	17130	17081	-0.29
Indium	A	651653	652261	0.09
Bismuth	A	701152	702636	0.21
Yttrium	A	596632	594809	-0.31
Terbium	A	1014322	1028178	1.37

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524054 File : 15d17100004 Time : 17-APR-2015 11:55
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0050	0.0045	10000	10060	ug/L	1	10	
Antimony	A	0.0029	0.0029	100.0	100.4	ug/L	0	10	
Barium	A	6.8E-4	6.9E-4	100.0	101.1	ug/L	1	10	
Beryllium	A	0.0038	0.0039	100.0	99.81	ug/L	0	10	
Cadmium	A	7.6E-4	7.4E-4	100.0	100.8	ug/L	1	10	
Calcium	A	2.8E-4	1.8E-4	10000	10640	ug/L	6	10	
Lead	A	0.0086	0.0064	100.0	99.95	ug/L	0	10	
Magnesium	A	0.0046	0.0037	10000	10190	ug/L	2	10	
Molybdenum	A	0.0024	0.0021	100.0	98.43	ug/L	-2	10	
Potassium	A	0.0272	0.0051	10000	9993	ug/L	0	10	
Silver	A	0.0035	0.0033	100.0	97.16	ug/L	-3	10	
Thallium	A	0.0073	0.0063	50.00	44.04	ug/L	-12	10	c- ***
Arsenic	E	0.0061	0.0051	100.0	102.0	ug/L	2	10	
Chromium	E	0.0307	0.0217	100.0	105.3	ug/L	5	10	
Cobalt	E	0.0354	0.0328	100.0	106.4	ug/L	6	10	
Copper	E	0.1878	0.0274	100.0	124.3	ug/L	24	10	c+ ***
Manganese	E	0.0184	0.0147	100.0	104.6	ug/L	5	10	
Nickel	E	0.0114	0.0087	100.0	106.8	ug/L	7	10	
Sodium	E	0.0087	0.0044	10000	10940	ug/L	9	10	
Vanadium	E	0.0273	0.0181	100.0	104.9	ug/L	5	10	
Zinc	E	0.0069	0.0043	100.0	105.0	ug/L	5	10	
Iron	H	0.0083	0.0065	10000	10370	ug/L	4	10	
Selenium	H	0.0010	9.5E-4	100.0	101.3	ug/L	1	10	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	124661	10.82
Scandium	A	303675	350831	15.53
Scandium	E	34509	38996	13.00
Scandium	H	236448	260418	10.14
Germanium	H	62158	68103	9.56
Germanium	E	17130	19110	11.56
Indium	A	651653	697984	7.11
Bismuth	A	701152	808461	15.30
Yttrium	A	596632	667266	11.84
Terbium	A	1014322	1114439	9.87

+ = high bias - = low bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015154524056
Cal : 1015154524001

File : 15d17100006
Caldate : 17-APR-2015

IDF : 1.0
Time : 17-APR-2015 12:05

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	10.27	10.00	10.00	ug/L	CCB ***
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.05060]	0.1000	---	ug/L	!CCB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	0.6992	0.1000	0.05000	ug/L	CCB ***
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	19.29	0.1000	0.5000	ug/L	CCB ***
Manganese	E	[0.06900]	0.1000	0.05000	ug/L	!CCB
Nickel	E	0.1369	0.1000	0.2000	ug/L	CCB ***
Sodium	E	41.17	10.00	15.00	ug/L	CCB ***
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	126865	12.78
Scandium	A	303675	342737	12.86
Scandium	E	34509	39544	14.59
Scandium	H	236448	264029	11.66
Germanium	H	62158	68914	10.87
Germanium	E	17130	18929	10.50
Indium	A	651653	704819	8.16
Bismuth	A	701152	741117	5.70
Yttrium	A	596632	652440	9.35
Terbium	A	1014322	1101653	8.61

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524057 File : 15d17100007 Time : 17-APR-2015 12:09
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4461	0.1000	ug/L	
Barium	A	1.759	0.1000	ug/L	
Beryllium	A	[0.03020]	0.1000	ug/L	
Cadmium	A	4.113	0.1000	ug/L	
Lead	A	0.1947	0.1000	ug/L	
Silver	A	3.971	0.1000	ug/L	
Thallium	A	[0.01430]	0.05000	ug/L	
Arsenic	E	0.6011	0.1000	ug/L	
Chromium	E	0.9012	0.1000	ug/L	
Cobalt	E	1.149	0.1000	ug/L	
Copper	E	19.57	0.1000	ug/L	
Manganese	E	7.253	0.1000	ug/L	
Nickel	E	1.435	0.1000	ug/L	
Vanadium	E	0.2058	0.1000	ug/L	
Zinc	E	3.514	0.5000	ug/L	
Selenium	H	0.1684	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	95320	ug/L	95
Calcium	A	300000	266300	ug/L	89
Magnesium	A	100000	94150	ug/L	94
Molybdenum	A	2000	1860	ug/L	93
Potassium	A	100000	93790	ug/L	94
Sodium	E	250000	246800	ug/L	99
Phosphorus	E	100000	100600	ug/L	101
Iron	H	250000	234100	ug/L	94

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	106798	-5.06
Scandium	A	303675	318293	4.81
Scandium	E	34509	35926	4.11
Scandium	H	236448	246420	4.22
Germanium	H	62158	62906	1.20
Germanium	E	17130	19851	15.88
Indium	A	651653	603096	-7.45
Bismuth	A	701152	672824	-4.04
Yttrium	A	596632	605162	1.43
Terbium	A	1014322	1018321	0.39

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015154524058 File : 15d17100008
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 17-APR-2015 12:14

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	99480	ug/L	-1		
Cadmium	A	100.0	101.7	ug/L	2	20	
Calcium	A	300000	274800	ug/L	-8		
Magnesium	A	100000	97960	ug/L	-2		
Molybdenum	A	2000	1914	ug/L	-4		
Potassium	A	100000	97270	ug/L	-3		
Silver	A	50.00	49.37	ug/L	-1	20	
Arsenic	E	100.0	90.67	ug/L	-9	20	
Chromium	E	200.0	199.9	ug/L	0	20	
Cobalt	E	200.0	194.5	ug/L	-3	20	
Copper	E	200.0	207.8	ug/L	4	20	
Manganese	E	200.0	203.1	ug/L	2	20	
Nickel	E	200.0	190.9	ug/L	-5	20	
Sodium	E	250000	253100	ug/L	1		
Vanadium	E	200.0	203.2	ug/L	2	20	
Zinc	E	100.0	90.18	ug/L	-10	20	
Iron	H	250000	233400	ug/L	-7		
Selenium	H	100.0	94.65	ug/L	-5	20	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	236448	234611	-0.78
Scandium	A	303675	284927	-6.17
Scandium	E	34509	33537	-2.82
Germanium	H	62158	60783	-2.21
Germanium	E	17130	18738	9.39
Indium	A	651653	551622	-15.35
Yttrium	A	596632	548142	-8.13

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524064 File : 15d17100014 Time : 17-APR-2015 12:43
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0050	0.0046	10000	10210	ug/L	2	10	
Antimony	A	0.0029	0.0029	100.0	100.1	ug/L	0	10	
Barium	A	6.8E-4	6.9E-4	100.0	100.3	ug/L	0	10	
Beryllium	A	0.0038	0.0041	100.0	106.7	ug/L	7	10	
Cadmium	A	7.6E-4	7.4E-4	100.0	100.8	ug/L	1	10	
Calcium	A	2.8E-4	1.8E-4	10000	10620	ug/L	6	10	
Lead	A	0.0086	0.0065	100.0	102.3	ug/L	2	10	
Magnesium	A	0.0046	0.0038	10000	10390	ug/L	4	10	
Molybdenum	A	0.0024	0.0021	100.0	99.09	ug/L	-1	10	
Potassium	A	0.0272	0.0051	10000	10060	ug/L	1	10	
Silver	A	0.0035	0.0034	100.0	102.3	ug/L	2	10	
Thallium	A	0.0073	0.0070	50.00	49.03	ug/L	-2	10	
Arsenic	E	0.0061	0.0052	100.0	103.5	ug/L	4	10	
Chromium	E	0.0307	0.0211	100.0	102.1	ug/L	2	10	
Cobalt	E	0.0354	0.0310	100.0	100.8	ug/L	1	10	
Copper	E	0.1878	0.0254	100.0	115.0	ug/L	15	10	c+ ***
Manganese	E	0.0184	0.0144	100.0	102.3	ug/L	2	10	
Nickel	E	0.0114	0.0083	100.0	101.7	ug/L	2	10	
Sodium	E	0.0087	0.0045	10000	11080	ug/L	11	10	c+ ***
Vanadium	E	0.0273	0.0177	100.0	102.4	ug/L	2	10	
Zinc	E	0.0069	0.0041	100.0	99.88	ug/L	0	10	
Iron	H	0.0083	0.0065	10000	10280	ug/L	3	10	
Selenium	H	0.0010	9.7E-4	100.0	102.7	ug/L	3	10	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	97091	-13.69
Scandium	A	303675	280900	-7.50
Scandium	E	34509	34488	-0.06
Scandium	H	236448	223517	-5.47
Germanium	H	62158	56920	-8.43
Germanium	E	17130	16064	-6.22
Indium	A	651653	568044	-12.83
Bismuth	A	701152	617933	-11.87
Yttrium	A	596632	538491	-9.74
Terbium	A	1014322	923700	-8.93

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015154524066
Cal : 1015154524001

File : 15d17100016
Caldate : 17-APR-2015

IDF : 1.0
Time : 17-APR-2015 12:53

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	0.1421	0.1000	---	ug/L	CCB ***
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	0.3252	0.1000	0.05000	ug/L	CCB ***
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	13.35	0.1000	0.5000	ug/L	CCB ***
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	28.49	10.00	15.00	ug/L	CCB ***
Vanadium	E	0.1039	0.1000	0.05000	ug/L	CCB ***
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	103150	-8.30
Scandium	A	303675	290740	-4.26
Scandium	E	34509	35445	2.71
Scandium	H	236448	229085	-3.11
Germanium	H	62158	59016	-5.05
Germanium	E	17130	16459	-3.92
Indium	A	651653	607782	-6.73
Bismuth	A	701152	661375	-5.67
Yttrium	A	596632	561626	-5.87
Terbium	A	1014322	956307	-5.72

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524077 File : 15d17100027 Time : 17-APR-2015 13:44
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0050	0.0047	10000	10370	ug/L	4	10	
Antimony	A	0.0029	0.0029	100.0	101.9	ug/L	2	10	
Barium	A	6.8E-4	6.9E-4	100.0	101.5	ug/L	2	10	
Beryllium	A	0.0038	0.0039	100.0	99.73	ug/L	0	10	
Cadmium	A	7.6E-4	7.5E-4	100.0	101.8	ug/L	2	10	
Calcium	A	2.8E-4	1.8E-4	10000	10830	ug/L	8	10	
Lead	A	0.0086	0.0066	100.0	103.3	ug/L	3	10	
Magnesium	A	0.0046	0.0038	10000	10520	ug/L	5	10	
Molybdenum	A	0.0024	0.0022	100.0	100.1	ug/L	0	10	
Potassium	A	0.0272	0.0052	10000	10280	ug/L	3	10	
Silver	A	0.0035	0.0034	100.0	102.8	ug/L	3	10	
Thallium	A	0.0073	0.0071	50.00	49.56	ug/L	-1	10	
Arsenic	E	0.0061	0.0050	100.0	99.80	ug/L	0	10	
Chromium	E	0.0307	0.0202	100.0	97.62	ug/L	-2	10	
Cobalt	E	0.0354	0.0302	100.0	97.97	ug/L	-2	10	
Copper	E	0.1878	0.0228	100.0	102.9	ug/L	3	10	
Manganese	E	0.0184	0.0137	100.0	97.27	ug/L	-3	10	
Nickel	E	0.0114	0.0080	100.0	97.65	ug/L	-2	10	
Sodium	E	0.0087	0.0042	10000	10370	ug/L	4	10	
Vanadium	E	0.0273	0.0169	100.0	97.90	ug/L	-2	10	
Zinc	E	0.0069	0.0040	100.0	97.61	ug/L	-2	10	
Iron	H	0.0083	0.0063	10000	10050	ug/L	1	10	
Selenium	H	0.0010	9.5E-4	100.0	100.5	ug/L	1	10	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	110506	-1.76
Scandium	A	303675	297679	-1.97
Scandium	E	34509	36444	5.61
Scandium	H	236448	231228	-2.21
Germanium	H	62158	59379	-4.47
Germanium	E	17130	17021	-0.64
Indium	A	651653	610595	-6.30
Bismuth	A	701152	662364	-5.53
Yttrium	A	596632	572477	-4.05
Terbium	A	1014322	989569	-2.44

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524079 File : 15d17100029 Time : 17-APR-2015 13:54
 Cal : 1015154524001 Caldate : 17-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.06360]	0.1000	---	ug/L	!CCB
Potassium	A	11.23	10.00	10.00	ug/L	CCB ***
Silver	A	0.2894	0.1000	0.05000	ug/L	CCB ***
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	4.194	0.1000	0.5000	ug/L	CCB ***
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	21.52	10.00	15.00	ug/L	CCB ***
Vanadium	E	[0.08050]	0.1000	0.05000	ug/L	!CCB
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	114255	1.57
Scandium	A	303675	305587	0.63
Scandium	E	34509	34450	-0.17
Scandium	H	236448	248060	4.91
Germanium	H	62158	63273	1.79
Germanium	E	17130	16519	-3.57
Indium	A	651653	636580	-2.31
Bismuth	A	701152	691490	-1.38
Yttrium	A	596632	585027	-1.95
Terbium	A	1014322	1020517	0.61

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524090 File : 15d17100040 Time : 17-APR-2015 14:46
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0050	0.0045	10000	9974	ug/L	0	10	
Antimony	A	0.0029	0.0029	100.0	100.8	ug/L	1	10	
Barium	A	6.8E-4	6.7E-4	100.0	98.40	ug/L	-2	10	
Beryllium	A	0.0038	0.0043	100.0	110.1	ug/L	10	10	
Cadmium	A	7.6E-4	7.2E-4	100.0	98.54	ug/L	-1	10	
Calcium	A	2.8E-4	1.8E-4	10000	10450	ug/L	5	10	
Lead	A	0.0086	0.0063	100.0	98.22	ug/L	-2	10	
Magnesium	A	0.0046	0.0037	10000	10060	ug/L	1	10	
Molybdenum	A	0.0024	0.0021	100.0	96.55	ug/L	-3	10	
Potassium	A	0.0272	0.0050	10000	9947	ug/L	-1	10	
Silver	A	0.0035	0.0034	100.0	100.1	ug/L	0	10	
Thallium	A	0.0073	0.0070	50.00	48.94	ug/L	-2	10	
Arsenic	E	0.0061	0.0053	100.0	104.6	ug/L	5	10	
Chromium	E	0.0307	0.0206	100.0	99.95	ug/L	0	10	
Cobalt	E	0.0354	0.0306	100.0	99.36	ug/L	-1	10	
Copper	E	0.1878	0.0261	100.0	118.5	ug/L	19	10	c+ ***
Manganese	E	0.0184	0.0141	100.0	100.3	ug/L	0	10	
Nickel	E	0.0114	0.0081	100.0	99.69	ug/L	0	10	
Sodium	E	0.0087	0.0044	10000	10820	ug/L	8	10	
Vanadium	E	0.0273	0.0173	100.0	99.91	ug/L	0	10	
Zinc	E	0.0069	0.0040	100.0	99.50	ug/L	0	10	
Iron	H	0.0083	0.0062	10000	9929	ug/L	-1	10	
Selenium	H	0.0010	9.4E-4	100.0	100.2	ug/L	0	10	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	96280	-14.41
Scandium	A	303675	297098	-2.17
Scandium	E	34509	35951	4.18
Scandium	H	236448	234568	-0.80
Germanium	H	62158	59344	-4.53
Germanium	E	17130	16979	-0.88
Indium	A	651653	611549	-6.15
Bismuth	A	701152	646705	-7.77
Yttrium	A	596632	580399	-2.72
Terbium	A	1014322	997753	-1.63

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524092 File : 15d17100042 Time : 17-APR-2015 14:56
 Cal : 1015154524001 Caldate : 17-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.06930]	0.1000	---	ug/L	!CCB
Potassium	A	18.94	10.00	10.00	ug/L	CCB ***
Silver	A	0.1651	0.1000	0.05000	ug/L	CCB ***
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	19.60	0.1000	0.5000	ug/L	CCB ***
Manganese	E	0.1649	0.1000	0.05000	ug/L	CCB ***
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	145.5	10.00	15.00	ug/L	CCB ***
Vanadium	E	[0.09770]	0.1000	0.05000	ug/L	!CCB
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	93910	-16.51
Scandium	A	303675	280447	-7.65
Scandium	E	34509	34627	0.34
Scandium	H	236448	225620	-4.58
Germanium	H	62158	58154	-6.44
Germanium	E	17130	16291	-4.90
Indium	A	651653	588058	-9.76
Bismuth	A	701152	636474	-9.22
Yttrium	A	596632	547785	-8.19
Terbium	A	1014322	918549	-9.44

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524095 File : 15d17100045 Time : 17-APR-2015 15:10
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0050	0.0045	10000	10030	ug/L	0	10	
Antimony	A	0.0029	0.0029	100.0	100.7	ug/L	1	10	
Barium	A	6.8E-4	6.9E-4	100.0	100.9	ug/L	1	10	
Beryllium	A	0.0038	0.0042	100.0	108.7	ug/L	9	10	
Cadmium	A	7.6E-4	7.3E-4	100.0	99.70	ug/L	0	10	
Calcium	A	2.8E-4	1.8E-4	10000	10520	ug/L	5	10	
Lead	A	0.0086	0.0064	100.0	100.2	ug/L	0	10	
Magnesium	A	0.0046	0.0037	10000	10120	ug/L	1	10	
Molybdenum	A	0.0024	0.0021	100.0	96.21	ug/L	-4	10	
Potassium	A	0.0272	0.0051	10000	10010	ug/L	0	10	
Silver	A	0.0035	0.0034	100.0	100.3	ug/L	0	10	
Thallium	A	0.0073	0.0070	50.00	48.79	ug/L	-2	10	
Arsenic	E	0.0061	0.0053	100.0	105.3	ug/L	5	10	
Chromium	E	0.0307	0.0205	100.0	99.35	ug/L	-1	10	
Cobalt	E	0.0354	0.0304	100.0	98.70	ug/L	-1	10	
Copper	E	0.1878	0.0249	100.0	112.5	ug/L	13	10	c+ ***
Manganese	E	0.0184	0.0142	100.0	100.9	ug/L	1	10	
Nickel	E	0.0114	0.0081	100.0	99.17	ug/L	-1	10	
Sodium	E	0.0087	0.0044	10000	10730	ug/L	7	10	
Vanadium	E	0.0273	0.0173	100.0	99.82	ug/L	0	10	
Zinc	E	0.0069	0.0040	100.0	98.35	ug/L	-2	10	
Iron	H	0.0083	0.0063	10000	9988	ug/L	0	10	
Selenium	H	0.0010	9.4E-4	100.0	100.1	ug/L	0	10	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	96154	-14.52
Scandium	A	303675	292348	-3.73
Scandium	E	34509	36116	4.66
Scandium	H	236448	230327	-2.59
Germanium	H	62158	58798	-5.41
Germanium	E	17130	16845	-1.66
Indium	A	651653	594809	-8.72
Bismuth	A	701152	631091	-9.99
Yttrium	A	596632	567207	-4.93
Terbium	A	1014322	958412	-5.51

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015154524097 File : 15d17100047 Time : 17-APR-2015 15:20
 Cal : 1015154524001 Caldate : 17-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	[9.668]	10.00	5.000	ug/L	!CCB
Molybdenum	A	[0.09110]	0.1000	---	ug/L	!CCB
Potassium	A	26.18	10.00	10.00	ug/L	CCB ***
Silver	A	0.1988	0.1000	0.05000	ug/L	CCB ***
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	12.79	0.1000	0.5000	ug/L	CCB ***
Manganese	E	0.1163	0.1000	0.05000	ug/L	CCB ***
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	78.62	10.00	15.00	ug/L	CCB ***
Vanadium	E	0.1149	0.1000	0.05000	ug/L	CCB ***
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	101569	-9.70
Scandium	A	303675	294784	-2.93
Scandium	E	34509	35870	3.94
Scandium	H	236448	238735	0.97
Germanium	H	62158	61572	-0.94
Germanium	E	17130	17012	-0.69
Indium	A	651653	619023	-5.01
Bismuth	A	701152	663783	-5.33
Yttrium	A	596632	572295	-4.08
Terbium	A	1014322	959423	-5.41

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015154524098
 Cal : 1015154524001
 Standards: S26727, S26751
 File : 15d17100048
 Caldate : 17-APR-2015
 IDF : 1.0
 Time : 17-APR-2015 15:25

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4631	0.1000	ug/L	
Barium	A	1.750	0.1000	ug/L	
Beryllium	A	[0.04130]	0.1000	ug/L	
Cadmium	A	4.628	0.1000	ug/L	
Lead	A	0.2006	0.1000	ug/L	
Silver	A	0.8894	0.1000	ug/L	
Thallium	A	[0.02190]	0.05000	ug/L	
Arsenic	E	0.6771	0.1000	ug/L	
Chromium	E	0.7896	0.1000	ug/L	
Cobalt	E	1.093	0.1000	ug/L	
Copper	E	15.32	0.1000	ug/L	
Manganese	E	7.153	0.1000	ug/L	
Nickel	E	1.156	0.1000	ug/L	
Vanadium	E	0.2548	0.1000	ug/L	
Zinc	E	3.223	0.5000	ug/L	
Selenium	H	0.1118	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	95270	ug/L	95
Calcium	A	300000	266700	ug/L	89
Magnesium	A	100000	93840	ug/L	94
Molybdenum	A	2000	1853	ug/L	93
Potassium	A	100000	94950	ug/L	95
Sodium	E	250000	241500	ug/L	97
Phosphorus	E	100000	103400	ug/L	103
Iron	H	250000	223900	ug/L	90

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	112485	85811	-23.71
Scandium	A	303675	277038	-8.77
Scandium	E	34509	33481	-2.98
Scandium	H	236448	225242	-4.74
Germanium	H	62158	57577	-7.37
Germanium	E	17130	18561	8.35
Indium	A	651653	531669	-18.41
Bismuth	A	701152	546905	-22.00
Yttrium	A	596632	534717	-10.38
Terbium	A	1014322	899151	-11.35

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015154524099 File : 15d17100049
 Cal : 1015154524001 Caldate : 17-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 17-APR-2015 15:30

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	93810	ug/L	-6		
Cadmium	A	100.0	97.88	ug/L	-2	20	
Calcium	A	300000	262800	ug/L	-12		
Magnesium	A	100000	92340	ug/L	-8		
Molybdenum	A	2000	1830	ug/L	-8		
Potassium	A	100000	93390	ug/L	-7		
Silver	A	50.00	47.28	ug/L	-5	20	
Arsenic	E	100.0	90.15	ug/L	-10	20	
Chromium	E	200.0	190.8	ug/L	-5	20	
Cobalt	E	200.0	185.4	ug/L	-7	20	
Copper	E	200.0	193.8	ug/L	-3	20	
Manganese	E	200.0	195.6	ug/L	-2	20	
Nickel	E	200.0	181.9	ug/L	-9	20	
Sodium	E	250000	240500	ug/L	-4		
Vanadium	E	200.0	195.4	ug/L	-2	20	
Zinc	E	100.0	87.58	ug/L	-12	20	
Iron	H	250000	225500	ug/L	-10		
Selenium	H	100.0	91.33	ug/L	-9	20	

ISTD (ICALBLK 15d17h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	236448	219557	-7.14
Scandium	A	303675	273326	-9.99
Scandium	E	34509	31969	-7.36
Germanium	H	62158	56939	-8.40
Germanium	E	17130	17899	4.49
Indium	A	651653	533339	-18.16
Yttrium	A	596632	536271	-10.12

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895158996

Instrument : MET16
 Method : EPA 6020

Begun : 04/20/15 09:56
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d20j00001	X	RINSE			04/20/15 09:56	1.0	1	
002	15d20j00002	TUN				04/20/15 10:03	1.0	2	
003	15d20j00003	X	RINSE			04/20/15 10:07	1.0	1	
004	15d20j00004	ICALBLK	CALBLANK			04/20/15 10:14	1.0	1	
005	15d20j00005	ICAL				04/20/15 10:20	1.0	3 1	
006	15d20j00006	ICAL				04/20/15 10:27	1.0	4 1	
007	15d20j00007	ICAL				04/20/15 10:33	1.0	5 1	
008	15d20j00008	ICAL				04/20/15 10:39	1.0	6 1	
009	15d20j00009	ICAL				04/20/15 10:46	1.0	7 1	
010	15d20j00010	ICAL				04/20/15 10:52	1.0	8 1	
011	15d20j00011	X	RINSE			04/20/15 10:59	1.0	1	
012	15d20j00012	ICV				04/20/15 11:05	1.0	9 1	
013	15d20j00013	XICV				04/20/15 11:12	1.0	9 1	
014	15d20j00014	XICV				04/20/15 11:18	1.0	9 1	
015	15d20j00015	XCRI				04/20/15 11:25	1.0	10 1	
016	15d20j00016	CRI				04/20/15 11:31	1.0	10 1	
017	15d20j00017	XICB				04/20/15 11:38	1.0	1	
018	15d20j00018	XICB				04/20/15 11:44	1.0	1	
019	15d20j00019	ICB				04/20/15 11:51	1.0	1	
020	15d20j00020	XCRI				04/20/15 11:57	1.0	10 1	
021	15d20j00021	ICSA				04/20/15 12:04	1.0	11 1	8:CA=290000
022	15d20j00022	ICSAB				04/20/15 12:10	1.0	12 1	11:CA=300000
023	15d20j00023	X	RINSE			04/20/15 12:17	1.0	1	
024	15d20j00024	X	RINSE			04/20/15 12:24	1.0	1	
025	15d20j00025	X	RINSE			04/20/15 12:30	1.0	1	
026	15d20j00026	X	RINSE			04/20/15 12:37	1.0	1	
027	15d20j00027	X	RINSE			04/20/15 12:43	1.0	1	
028	15d20j00028	BLANK	QC784823	Soil	222389	04/20/15 12:50	25.0	1	
029	15d20j00029	BS	QC784824	Soil	222389	04/20/15 12:56	25.0	1	
030	15d20j00030	BSD	QC784825	Soil	222389	04/20/15 13:02	25.0	1	
031	15d20j00031	MSS	266160-001	Soil	222389	04/20/15 13:09	25.0	1	1:MN=230
032	15d20j00032	MS	QC784826	Soil	222389	04/20/15 13:15	25.0	1	1:MN=220
033	15d20j00033	MSD	QC784827	Soil	222389	04/20/15 13:21	25.0	1	1:MN=230
034	15d20j00034	MSS	266160-001	Soil	222389	04/20/15 13:28	2500	1	
035	15d20j00035	CCV				04/20/15 13:34	1.0	13 1	
036	15d20j00036	X	XCCB			04/20/15 13:41	1.0	1	
037	15d20j00037	CCB				04/20/15 13:47	1.0	1	
038	15d20j00038	ICSA				04/20/15 13:54	1.0	11 1	8:CA=300000
039	15d20j00039	ICSAB				04/20/15 14:02	1.0	12 1	8:CA=300000
040	15d20j00040	X	RINSE			04/20/15 14:09	1.0	1	
041	15d20j00041	X	RINSE			04/20/15 14:15	1.0	1	
042	15d20j00042	X	RINSE			04/20/15 14:24	1.0	1	
043	15d20j00043	BLANK	QC784300	Filtrate	222258	04/20/15 14:31	5.0	1	
044	15d20j00044	BLANK	QC784301	Filtrate	222258	04/20/15 14:37	5.0	1	
045	15d20j00045	XBS	QC784302	Filtrate	222258	04/20/15 14:43	5.0	1	
046	15d20j00046	X	RINSE			04/20/15 14:50	1.0	1	
047	15d20j00047	BLANK	QC784570	Filtrate	222325	04/20/15 14:56	5.0	1	
048	15d20j00048	BS	QC784571	Filtrate	222325	04/20/15 15:03	5.0	1	
049	15d20j00049	BSD	QC784572	Filtrate	222325	04/20/15 15:09	5.0	1	
050	15d20j00050	CCV				04/20/15 15:15	1.0	13 1	
051	15d20j00051	X	XCCB			04/20/15 15:22	1.0	1	
052	15d20j00052	CCB				04/20/15 15:28	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895158996

Instrument : MET16
 Method : EPA 6020

Begun : 04/20/15 09:56
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d20j00053	SAMPLE	265932-001	Filtrate	222258	04/20/15 15:35	500.0	1	
054	15d20j00054	BS	QC784302	Filtrate	222258	04/20/15 15:45	5.0	1	
055	15d20j00055	BSD	QC784303	Filtrate	222258	04/20/15 15:51	5.0	1	
056	15d20j00056	SAMPLE	265932-003	Filtrate	222258	04/20/15 15:58	500.0	1	
057	15d20j00057	MSS	265932-004	Filtrate	222258	04/20/15 16:04	500.0	1	
058	15d20j00058	SAMPLE	266019-003	Filtrate	222258	04/20/15 16:10	500.0	1	
059	15d20j00059	MSS	266019-005	Filtrate	222258	04/20/15 16:17	500.0	1	
060	15d20j00060	SER	QC784308	Filtrate	222258	04/20/15 16:23	2500	1	
061	15d20j00061	PDS	QC784309	Filtrate	222258	04/20/15 16:29	500.0	14 15 16 1	
062	15d20j00062	X	RINSE			04/20/15 16:36	1.0	1	
063	15d20j00063	MSS	266087-001	Filtrate	222325	04/20/15 16:42	500.0	1	
064	15d20j00064	CCV				04/20/15 16:49	1.0	13 1	
065	15d20j00065	X	XCCB			04/20/15 16:55	1.0	1	
066	15d20j00066	CCB				04/20/15 17:02	1.0	1	
067	15d20j00067	SER	QC784575	Filtrate	222325	04/20/15 17:08	2500	1	
068	15d20j00068	PDS	QC784576	Filtrate	222325	04/20/15 17:14	500.0	14 15 16 1	
069	15d20j00069	SAMPLE	266091-004	Filtrate	222325	04/20/15 17:21	500.0	1	
070	15d20j00070	SAMPLE	266087-009	Filtrate	222325	04/20/15 17:27	500.0	1	
071	15d20j00071	SAMPLE	266091-002	Filtrate	222325	04/20/15 17:34	500.0	1	
072	15d20j00072	SAMPLE	266091-009	Filtrate	222325	04/20/15 17:40	500.0	1	
073	15d20j00073	SAMPLE	266091-010	Filtrate	222325	04/20/15 17:47	500.0	1	
074	15d20j00074	X	RINSE			04/20/15 17:53	1.0	1	
075	15d20j00075	BLANK	QC784945	Filtrate	222114	04/20/15 17:59	5.0	1	
076	15d20j00076	CCV				04/20/15 18:06	1.0	13 1	
077	15d20j00077	X	XCCB			04/20/15 18:12	1.0	1	
078	15d20j00078	CCB				04/20/15 18:19	1.0	1	
079	15d20j00079	MSS	265932-004	Filtrate	222258	04/20/15 18:25	5.0	1	4:NA=780000
080	15d20j00080	X	RINSE			04/20/15 18:32	1.0	1	
081	15d20j00081	MS	QC784304	Filtrate	222258	04/20/15 18:38	5.0	1	4:NA=720000
082	15d20j00082	X	RINSE			04/20/15 18:45	1.0	1	
083	15d20j00083	MSD	QC784305	Filtrate	222258	04/20/15 18:51	5.0	1	4:NA=740000
084	15d20j00084	X	RINSE			04/20/15 18:58	1.0	1	
085	15d20j00085	MSS	266019-005	Filtrate	222258	04/20/15 19:05	5.0	1	4:NA=34000
086	15d20j00086	X	RINSE			04/20/15 19:11	1.0	1	
087	15d20j00087	MS	QC784306	Filtrate	222258	04/20/15 19:18	5.0	1	4:NA=33000
088	15d20j00088	X	RINSE			04/20/15 19:24	1.0	1	
089	15d20j00089	MSD	QC784307	Filtrate	222258	04/20/15 19:30	5.0	1	4:NA=34000
090	15d20j00090	X	RINSE			04/20/15 19:37	1.0	1	
091	15d20j00091	SER	QC784308	Filtrate	222258	04/20/15 19:43	25.0	1	
092	15d20j00092	X	RINSE			04/20/15 19:50	1.0	1	
093	15d20j00093	PDS	QC784309	Filtrate	222258	04/20/15 19:56	5.0	14 15 16 1	1:NA=36000
094	15d20j00094	X	RINSE			04/20/15 20:03	1.0	1	
095	15d20j00095	SAMPLE	265932-001	Filtrate	222258	04/20/15 20:09	5.0	1	4:NA=170000
096	15d20j00096	X	RINSE			04/20/15 20:16	1.0	1	
097	15d20j00097	SAMPLE	265932-003	Filtrate	222258	04/20/15 20:22	5.0	1	7:NA=300000
098	15d20j00098	CCV				04/20/15 20:29	1.0	13 1	
099	15d20j00099	X	XCCB			04/20/15 20:36	1.0	1	
100	15d20j00100	CCB				04/20/15 20:42	1.0	1	
101	15d20j00101	X	RINSE			04/20/15 20:49	1.0	1	
102	15d20j00102	SAMPLE	265994-001	Filtrate	222258	04/20/15 20:55	5.0	1	4:NA=590000
103	15d20j00103	X	RINSE			04/20/15 21:02	1.0	1	
104	15d20j00104	SAMPLE	266019-003	Filtrate	222258	04/20/15 21:08	5.0	1	4:CA=37000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895158996

Instrument : MET16
 Method : EPA 6020

Begun : 04/20/15 09:56
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d20j00105	X	RINSE			04/20/15 21:15	1.0	1	
106	15d20j00106	MSS	266087-001	Filtrate	222325	04/20/15 21:21	5.0	1	4:CA=34000
107	15d20j00107	X	RINSE			04/20/15 21:28	1.0	1	
108	15d20j00108	MS	QC784573	Filtrate	222325	04/20/15 21:34	5.0	1	4:CA=34000
109	15d20j00109	X	RINSE			04/20/15 21:41	1.0	1	
110	15d20j00110	MSD	QC784574	Filtrate	222325	04/20/15 21:47	5.0	1	4:CA=35000
111	15d20j00111	X	RINSE			04/20/15 21:54	1.0	1	
112	15d20j00112	SER	QC784575	Filtrate	222325	04/20/15 22:00	25.0	1	
113	15d20j00113	PDS	QC784576	Filtrate	222325	04/20/15 22:07	5.0	14 15 16 1	
114	15d20j00114	X	RINSE			04/20/15 22:13	1.0	1	
115	15d20j00115	SAMPLE	266068-003	Filtrate	222325	04/20/15 22:19	5.0	1	
116	15d20j00116	SAMPLE	266068-005	Filtrate	222325	04/20/15 22:26	5.0	1	
117	15d20j00117	SAMPLE	266087-002	Filtrate	222325	04/20/15 22:32	5.0	1	
118	15d20j00118	CCV				04/20/15 22:39	1.0	13 1	
119	15d20j00119	X	XCCB			04/20/15 22:45	1.0	1	
120	15d20j00120	CCB				04/20/15 22:52	1.0	1	
121	15d20j00121	SAMPLE	266087-003	Filtrate	222325	04/20/15 22:58	5.0	1	
122	15d20j00122	ICSA				04/20/15 23:04	1.0	11 1	8:CA=300000
123	15d20j00123	ICSAB				04/20/15 23:11	1.0	12 1	11:CA=310000
124	15d20j00124	X	RINSE			04/20/15 23:18	1.0	1	
125	15d20j00125	X	RINSE			04/20/15 23:24	1.0	1	
126	15d20j00126	SAMPLE	266087-004	Filtrate	222325	04/20/15 23:31	5.0	1	
127	15d20j00127	X	RINSE			04/20/15 23:37	1.0	1	
128	15d20j00128	SAMPLE	266087-006	Filtrate	222325	04/20/15 23:44	5.0	1	
129	15d20j00129	SAMPLE	266087-007	Filtrate	222325	04/20/15 23:50	5.0	1	
130	15d20j00130	SAMPLE	266087-009	Filtrate	222325	04/20/15 23:56	5.0	1	4:CA=57000
131	15d20j00131	X	RINSE			04/21/15 00:03	1.0	1	
132	15d20j00132	SAMPLE	266091-002	Filtrate	222325	04/21/15 00:09	5.0	1	4:CA=130000
133	15d20j00133	X	RINSE			04/21/15 00:16	1.0	1	
134	15d20j00134	SAMPLE	266091-004	Filtrate	222325	04/21/15 00:22	5.0	1	1:NA=20000
135	15d20j00135	SAMPLE	266091-005	Filtrate	222325	04/21/15 00:29	5.0	1	1:NA=21000
136	15d20j00136	SAMPLE	266091-006	Filtrate	222325	04/21/15 00:35	5.0	1	4:NA=1500000
137	15d20j00137	SAMPLE	266091-007	Filtrate	222325	04/21/15 00:42	5.0	1	4:NA=1500000
138	15d20j00138	CCV				04/21/15 00:49	1.0	13 1	
139	15d20j00139	X	XCCB			04/21/15 00:55	1.0	1	
140	15d20j00140	CCB				04/21/15 01:02	1.0	1	
141	15d20j00141	SAMPLE	266091-008	Filtrate	222325	04/21/15 01:08	5.0	1	
142	15d20j00142	SAMPLE	266091-009	Filtrate	222325	04/21/15 01:15	5.0	1	1:NA=64000
143	15d20j00143	X	RINSE			04/21/15 01:21	1.0	1	
144	15d20j00144	SAMPLE	266091-010	Filtrate	222325	04/21/15 01:28	5.0	1	4:NA=31000
145	15d20j00145	X	RINSE			04/21/15 01:34	1.0	1	
146	15d20j00146	SAMPLE	266091-012	Filtrate	222325	04/21/15 01:41	5.0	1	
147	15d20j00147	X	RINSE			04/21/15 01:47	1.0	1	
148	15d20j00148	CCV				04/21/15 01:54	1.0	13 1	
149	15d20j00149	X	XCCB			04/21/15 02:00	1.0	1	
150	15d20j00150	CCB				04/21/15 02:07	1.0	1	
151	15d20j00151	ICSA				04/21/15 02:13	1.0	11 1	8:CA=290000
152	15d20j00152	ICSAB				04/21/15 02:20	1.0	12 1	11:CA=300000
153	15d20j00153	X	RINSE			04/21/15 02:26	1.0	1	
154	15d20j00154	X	RINSE			04/21/15 02:33	1.0	1	
155	15d20j00155	X	RINSE			04/21/15 02:39	1.0	1	
156	15d20j00156	X	RINSE			04/21/15 02:46	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895158996

Instrument : MET16 Begun : 04/20/15 09:56
 Method : EPA 6020 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
157	15d20j00157	X	RINSE			04/21/15 02:52	1.0	1
158	15d20j00158	X	RINSE			04/21/15 02:59	1.0	1
159	15d20j00159	X	RINSE			04/21/15 03:06	1.0	1
160	15d20j00160	X	RINSE			04/21/15 03:12	1.0	1

CRT 04/20/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 40.

NT 04/21/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 41 through 160.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895158996

Date : 04/20/15
 Sequence : MET16 15d20j00

Reference : 15d20j00004
 Analyzed : 04/20/15 10:14

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	1236548	1232744	39135	113610	24397	19858	1791695	2228668	1708777	3181686
		LOWER LIMIT	370964	369823	11741	34083	7319	5957	537509	668600	512633	954506
		UPPER LIMIT	1483858	1479293	46962	136332	29276	23830	2150034	2674402	2050532	3818023
019	ICB		1217173	1333501	40844	86614	19117	21722	1882086	2247870	1810035	3274589
021	ICSA		978094	1177257	41755	114822	18009	18536	1400122	1525446	1520649	2603140
022	ICSAB		1016695	1145136	37010	101027	19446	17734	1391981	1523546	1510625	2601560
028	BLANK	QC784823	1128304	1208324	38782	94994	20524	20669	1797910	2230237	1727566	3223742
029	BS	QC784824	1132820	1170838	39692	88890	20107	20496	1766585	2199918	1698809	3191710
030	BSD	QC784825	1160792	1213788	39783	101766	21691	20753	1807526	2234193	1736437	3231182
031	MSS	266160-001	1095370	1193247	39852	109631	22321	19852	1714763	2156562	1706205	3152006
032	MS	QC784826	1111373	1220211	40175	103795	21818	20300	1713468	2113858	1730238	3125150
033	MSD	QC784827	1108303	1250103	39712	96300	20759	20320	1734268	2129771	1748435	3159891
034	MSS	266160-001	1123479	1154847	38522	95470	21660	20846	1781868	2206248	1697725	3161603
035	CCV		1148028	1219498	41001	107153	21802	20898	1727313	2071191	1700907	3132181
037	CCB		1112574	1181138	36861	99221	21509	20084	1758224	2183152	1677816	3143881
038	ICSA		997450	1119182	38674	109832	20015	17946	1332893	1466993	1444600	2491415
039	ICSAB		1066847	1172969	40105	105797	20460	18039	1361082	1479739	1487682	2548302
043	BLANK	QC784300	1191510	1180895	38328	95254	20805	20268	1745478	2159231	1675549	3111367
044	BLANK	QC784301	1162555	1176306	38690	95462	20796	20158	1726661	2153123	1668251	3107742
047	BLANK	QC784570	1121226	1152329	37917	98509	22016	20294	1711524	2145250	1626343	3070405
048	BS	QC784571	1124861	1165050	38909	112656	23060	19724	1688043	2104475	1622411	3064781
049	BSD	QC784572	1167379	1399982	37430	105381	23183	19898	1787840	2223007	1711925	3243007
050	CCV		1122961	1198997	39712	107542	23587	19899	1646257	2006810	1616798	3023780
052	CCB		1136304	1129225	38028	101010	22224	20108	1698192	2124272	1624053	3024444
053	SAMPLE	265932-001	1123237	1138109	36586	106437	23175	20028	1713846	2150700	1617276	3071308
054	BS	QC784302	1110780	1171370	39642	113803	21553	19863	1677452	2113164	1609671	3047347
055	BSD	QC784303	1084740	1157851	40173	101484	20596	19725	1675958	2103157	1602599	3048171
056	SAMPLE	265932-003	1143453	1155586	38145	86916	20241	20242	1705102	2127904	1628558	3068095
057	MSS	265932-004	1169106	1189314	38370	92430	20865	20543	1733707	2126692	1653637	3098103
058	SAMPLE	266019-003	1243964	1290433	38649	92944	20921	20545	1863811	2331425	1772702	3345338
059	MSS	266019-005	1144510	1136736	38038	90700	20667	20326	1714979	2172869	1624866	3086936
060	SER	QC784308	1155935	1163180	38368	94166	20225	20177	1739038	2202831	1643103	3121248
061	PDS	QC784309	1156647	1193685	40696	102883	20226	19869	1680096	2089656	1622897	3070495
063	MSS	266087-001	1157742	1140969	38423	86493	19372	20672	1731757	2191482	1638853	3094502
064	CCV		1127545	1180810	39676	95652	18862	19961	1652210	2013070	1615367	3022681
066	CCB		1159560	1171688	38203	82056	18125	20581	1751832	2206393	1660085	3126433
067	SER	QC784575	1135751	1162001	39804	80844	16655	20626	1745743	2208051	1654342	3122676
068	PDS	QC784576	1145632	1212851	39359	73854	15650	20302	1705948	2092289	1655978	3092417
069	SAMPLE	266091-004	1144883	1173176	38925	68614	15862	20902	1759373	2206015	1670861	3146588
070	SAMPLE	266087-009	1153377	1199236	38655	66954	14846	20908	1785149	2220172	1690259	3177107
071	SAMPLE	266091-002	1137565	1137167	38635	70033	14820	20747	1754428	2169403	1663890	3132891
072	SAMPLE	266091-009	1143015	1175764	39904	73939	14816	20811	1757540	2198105	1656853	3122980
073	SAMPLE	266091-010	1137458	1152009	39189	69092	14680	20615	1763209	2216786	1665805	3142132
075	BLANK	QC784945	1184090	1205351	39428	69883	14482	20988	1830078	2299116	1734513	3266801
076	CCV		1081795	1153613	43278	79162	14543	20439	1610089	1941645	1569349	2907136
078	CCB		1139120	1172804	39868	66435	14175	21398	1795062	2225649	1698772	3172540
079	MSS	265932-004	1171663	1283570	42459	68087	12356	19697	1532567	1536360	1652471	2668142
081	MS	QC784304	1214232	1360217	47743 *	70480	11304	20484	1515758	1521888	1641568	2661657
083	MSD	QC784305	1185535	1226339	44571	69114	12094	19748	1418396	1417686	1539956	2479406
085	MSS	266019-005	1248977	1222285	41092	66789	13522	21001	1658492	1884082	1657672	2933833
087	MS	QC784306	1213179	1246064	40521	62057	12560	20619	1653135	1886193	1659818	2940022

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895158996

Date : 04/20/15
 Sequence : MET16 15d20j00

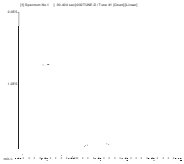
Reference : 15d20j00004
 Analyzed : 04/20/15 10:14

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
089	MSD	QC784307	1185622	1217423	40327	60275	12090	20684	1628623	1861819	1634001	2895809
091	SER	QC784308	1228718	1220661	39937	60967	12690	20999	1730275	2034227	1686706	3020937
093	PDS	QC784309	1134036	1222311	39639	60842	11764	19486	1612319	1842026	1621300	2870038
095	SAMPLE	265932-001	1199693	1272250	39026	55831	11198	19671	1628294	1760427	1678551	2871514
097	SAMPLE	265932-003	1124693	1279446	42253	60669	11187	20235	1542955	1641838	2167972 *	2781638
098	CCV		1259154	1303893	44635	54684	10730	22692	1797484	2057304	1793768	3164796
100	CCB		1247240	1260930	42135	49397	10278	22428	1839106	2161198	1793136	3166295
102	SAMPLE	265994-001	1306497	1422616	47051 *	56977	10271	22077	1687839	1664852	1797030	2868288
104	SAMPLE	266019-003	1339740	1429674	44854	53519	10369	22704	1856967	2028471	1890421	3222243
106	MSS	266087-001	1293982	1407471	44951	50936	9900	22719	1841086	2007632	1861951	3174929
108	MS	QC784573	924275	1006099	33281	40309	7846	17136	1376326	1568120	1374762	2447087
110	MSD	QC784574	945353	1035016	34428	37026	7480	17932	1424489	1636456	1429156	2542537
112	SER	QC784575	1072986	1125502	35613	41539	8877	19520	1616655	1887365	1579828	2815440
113	PDS	QC784576	1046290	1192017	37185	40788	8056	18809	1578769	1760841	1604303	2793660
115	SAMPLE	266068-003	978184	1013837	34041	36667	7721	18532	1534186	1844085	1476166	2694547
116	SAMPLE	266068-005	1045073	1116569	34709	37270	7664	18798	1640797	1956178	1587329	2872556
117	SAMPLE	266087-002	1179487	1243995	40818	43116	8952	21811	1798901	2082439	1764167	3164076
118	CCV		1151875	1296213	43503	47791	8334	20879	1720747	1973517	1714099	3040206
120	CCB		1169425	1196598	39505	35218	7214 *	21098	1761628	2073276	1706766	3043570
121	SAMPLE	266087-003	1069036	1122561	37028	35781	7161 *	19653	1638404	1919119	1593771	2901484
122	ICSA		1028471	1241204	41241	39460	6000 *	18893	1429897	1480817	1587808	2589842
123	ICSAB		1047316	1214437	40101	31363 *	5429 *	19422	1431146	1465940	1586131	2581670
126	SAMPLE	266087-004	1197008	1248092	41328	38319	7977	22172	1762928	1991695	1743363	3057517
128	SAMPLE	266087-006	1131626	1206010	39439	42488	8520	20750	1688178	1926576	1669277	2958296
129	SAMPLE	266087-007	1121849	1186956	39119	40236	7988	20780	1734466	2011299	1692614	2989781
130	SAMPLE	266087-009	1137517	1216102	40165	41651	8665	21082	1681175	1815989	1707836	2885138
132	SAMPLE	266091-002	1092955	1227590	39946	34443	6507 *	19974	1534854	1601620	1624374	2690666
134	SAMPLE	266091-004	1118271	1201253	39265	34933	6977 *	20705	1676583	1886282	1659940	2879945
135	SAMPLE	266091-005	924154	959158	32644	30086 *	6262 *	17784	1382590	1591793	1361296	2401039
136	SAMPLE	266091-006	1237109	1335582	41186	26834 *	4474 *	19030	1391531	1137809	1601288	2172568
137	SAMPLE	266091-007	1345840	1469789	44352	31366 *	5163 *	20046	1475070	1167623	1715626	2256263
138	CCV		1503911 *	1552926 *	50798 *	44840	8315	24797 *	1828239	1826199	1926573	2989398
140	CCB		1376223	1401427	44992	42446	8828	23627	1834256	1923978	1855698	2961684
141	SAMPLE	266091-008	1299510	1340230	43165	40856	8250	22571	1764539	1864515	1782945	2873472
142	SAMPLE	266091-009	1214392	1301014	41168	40337	8331	21531	1657014	1717512	1706444	2738513
144	SAMPLE	266091-010	1242558	1353413	43067	39493	8012	22293	1717912	1766207	1776486	2853392
146	SAMPLE	266091-012	1167154	1207153	38246	35474	7304 *	20520	1633312	1752725	1638753	2673933
148	CCV		1112344	1250553	41614	39626	6845 *	20341	1548376	1633689	1592959	2606753
150	CCB		1139817	1189460	38815	31892 *	6786 *	20928	1642431	1787713	1643995	2705591
151	ICSA		926266	1162057	39870	35238	5527 *	18781	1267898	1226225	1440078	2183733
152	ICSAB		912848	1090331	35464	23814 *	4302 *	17757	1215005	1168370	1378718	2086925

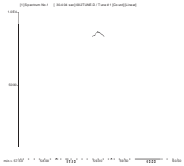
MET16 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D20J00.B\002TUNE.D
 Date Acquired: Apr 20 2015 10:03 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

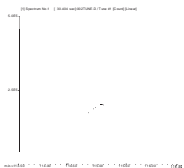
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	112505	113508	114245	114218	113449	1.23	5.00	
59 Co	46391	47097	47462	47566	47442	0.85	5.00	
115 In	1046001	1035800	1053209	1052917	1052613	0.33	5.00	
205 Tl	96134	95628	95941	96401	95513	0.64	5.00	



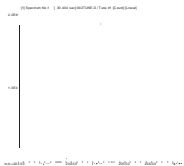
7 Li
Mass Calib.
 Actual: 7.05
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 59.00
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266091 METALS Filtrate: EPA 6020

Inst : MET16
 Calnum : 895158996001
 Units : ug/L
 Date : 20-APR-2015 10:14
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d20j00005	895158996005	20-APR-2015 10:20	S27043, S26751	
L2	15d20j00006	895158996006	20-APR-2015 10:27	S27044, S26751	
L3	15d20j00007	895158996007	20-APR-2015 10:33	S27045, S26751	
L4	15d20j00008	895158996008	20-APR-2015 10:39	S27046, S26751	
L5	15d20j00009	895158996009	20-APR-2015 10:46	S27041, S26751	
L6	15d20j00010	895158996010	20-APR-2015 10:52	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0062	0.0064	0.0065	0.0064	0.0066	0.0062	BLNK	-0.3031	160.167		0.0064	0.999	0.995	
Antimony	A	0.0028	0.0025	0.0025	0.0025	0.0025	0.0025	BLNK	-0.0116	399.368		0.0026	1.000	0.995	
Barium	A	7.5E-4	6.3E-4	6.2E-4	6.2E-4	6.1E-4	6.0E-4	BLNK	-0.0062	1658.77		6.4E-4	1.000	0.995	
Beryllium	A	0.0024	0.0021	0.0021	0.0022	0.0021	0.0021	BLNK	-0.0071	473.250		0.0022	1.000	0.995	
Cadmium	A	6.6E-4	6.9E-4	6.9E-4	6.8E-4	6.7E-4	6.5E-4	BLNK	-0.0062	1524.31		6.7E-4	1.000	0.995	
Calcium	A	4.9E-4	2.1E-4	1.9E-4	1.7E-4	1.8E-4	1.7E-4	BLNK	-7.0137	5731.62		2.4E-4	0.999	0.995	
Lead	A	0.0080	0.0068	0.0069	0.0066	0.0064	0.0061	BLNK	-0.0202	162.012		0.0068	1.000	0.995	
Magnesium	A	0.0079	0.0057	0.0055	0.0055	0.0056	0.0052	BLNK	-3.1666	189.955		0.0059	0.998	0.995	
Molybdenum	A	0.0019	0.0018	0.0019	0.0018	0.0018	0.0018	BLNK	-0.0211	552.741		0.0018	1.000	0.995	
Potassium	A	0.0774	0.0208	0.0134	0.0067	0.0062	0.0058	BLNK	-123.52	171.587		0.0217	0.999	0.995	
Silver	A	0.0032	0.0030	0.0030	0.0030	0.0029	0.0029	BLNK	-0.0076	347.734		0.0030	1.000	0.995	
Thallium	A	0.0069	0.0066	0.0067	0.0068	0.0069	0.0070	BLNK	-0.0060	143.842		0.0068	1.000	0.995	
Arsenic	E	0.0056	0.0043	0.0045	0.0043	0.0042	0.0041	BLNK	-0.0405	241.306		0.0045	1.000	0.995	
Chromium	E	0.0406	0.0289	0.0287	0.0266	0.0250	0.0251	BLNK	-0.0380	39.8944		0.0292	1.000	0.995	
Cobalt	E	0.0495	0.0428	0.0457	0.0420	0.0388	0.0385	BLNK	-0.0066	25.9150		0.0429	1.000	0.995	
Copper	E	0.1829	0.0848	0.0721	0.0611	0.0571	0.0552	BLNK	-0.2415	18.0204		0.0855	1.000	0.995	
Manganese	E	0.0167	0.0140	0.0143	0.0135	0.0127	0.0127	BLNK	-0.0062	78.7610		0.0140	1.000	0.995	
Nickel	E	0.0214	0.0129	0.0130	0.0114	0.0103	0.0102	BLNK	-0.0710	98.2074		0.0132	1.000	0.995	
Sodium	E	0.0602	0.0167	0.0128	0.0078	0.0076	0.0076	BLNK	-62.779	132.034		0.0188	1.000	0.995	
Vanadium	E	0.0552	0.0261	0.0242	0.0204	0.0193	0.0195	BLNK	-0.1707	51.4208		0.0275	1.000	0.995	
Zinc	E		0.0137	0.0109	0.0084	0.0078	0.0075	BLNK	-0.2335	132.072		0.0097	1.000	0.995	
Iron	H	0.0115	0.0089	0.0099	0.0097	0.0086	0.0087	BLNK	-2.5033	115.022		0.0095	1.000	0.995	
Selenium	H	0.0023	0.0019	0.0018	0.0020	0.0018	0.0018	BLNK	-0.0060	548.775		0.0019	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	-3	50.000	2	100.00	4	1000.0	3	10000	6	20000	-1
Antimony	A	0.1000	1	0.5000	-3	1.0000	-2	10.000	1	100.00	1	200.00	0
Barium	A	0.1000	19	0.5000	3	1.0000	3	10.000	3	100.00	1	200.00	0
Beryllium	A	0.1000	4	0.5000	0	1.0000	0	10.000	2	100.00	1	200.00	0
Cadmium	A	0.1000	-6	0.5000	3	1.0000	4	10.000	4	100.00	2	200.00	0
Calcium	A	10.000	109	50.000	6	100.00	2	1000.0	-1	10000	6	20000	-1
Lead	A	0.1000	9	0.5000	6	1.0000	9	10.000	6	100.00	3	200.00	-1
Magnesium	A	10.000	19	50.000	2	100.00	1	1000.0	4	10000	6	20000	-2
Molybdenum	A	0.1000	-13	0.5000	-3	1.0000	0	10.000	1	100.00	1	200.00	0
Potassium	A	10.000	-7	50.000	10	100.00	6	1000.0	2	10000	6	20000	-1
Silver	A	0.1000	3	0.5000	3	1.0000	3	10.000	3	100.00	2	200.00	0
Thallium	A	0.0500	-12	0.2500	-7	0.5000	-5	5.0000	-3	50.000	-1	100.00	0
Arsenic	E	0.1000	-6	0.5000	-4	1.0000	5	10.000	3	100.00	1	200.00	0
Chromium	E	0.1000	24	0.5000	8	1.0000	11	10.000	6	100.00	0	200.00	0
Cobalt	E	0.1000	22	0.5000	10	1.0000	18	10.000	9	100.00	0	200.00	0
Copper	E	0.1000	-12	0.5000	4	1.0000	6	10.000	8	100.00	3	200.00	-1
Manganese	E	0.1000	26	0.5000	9	1.0000	12	10.000	6	100.00	0	200.00	0
Nickel	E	0.1000	39	0.5000	13	1.0000	20	10.000	11	100.00	1	200.00	0
Sodium	E	10.000	67	50.000	-5	100.00	6	1000.0	-4	10000	0	20000	0
Vanadium	E	0.1000	13	0.5000	0	1.0000	7	10.000	3	100.00	-1	200.00	0
Zinc	E			0.5000	34	1.0000	21	10.000	9	100.00	3	200.00	-1
Iron	H	10.000	7	50.000	-2	100.00	11	1000.0	11	10000	-1	20000	0
Selenium	H	0.1000	21	0.5000	2	1.0000	0	10.000	7	100.00	0	200.00	0

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16
Calnum : 895158996001

Cal Date : 20-APR-2015

ICV 895158996012 (15d20j00012 20-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	9953	ug/L	0	10	
Antimony	A	100.0	102.0	ug/L	2	10	
Barium	A	100.0	100.9	ug/L	1	10	
Beryllium	A	100.0	101.2	ug/L	1	10	
Cadmium	A	100.0	101.2	ug/L	1	10	
Calcium	A	10000	10090	ug/L	1	10	
Lead	A	100.0	102.4	ug/L	2	10	
Magnesium	A	10000	10000	ug/L	0	10	
Molybdenum	A	100.0	100.2	ug/L	0	10	
Potassium	A	10000	10030	ug/L	0	10	
Silver	A	100.0	100.7	ug/L	1	10	
Thallium	A	50.00	48.73	ug/L	-3	10	
Arsenic	E	100.0	100.7	ug/L	1	10	
Chromium	E	100.0	101.5	ug/L	2	10	
Cobalt	E	100.0	102.5	ug/L	3	10	
Copper	E	100.0	102.6	ug/L	3	10	
Manganese	E	100.0	102.0	ug/L	2	10	
Nickel	E	100.0	103.1	ug/L	3	10	
Sodium	E	10000	10130	ug/L	1	10	
Vanadium	E	100.0	101.3	ug/L	1	10	
Zinc	E	100.0	102.9	ug/L	3	10	
Iron	H	10000	9834	ug/L	-2	10	
Selenium	H	100.0	104.4	ug/L	4	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996019 File : 15d20j00019 Time : 20-APR-2015 11:51
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1217173	-1.57
Scandium	A	1232744	1333501	8.17
Scandium	E	39135	40844	4.37
Scandium	H	113610	86614	-23.76
Germanium	H	24397	19117	-21.64
Germanium	E	19858	21722	9.39
Indium	A	1791695	1882086	5.04
Bismuth	A	2228668	2247870	0.86
Yttrium	A	1708777	1810035	5.93
Terbium	A	3181686	3274589	2.92

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996035 File : 15d20j00035 Time : 20-APR-2015 13:34
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0065	10000	10350	ug/L	4	10	
Antimony	A	0.0026	0.0026	100.0	102.4	ug/L	2	10	
Barium	A	6.4E-4	6.1E-4	100.0	100.5	ug/L	1	10	
Beryllium	A	0.0022	0.0021	100.0	100.4	ug/L	0	10	
Cadmium	A	6.7E-4	6.6E-4	100.0	101.0	ug/L	1	10	
Calcium	A	2.4E-4	1.8E-4	10000	10410	ug/L	4	10	
Lead	A	0.0068	0.0064	100.0	103.5	ug/L	4	10	
Magnesium	A	0.0059	0.0055	10000	10440	ug/L	4	10	
Molybdenum	A	0.0018	0.0018	100.0	100.7	ug/L	1	10	
Potassium	A	0.0217	0.0061	10000	10340	ug/L	3	10	
Silver	A	0.0030	0.0029	100.0	100.5	ug/L	1	10	
Thallium	A	0.0068	0.0068	50.00	49.24	ug/L	-2	10	
Arsenic	E	0.0045	0.0042	100.0	100.7	ug/L	1	10	
Chromium	E	0.0292	0.0261	100.0	103.9	ug/L	4	10	
Cobalt	E	0.0429	0.0403	100.0	104.5	ug/L	5	10	
Copper	E	0.0855	0.0562	100.0	101.0	ug/L	1	10	
Manganese	E	0.0140	0.0135	100.0	106.2	ug/L	6	10	
Nickel	E	0.0132	0.0107	100.0	105.2	ug/L	5	10	
Sodium	E	0.0188	0.0078	10000	10240	ug/L	2	10	
Vanadium	E	0.0275	0.0202	100.0	103.5	ug/L	4	10	
Zinc	E	0.0097	0.0079	100.0	104.0	ug/L	4	10	
Iron	H	0.0095	0.0086	10000	9842	ug/L	-2	10	
Selenium	H	0.0019	0.0018	100.0	98.98	ug/L	-1	10	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1148028	-7.16
Scandium	A	1232744	1219498	-1.07
Scandium	E	39135	41001	4.77
Scandium	H	113610	107153	-5.68
Germanium	H	24397	21802	-10.64
Germanium	E	19858	20898	5.24
Indium	A	1791695	1727313	-3.59
Bismuth	A	2228668	2071191	-7.07
Yttrium	A	1708777	1700907	-0.46
Terbium	A	3181686	3132181	-1.56

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996037 File : 15d20j00037 Time : 20-APR-2015 13:47
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1112574	-10.03
Scandium	A	1232744	1181138	-4.19
Scandium	E	39135	36861	-5.81
Scandium	H	113610	99221	-12.67
Germanium	H	24397	21509	-11.84
Germanium	E	19858	20084	1.14
Indium	A	1791695	1758224	-1.87
Bismuth	A	2228668	2183152	-2.04
Yttrium	A	1708777	1677816	-1.81
Terbium	A	3181686	3143881	-1.19

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996038 File : 15d20j00038 Time : 20-APR-2015 13:54
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.5235	0.1000	ug/L	
Barium	A	1.948	0.1000	ug/L	
Beryllium	A	[0.02270]	0.1000	ug/L	
Cadmium	A	2.140	0.1000	ug/L	
Lead	A	0.2241	0.1000	ug/L	
Silver	A	[0.07160]	0.1000	ug/L	
Thallium	A	[0.01740]	0.05000	ug/L	
Arsenic	E	0.7117	0.1000	ug/L	
Chromium	E	0.8594	0.1000	ug/L	
Cobalt	E	1.081	0.1000	ug/L	
Copper	E	1.111	0.1000	ug/L	
Manganese	E	7.076	0.1000	ug/L	
Nickel	E	1.080	0.1000	ug/L	
Vanadium	E	0.1045	0.1000	ug/L	
Zinc	E	1.774	0.5000	ug/L	
Selenium	H	0.1617	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	99580	ug/L	100
Calcium	A	300000	302900	ug/L	101
Magnesium	A	100000	97830	ug/L	98
Molybdenum	A	2000	2079	ug/L	104
Potassium	A	100000	99910	ug/L	100
Sodium	E	250000	241800	ug/L	97
Phosphorus	E	100000	97080	ug/L	97
Iron	H	250000	226800	ug/L	91

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	997450	-19.34
Scandium	A	1232744	1119182	-9.21
Scandium	E	39135	38674	-1.18
Scandium	H	113610	109832	-3.33
Germanium	H	24397	20015	-17.96
Germanium	E	19858	17946	-9.63
Indium	A	1791695	1332893	-25.61
Bismuth	A	2228668	1466993	-34.18
Yttrium	A	1708777	1444600	-15.46
Terbium	A	3181686	2491415	-21.70

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895158996039 File : 15d20j00039
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 20-APR-2015 14:02

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	101100	ug/L	1		
Cadmium	A	100.0	100.9	ug/L	1	20	
Calcium	A	300000	304100	ug/L	1		
Magnesium	A	100000	98640	ug/L	-1		
Molybdenum	A	2000	2074	ug/L	4		
Potassium	A	100000	100200	ug/L	0		
Silver	A	50.00	49.37	ug/L	-1	20	
Arsenic	E	100.0	106.3	ug/L	6	20	
Chromium	E	200.0	190.2	ug/L	-5	20	
Cobalt	E	200.0	181.8	ug/L	-9	20	
Copper	E	200.0	186.3	ug/L	-7	20	
Manganese	E	200.0	198.4	ug/L	-1	20	
Nickel	E	200.0	175.3	ug/L	-12	20	
Sodium	E	250000	240700	ug/L	-4		
Vanadium	E	200.0	195.0	ug/L	-2	20	
Zinc	E	100.0	90.24	ug/L	-10	20	
Iron	H	250000	237700	ug/L	-5		
Selenium	H	100.0	97.39	ug/L	-3	20	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	113610	105797	-6.88
Scandium	A	1232744	1172969	-4.85
Scandium	E	39135	40105	2.48
Germanium	H	24397	20460	-16.14
Germanium	E	19858	18039	-9.16
Indium	A	1791695	1361082	-24.03
Yttrium	A	1708777	1487682	-12.94

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996050.1 File : 15d20j00050 Time : 20-APR-2015 15:15
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0063	10000	10150	ug/L	2	10	
Antimony	A	0.0026	0.0026	100.0	103.3	ug/L	3	10	
Barium	A	6.4E-4	6.1E-4	100.0	100.6	ug/L	1	10	
Beryllium	A	0.0022	0.0021	100.0	98.13	ug/L	-2	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	102.1	ug/L	2	10	
Calcium	A	2.4E-4	1.8E-4	10000	10160	ug/L	2	10	
Lead	A	0.0068	0.0064	100.0	104.4	ug/L	4	10	
Magnesium	A	0.0059	0.0054	10000	10260	ug/L	3	10	
Molybdenum	A	0.0018	0.0018	100.0	101.3	ug/L	1	10	
Potassium	A	0.0217	0.0060	10000	10090	ug/L	1	10	
Silver	A	0.0030	0.0029	100.0	100.8	ug/L	1	10	
Thallium	A	0.0068	0.0069	50.00	49.83	ug/L	0	10	
Arsenic	E	0.0045	0.0042	100.0	100.2	ug/L	0	10	
Chromium	E	0.0292	0.0254	100.0	101.3	ug/L	1	10	
Cobalt	E	0.0429	0.0395	100.0	102.5	ug/L	3	10	
Copper	E	0.0855	0.0554	100.0	99.61	ug/L	0	10	
Manganese	E	0.0140	0.0133	100.0	105.1	ug/L	5	10	
Nickel	E	0.0132	0.0104	100.0	102.3	ug/L	2	10	
Sodium	E	0.0188	0.0077	10000	10140	ug/L	1	10	
Vanadium	E	0.0275	0.0198	100.0	101.6	ug/L	2	10	
Zinc	E	0.0097	0.0078	100.0	103.1	ug/L	3	10	
Iron	H	0.0095	0.0090	10000	10360	ug/L	4	10	
Selenium	H	0.0019	0.0018	100.0	96.47	ug/L	-4	10	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1122961	-9.19
Scandium	A	1232744	1198997	-2.74
Scandium	E	39135	39712	1.47
Scandium	H	113610	107542	-5.34
Germanium	H	24397	23587	-3.32
Germanium	E	19858	19899	0.21
Indium	A	1791695	1646257	-8.12
Bismuth	A	2228668	2006810	-9.95
Yttrium	A	1708777	1616798	-5.38
Terbium	A	3181686	3023780	-4.96

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996052.1 File : 15d20j00052 Time : 20-APR-2015 15:28
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1136304	-8.11
Scandium	A	1232744	1129225	-8.40
Scandium	E	39135	38028	-2.83
Scandium	H	113610	101010	-11.09
Germanium	H	24397	22224	-8.91
Germanium	E	19858	20108	1.26
Indium	A	1791695	1698192	-5.22
Bismuth	A	2228668	2124272	-4.68
Yttrium	A	1708777	1624053	-4.96
Terbium	A	3181686	3024444	-4.94

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996064.1 File : 15d20j00064 Time : 20-APR-2015 16:49
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0064	10000	10310	ug/L	3	10	
Antimony	A	0.0026	0.0026	100.0	103.3	ug/L	3	10	
Barium	A	6.4E-4	6.1E-4	100.0	100.8	ug/L	1	10	
Beryllium	A	0.0022	0.0021	100.0	99.50	ug/L	0	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	102.6	ug/L	3	10	
Calcium	A	2.4E-4	1.8E-4	10000	10260	ug/L	3	10	
Lead	A	0.0068	0.0065	100.0	105.0	ug/L	5	10	
Magnesium	A	0.0059	0.0055	10000	10430	ug/L	4	10	
Molybdenum	A	0.0018	0.0018	100.0	100.9	ug/L	1	10	
Potassium	A	0.0217	0.0060	10000	10180	ug/L	2	10	
Silver	A	0.0030	0.0029	100.0	100.7	ug/L	1	10	
Thallium	A	0.0068	0.0069	50.00	49.75	ug/L	0	10	
Arsenic	E	0.0045	0.0042	100.0	101.1	ug/L	1	10	
Chromium	E	0.0292	0.0256	100.0	102.1	ug/L	2	10	
Cobalt	E	0.0429	0.0395	100.0	102.3	ug/L	2	10	
Copper	E	0.0855	0.0554	100.0	99.53	ug/L	0	10	
Manganese	E	0.0140	0.0135	100.0	106.2	ug/L	6	10	
Nickel	E	0.0132	0.0104	100.0	102.0	ug/L	2	10	
Sodium	E	0.0188	0.0079	10000	10350	ug/L	4	10	
Vanadium	E	0.0275	0.0199	100.0	102.0	ug/L	2	10	
Zinc	E	0.0097	0.0079	100.0	104.2	ug/L	4	10	
Iron	H	0.0095	0.0085	10000	9780	ug/L	-2	10	
Selenium	H	0.0019	0.0019	100.0	104.0	ug/L	4	10	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1127545	-8.82
Scandium	A	1232744	1180810	-4.21
Scandium	E	39135	39676	1.38
Scandium	H	113610	95652	-15.81
Germanium	H	24397	18862	-22.69
Germanium	E	19858	19961	0.52
Indium	A	1791695	1652210	-7.79
Bismuth	A	2228668	2013070	-9.67
Yttrium	A	1708777	1615367	-5.47
Terbium	A	3181686	3022681	-5.00

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EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996066.1 File : 15d20j00066 Time : 20-APR-2015 17:02
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1159560	-6.23
Scandium	A	1232744	1171688	-4.95
Scandium	E	39135	38203	-2.38
Scandium	H	113610	82056	-27.77
Germanium	H	24397	18125	-25.71
Germanium	E	19858	20581	3.64
Indium	A	1791695	1751832	-2.22
Bismuth	A	2228668	2206393	-1.00
Yttrium	A	1708777	1660085	-2.85
Terbium	A	3181686	3126433	-1.74

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996076 File : 15d20j00076 Time : 20-APR-2015 18:06
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0064	0.0067	10000	10740	ug/L	7	10	
Antimony	A	0.0026	0.0028	100.0	109.9	ug/L	10	10	
Barium	A	6.4E-4	6.5E-4	100.0	108.1	ug/L	8	10	
Beryllium	A	0.0022	0.0022	100.0	104.5	ug/L	5	10	
Cadmium	A	6.7E-4	7.2E-4	100.0	109.1	ug/L	9	10	
Calcium	A	2.4E-4	1.9E-4	10000	10810	ug/L	8	10	
Lead	A	0.0068	0.0069	100.0	111.6	ug/L	12	10	c+ ***
Magnesium	A	0.0059	0.0057	10000	10860	ug/L	9	10	
Molybdenum	A	0.0018	0.0019	100.0	107.7	ug/L	8	10	
Potassium	A	0.0217	0.0063	10000	10670	ug/L	7	10	
Silver	A	0.0030	0.0031	100.0	107.0	ug/L	7	10	
Thallium	A	0.0068	0.0073	50.00	52.53	ug/L	5	10	
Arsenic	E	0.0045	0.0042	100.0	101.3	ug/L	1	10	
Chromium	E	0.0292	0.0239	100.0	95.32	ug/L	-5	10	
Cobalt	E	0.0429	0.0370	100.0	95.95	ug/L	-4	10	
Copper	E	0.0855	0.0550	100.0	98.85	ug/L	-1	10	
Manganese	E	0.0140	0.0126	100.0	99.54	ug/L	0	10	
Nickel	E	0.0132	0.0097	100.0	95.36	ug/L	-5	10	
Sodium	E	0.0188	0.0073	10000	9513	ug/L	-5	10	
Vanadium	E	0.0275	0.0185	100.0	95.14	ug/L	-5	10	
Zinc	E	0.0097	0.0080	100.0	104.8	ug/L	5	10	
Iron	H	0.0095	0.0082	10000	9398	ug/L	-6	10	
Selenium	H	0.0019	0.0020	100.0	110.1	ug/L	10	10	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1081795	-12.51
Scandium	A	1232744	1153613	-6.42
Scandium	E	39135	43278	10.59
Scandium	H	113610	79162	-30.32
Germanium	H	24397	14543	-40.39
Germanium	E	19858	20439	2.93
Indium	A	1791695	1610089	-10.14
Bismuth	A	2228668	1941645	-12.88
Yttrium	A	1708777	1569349	-8.16
Terbium	A	3181686	2907136	-8.63

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996078 File : 15d20j00078 Time : 20-APR-2015 18:19
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1139120	-7.88
Scandium	A	1232744	1172804	-4.86
Scandium	E	39135	39868	1.87
Scandium	H	113610	66435	-41.52
Germanium	H	24397	14175	-41.90
Germanium	E	19858	21398	7.76
Indium	A	1791695	1795062	0.19
Bismuth	A	2228668	2225649	-0.14
Yttrium	A	1708777	1698772	-0.59
Terbium	A	3181686	3172540	-0.29

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996098 File : 15d20j00098 Time : 20-APR-2015 20:29
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0064	0.0065	10000	10410	ug/L	4	10	
Antimony	A	0.0026	0.0026	100.0	104.0	ug/L	4	10	
Barium	A	6.4E-4	6.3E-4	100.0	105.1	ug/L	5	10	
Beryllium	A	0.0022	0.0021	100.0	97.55	ug/L	-2	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	101.8	ug/L	2	10	
Calcium	A	2.4E-4	1.8E-4	10000	10490	ug/L	5	10	
Lead	A	0.0068	0.0063	100.0	102.4	ug/L	2	10	
Magnesium	A	0.0059	0.0055	10000	10450	ug/L	5	10	
Molybdenum	A	0.0018	0.0018	100.0	100.4	ug/L	0	10	
Potassium	A	0.0217	0.0062	10000	10530	ug/L	5	10	
Silver	A	0.0030	0.0029	100.0	101.7	ug/L	2	10	
Thallium	A	0.0068	0.0069	50.00	49.69	ug/L	-1	10	
Arsenic	E	0.0045	0.0043	100.0	102.8	ug/L	3	10	
Chromium	E	0.0292	0.0258	100.0	102.9	ug/L	3	10	
Cobalt	E	0.0429	0.0399	100.0	103.4	ug/L	3	10	
Copper	E	0.0855	0.0554	100.0	99.68	ug/L	0	10	
Manganese	E	0.0140	0.0134	100.0	105.6	ug/L	6	10	
Nickel	E	0.0132	0.0106	100.0	104.2	ug/L	4	10	
Sodium	E	0.0188	0.0077	10000	10150	ug/L	2	10	
Vanadium	E	0.0275	0.0201	100.0	103.3	ug/L	3	10	
Zinc	E	0.0097	0.0078	100.0	103.2	ug/L	3	10	
Iron	H	0.0095	0.0095	10000	10970	ug/L	10	10	
Selenium	H	0.0019	0.0022	100.0	121.5	ug/L	22	10	c+ ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1259154	1.83
Scandium	A	1232744	1303893	5.77
Scandium	E	39135	44635	14.05
Scandium	H	113610	54684	-51.87
Germanium	H	24397	10730	-56.02
Germanium	E	19858	22692	14.27
Indium	A	1791695	1797484	0.32
Bismuth	A	2228668	2057304	-7.69
Yttrium	A	1708777	1793768	4.97
Terbium	A	3181686	3164796	-0.53

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996100 File : 15d20j00100 Time : 20-APR-2015 20:42
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	0.1031	0.1000	0.1000	ug/L	CCB ***
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1247240	0.86
Scandium	A	1232744	1260930	2.29
Scandium	E	39135	42135	7.67
Scandium	H	113610	49397	-56.52
Germanium	H	24397	10278	-57.87
Germanium	E	19858	22428	12.94
Indium	A	1791695	1839106	2.65
Bismuth	A	2228668	2161198	-3.03
Yttrium	A	1708777	1793136	4.94
Terbium	A	3181686	3166295	-0.48

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996118 File : 15d20j00118 Time : 20-APR-2015 22:39
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0061	10000	9710	ug/L	-3	10	
Antimony	A	0.0026	0.0026	100.0	104.7	ug/L	5	10	
Barium	A	6.4E-4	6.4E-4	100.0	105.6	ug/L	6	10	
Beryllium	A	0.0022	0.0021	100.0	98.99	ug/L	-1	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	102.0	ug/L	2	10	
Calcium	A	2.4E-4	1.7E-4	10000	9876	ug/L	-1	10	
Lead	A	0.0068	0.0064	100.0	103.2	ug/L	3	10	
Magnesium	A	0.0059	0.0051	10000	9748	ug/L	-3	10	
Molybdenum	A	0.0018	0.0018	100.0	100.7	ug/L	1	10	
Potassium	A	0.0217	0.0058	10000	9867	ug/L	-1	10	
Silver	A	0.0030	0.0029	100.0	101.3	ug/L	1	10	
Thallium	A	0.0068	0.0070	50.00	50.00	ug/L	0	10	
Arsenic	E	0.0045	0.0043	100.0	103.2	ug/L	3	10	
Chromium	E	0.0292	0.0242	100.0	96.67	ug/L	-3	10	
Cobalt	E	0.0429	0.0376	100.0	97.45	ug/L	-3	10	
Copper	E	0.0855	0.0553	100.0	99.46	ug/L	-1	10	
Manganese	E	0.0140	0.0127	100.0	99.72	ug/L	0	10	
Nickel	E	0.0132	0.0099	100.0	97.41	ug/L	-3	10	
Sodium	E	0.0188	0.0072	10000	9441	ug/L	-6	10	
Vanadium	E	0.0275	0.0189	100.0	96.96	ug/L	-3	10	
Zinc	E	0.0097	0.0078	100.0	103.0	ug/L	3	10	
Iron	H	0.0095	0.0086	10000	9924	ug/L	-1	10	
Selenium	H	0.0019	0.0023	100.0	124.7	ug/L	25	10	c+ ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1151875	-6.85
Scandium	A	1232744	1296213	5.15
Scandium	E	39135	43503	11.16
Scandium	H	113610	47791	-57.93
Germanium	H	24397	8334	-65.84
Germanium	E	19858	20879	5.14
Indium	A	1791695	1720747	-3.96
Bismuth	A	2228668	1973517	-11.45
Yttrium	A	1708777	1714099	0.31
Terbium	A	3181686	3040206	-4.45

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 895158996120 File : 15d20j00120 Time : 20-APR-2015 22:52
Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	i- ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1169425	-5.43
Scandium	A	1232744	1196598	-2.93
Scandium	E	39135	39505	0.95
Scandium	H	113610	35218	-69.00
Germanium	H	24397	7214	-70.43 *
Germanium	E	19858	21098	6.24
Indium	A	1791695	1761628	-1.68
Bismuth	A	2228668	2073276	-6.97
Yttrium	A	1708777	1706766	-0.12
Terbium	A	3181686	3043570	-4.34

--low bias i=ISTD failure

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996122 File : 15d20j00122 Time : 20-APR-2015 23:04
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4876	0.1000	ug/L	
Barium	A	2.000	0.1000	ug/L	
Beryllium	A	[0.02270]	0.1000	ug/L	
Cadmium	A	2.182	0.1000	ug/L	
Lead	A	0.2220	0.1000	ug/L	
Silver	A	[0.07980]	0.1000	ug/L	
Thallium	A	[0.01870]	0.05000	ug/L	
Arsenic	E	0.7274	0.1000	ug/L	
Chromium	E	0.8149	0.1000	ug/L	
Cobalt	E	1.088	0.1000	ug/L	
Copper	E	1.121	0.1000	ug/L	
Manganese	E	6.940	0.1000	ug/L	
Nickel	E	1.107	0.1000	ug/L	
Vanadium	E	[0.08030]	0.1000	ug/L	
Zinc	E	1.783	0.5000	ug/L	
Selenium	H	0.4931	0.1000	ug/L	i- ***

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	96080	ug/L	96
Calcium	A	300000	298700	ug/L	100
Magnesium	A	100000	92970	ug/L	93
Molybdenum	A	2000	2051	ug/L	103
Potassium	A	100000	98800	ug/L	99
Sodium	E	250000	232300	ug/L	93
Phosphorus	E	100000	97160	ug/L	97
Iron	H	250000	232400	ug/L	93

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1028471	-16.83
Scandium	A	1232744	1241204	0.69
Scandium	E	39135	41241	5.38
Scandium	H	113610	39460	-65.27
Germanium	H	24397	6000	-75.41 *
Germanium	E	19858	18893	-4.86
Indium	A	1791695	1429897	-20.19
Bismuth	A	2228668	1480817	-33.56
Yttrium	A	1708777	1587808	-7.08
Terbium	A	3181686	2589842	-18.60

--low bias i=ISTD failure

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895158996123 File : 15d20j00123
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 20-APR-2015 23:11

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	98820	ug/L	-1		
Cadmium	A	100.0	100.3	ug/L	0	20	
Calcium	A	300000	305500	ug/L	2		
Magnesium	A	100000	95830	ug/L	-4		
Molybdenum	A	2000	2037	ug/L	2		
Potassium	A	100000	101700	ug/L	2		
Silver	A	50.00	49.39	ug/L	-1	20	
Arsenic	E	100.0	109.3	ug/L	9	20	
Chromium	E	200.0	202.1	ug/L	1	20	
Cobalt	E	200.0	194.3	ug/L	-3	20	
Copper	E	200.0	186.1	ug/L	-7	20	
Manganese	E	200.0	210.8	ug/L	5	20	
Nickel	E	200.0	188.6	ug/L	-6	20	
Sodium	E	250000	245400	ug/L	-2		
Vanadium	E	200.0	208.7	ug/L	4	20	
Zinc	E	100.0	90.27	ug/L	-10	20	
Iron	H	250000	277600	ug/L	11		i- ***
Selenium	H	100.0	143.2	ug/L	43	20	ab+ i- ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	113610	31363	-72.39 *
Scandium	A	1232744	1214437	-1.49
Scandium	E	39135	40101	2.47
Germanium	H	24397	5429	-77.75 *
Germanium	E	19858	19422	-2.20
Indium	A	1791695	1431146	-20.12
Yttrium	A	1708777	1586131	-7.18

+ = high bias - = low bias ab = ICSAB i = ISTD failure

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996138 File : 15d20j00138 Time : 21-APR-2015 00:49
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0064	0.0064	10000	10190	ug/L	2	10	i+ ***
Antimony	A	0.0026	0.0026	100.0	105.2	ug/L	5	10	
Barium	A	6.4E-4	6.8E-4	100.0	112.6	ug/L	13	10	c+ ***
Beryllium	A	0.0022	0.0020	100.0	95.45	ug/L	-5	10	i+ ***
Cadmium	A	6.7E-4	6.7E-4	100.0	101.8	ug/L	2	10	
Calcium	A	2.4E-4	1.8E-4	10000	10060	ug/L	1	10	i+ ***
Lead	A	0.0068	0.0059	100.0	95.40	ug/L	-5	10	
Magnesium	A	0.0059	0.0053	10000	10130	ug/L	1	10	i+ ***
Molybdenum	A	0.0018	0.0018	100.0	99.22	ug/L	-1	10	
Potassium	A	0.0217	0.0062	10000	10570	ug/L	6	10	i+ ***
Silver	A	0.0030	0.0030	100.0	103.6	ug/L	4	10	
Thallium	A	0.0068	0.0069	50.00	49.38	ug/L	-1	10	
Arsenic	E	0.0045	0.0046	100.0	110.1	ug/L	10	10	i+ ***
Chromium	E	0.0292	0.0254	100.0	101.1	ug/L	1	10	i+ ***
Cobalt	E	0.0429	0.0395	100.0	102.3	ug/L	2	10	i+ ***
Copper	E	0.0855	0.0571	100.0	102.7	ug/L	3	10	i+ ***
Manganese	E	0.0140	0.0129	100.0	101.7	ug/L	2	10	i+ ***
Nickel	E	0.0132	0.0104	100.0	102.5	ug/L	3	10	i+ ***
Sodium	E	0.0188	0.0076	10000	9912	ug/L	-1	10	i+ ***
Vanadium	E	0.0275	0.0202	100.0	103.5	ug/L	4	10	i+ ***
Zinc	E	0.0097	0.0078	100.0	102.3	ug/L	2	10	i+ ***
Iron	H	0.0095	0.0095	10000	10910	ug/L	9	10	
Selenium	H	0.0019	0.0023	100.0	124.9	ug/L	25	10	c+ ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1503911	21.62 *
Scandium	A	1232744	1552926	25.97 *
Scandium	E	39135	50798	29.80 *
Scandium	H	113610	44840	-60.53
Germanium	H	24397	8315	-65.92
Germanium	E	19858	24797	24.87 *
Indium	A	1791695	1828239	2.04
Bismuth	A	2228668	1826199	-18.06
Yttrium	A	1708777	1926573	12.75
Terbium	A	3181686	2989398	-6.04

+ = high bias c = CCV i = ISTD failure

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996140 File : 15d20j00140 Time : 21-APR-2015 01:02
 Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	[6.674]	10.00	5.000	ug/L	!CCB
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	38.49	10.00	---	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	64.37	10.00	100.0	ug/L	CCB ***
Vanadium	E	[0.05130]	0.1000	0.05000	ug/L	!CCB
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1376223	11.30
Scandium	A	1232744	1401427	13.68
Scandium	E	39135	44992	14.97
Scandium	H	113610	42446	-62.64
Germanium	H	24397	8828	-63.82
Germanium	E	19858	23627	18.98
Indium	A	1791695	1834256	2.38
Bismuth	A	2228668	1923978	-13.67
Yttrium	A	1708777	1855698	8.60
Terbium	A	3181686	2961684	-6.91

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895158996148 File : 15d20j00148
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26726, S26751

IDF : 1.0
 Time : 21-APR-2015 01:54

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0064	0.0062	10000	9994	ug/L	0	10	
Antimony	A	0.0026	0.0027	100.0	109.3	ug/L	9	10	
Barium	A	6.4E-4	6.8E-4	100.0	112.9	ug/L	13	10	c+ ***
Beryllium	A	0.0022	0.0021	100.0	101.1	ug/L	1	10	
Cadmium	A	6.7E-4	6.8E-4	100.0	103.4	ug/L	3	10	
Calcium	A	2.4E-4	1.8E-4	10000	10130	ug/L	1	10	
Lead	A	0.0068	0.0062	100.0	100.4	ug/L	0	10	
Magnesium	A	0.0059	0.0052	10000	9955	ug/L	0	10	
Molybdenum	A	0.0018	0.0019	100.0	102.8	ug/L	3	10	
Potassium	A	0.0217	0.0061	10000	10350	ug/L	4	10	
Silver	A	0.0030	0.0030	100.0	105.2	ug/L	5	10	
Thallium	A	0.0068	0.0070	50.00	50.54	ug/L	1	10	
Arsenic	E	0.0045	0.0045	100.0	108.2	ug/L	8	10	
Chromium	E	0.0292	0.0248	100.0	99.06	ug/L	-1	10	
Cobalt	E	0.0429	0.0385	100.0	99.74	ug/L	0	10	
Copper	E	0.0855	0.0562	100.0	101.0	ug/L	1	10	
Manganese	E	0.0140	0.0127	100.0	100.0	ug/L	0	10	
Nickel	E	0.0132	0.0102	100.0	100.4	ug/L	0	10	
Sodium	E	0.0188	0.0072	10000	9402	ug/L	-6	10	
Vanadium	E	0.0275	0.0197	100.0	101.3	ug/L	1	10	
Zinc	E	0.0097	0.0078	100.0	103.1	ug/L	3	10	
Iron	H	0.0095	0.0087	10000	9985	ug/L	0	10	
Selenium	H	0.0019	0.0023	100.0	123.9	ug/L	24	10	c+ i- ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1112344	-10.04
Scandium	A	1232744	1250553	1.44
Scandium	E	39135	41614	6.33
Scandium	H	113610	39626	-65.12
Germanium	H	24397	6845	-71.94 *
Germanium	E	19858	20341	2.43
Indium	A	1791695	1548376	-13.58
Bismuth	A	2228668	1633689	-26.70
Yttrium	A	1708777	1592959	-6.78
Terbium	A	3181686	2606753	-18.07

+ = high bias - = low bias c = CCV i = ISTD failure

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 895158996150 File : 15d20j00150 Time : 21-APR-2015 02:07
Cal : 895158996001 Caldate : 20-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	40.23	10.00	---	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	33.65	10.00	100.0	ug/L	CCB ***
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	i- ***
Selenium	H	ND	0.1000	0.1000	ug/L	i- ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	1139817	-7.82
Scandium	A	1232744	1189460	-3.51
Scandium	E	39135	38815	-0.82
Scandium	H	113610	31892	-71.93 *
Germanium	H	24397	6786	-72.19 *
Germanium	E	19858	20928	5.39
Indium	A	1791695	1642431	-8.33
Bismuth	A	2228668	1787713	-19.79
Yttrium	A	1708777	1643995	-3.79
Terbium	A	3181686	2705591	-14.96

--low bias CCB=instrument blank i=ISTD failure

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895158996151 File : 15d20j00151 Time : 21-APR-2015 02:13
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.5149	0.1000	ug/L	
Barium	A	2.069	0.1000	ug/L	
Beryllium	A	[0.02150]	0.1000	ug/L	
Cadmium	A	2.183	0.1000	ug/L	
Lead	A	0.2098	0.1000	ug/L	
Silver	A	[0.07320]	0.1000	ug/L	
Thallium	A	[0.01660]	0.05000	ug/L	
Arsenic	E	0.7562	0.1000	ug/L	
Chromium	E	0.8362	0.1000	ug/L	
Cobalt	E	1.109	0.1000	ug/L	
Copper	E	1.163	0.1000	ug/L	
Manganese	E	6.891	0.1000	ug/L	
Nickel	E	1.100	0.1000	ug/L	
Vanadium	E	0.1064	0.1000	ug/L	
Zinc	E	1.831	0.5000	ug/L	
Selenium	H	0.4149	0.1000	ug/L	i- ***

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94060	ug/L	94
Calcium	A	300000	293600	ug/L	98
Magnesium	A	100000	90930	ug/L	91
Molybdenum	A	2000	2052	ug/L	103
Potassium	A	100000	99190	ug/L	99
Sodium	E	250000	225400	ug/L	90
Phosphorus	E	100000	102300	ug/L	102
Iron	H	250000	235100	ug/L	94

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1236548	926266	-25.09
Scandium	A	1232744	1162057	-5.73
Scandium	E	39135	39870	1.88
Scandium	H	113610	35238	-68.98
Germanium	H	24397	5527	-77.35 *
Germanium	E	19858	18781	-5.42
Indium	A	1791695	1267898	-29.23
Bismuth	A	2228668	1226225	-44.98
Yttrium	A	1708777	1440078	-15.72
Terbium	A	3181686	2183733	-31.37

--low bias i=ISTD failure

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895158996152 File : 15d20j00152
 Cal : 895158996001 Caldate : 20-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 21-APR-2015 02:20

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	98040	ug/L	-2		
Cadmium	A	100.0	100.5	ug/L	1	20	
Calcium	A	300000	304400	ug/L	1		
Magnesium	A	100000	94680	ug/L	-5		
Molybdenum	A	2000	2058	ug/L	3		
Potassium	A	100000	102900	ug/L	3		
Silver	A	50.00	51.20	ug/L	2	20	
Arsenic	E	100.0	114.6	ug/L	15	20	
Chromium	E	200.0	205.4	ug/L	3	20	
Cobalt	E	200.0	198.7	ug/L	-1	20	
Copper	E	200.0	186.9	ug/L	-7	20	
Manganese	E	200.0	209.2	ug/L	5	20	
Nickel	E	200.0	194.1	ug/L	-3	20	
Sodium	E	250000	238500	ug/L	-5		
Vanadium	E	200.0	214.2	ug/L	7	20	
Zinc	E	100.0	91.27	ug/L	-9	20	
Iron	H	250000	278300	ug/L	11		i- ***
Selenium	H	100.0	134.3	ug/L	34	20	ab+ i- ***

ISTD (ICALBLK 15d20j00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	113610	23814	-79.04 *
Scandium	A	1232744	1090331	-11.55
Scandium	E	39135	35464	-9.38
Germanium	H	24397	4302	-82.37 *
Germanium	E	19858	17757	-10.58
Indium	A	1791695	1215005	-32.19
Yttrium	A	1708777	1378718	-19.32

+ = high bias - = low bias ab = ICSAB i = ISTD failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d21f00001	X	RINSE			04/21/15 05:46	1.0	1	
002	15d21f00002	TUN				04/21/15 05:50	1.0	2	
003	15d21f00003	X	RINSE			04/21/15 05:55	1.0	1	
004	15d21f00004	ICALBLK	CALBLANK			04/21/15 06:00	1.0	1	
005	15d21f00005	ICAL				04/21/15 06:05	1.0	3 1	
006	15d21f00006	ICAL				04/21/15 06:09	1.0	4 1	
007	15d21f00007	ICAL				04/21/15 06:14	1.0	5 1	
008	15d21f00008	ICAL				04/21/15 06:19	1.0	6 1	
009	15d21f00009	ICAL				04/21/15 06:24	1.0	7 1	
010	15d21f00010	ICAL				04/21/15 06:28	1.0	8 1	
011	15d21f00011	X	RINSE			04/21/15 06:33	1.0	1	
012	15d21f00012	XICV				04/21/15 06:48	1.0	9 1	
013	15d21f00013	ICV				04/21/15 06:53	1.0	9 1	
014	15d21f00014	XCRI				04/21/15 06:57	1.0	10 1	
015	15d21f00015	XICB				04/21/15 07:03	1.0	1	
016	15d21f00016	ICB				04/21/15 07:08	1.0	1	
017	15d21f00017	CRI				04/21/15 07:12	1.0	10 1	
018	15d21f00018	ICSA				04/21/15 07:17	1.0	11 1	8:CA=290000
019	15d21f00019	ICSAB				04/21/15 07:22	1.0	12 1	8:CA=280000
020	15d21f00020	X	RINSE			04/21/15 07:27	1.0	1	
021	15d21f00021	X	RINSE			04/21/15 07:40	1.0	1	
022	15d21f00022	X	RINSE			04/21/15 07:45	1.0	1	
023	15d21f00023	X	RINSE			04/21/15 07:50	1.0	1	
024	15d21f00024	X	RINSE			04/21/15 07:54	1.0	1	
025	15d21f00025	BLANK	QC784864	Water	222400	04/21/15 07:59	5.0	1	
026	15d21f00026	BS	QC784865	Water	222400	04/21/15 08:04	5.0	1	
027	15d21f00027	BSD	QC784866	Water	222400	04/21/15 08:09	5.0	1	
028	15d21f00028	MSS	266138-002	Water	222400	04/21/15 08:13	5.0	1	1:NA=73000
029	15d21f00029	MS	QC784867	Water	222400	04/21/15 08:18	5.0	1	
030	15d21f00030	MSD	QC784868	Water	222400	04/21/15 08:23	5.0	1	
031	15d21f00031	MSS	266138-002	Water	222400	04/21/15 08:28	5.0	1	1:NA=72000
032	15d21f00032	SAMPLE	266173-001	Water	222400	04/21/15 08:32	5.0	1	
033	15d21f00033	SAMPLE	266173-002	Water	222400	04/21/15 08:37	5.0	1	6:CA=44000
034	15d21f00034	CCV				04/21/15 08:42	1.0	13 1	
035	15d21f00035	X	XCCB			04/21/15 09:01	1.0	1	
036	15d21f00036	CCB				04/21/15 09:05	1.0	1	
037	15d21f00037	BLANK	QC784864	Water	222400	04/21/15 09:10	5.0	1	
038	15d21f00038	SAMPLE	266173-002	Water	222400	04/21/15 09:15	500.0	1	
039	15d21f00039	CCV				04/21/15 09:20	1.0	13 1	
040	15d21f00040	X	XCCB			04/21/15 09:25	1.0	1	
041	15d21f00041	CCB				04/21/15 09:30	1.0	1	
042	15d21f00042	ICSA				04/21/15 09:35	1.0	11 1	8:CA=290000
043	15d21f00043	ICSAB				04/21/15 09:39	1.0	12 1	11:CA=280000
044	15d21f00044	X	RINSE			04/21/15 09:44	1.0	1	
045	15d21f00045	X	RINSE			04/21/15 09:49	1.0	1	
046	15d21f00046	MS	QC784304	Filtrate	222258	04/21/15 09:54	5.0	1	4:NA=720000
047	15d21f00047	X	RINSE			04/21/15 09:59	1.0	1	
048	15d21f00048	MSD	QC784305	Filtrate	222258	04/21/15 10:03	5.0	1	4:NA=720000
049	15d21f00049	X	RINSE			04/21/15 10:08	1.0	1	
050	15d21f00050	MS	QC784304	Filtrate	222258	04/21/15 10:13	50.0	1	2:NA=77000
051	15d21f00051	X	RINSE			04/21/15 10:18	1.0	1	
052	15d21f00052	MSD	QC784305	Filtrate	222258	04/21/15 10:23	50.0	1	3:NA=67000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d21f00053	X	RINSE			04/21/15 10:28	1.0	1	
054	15d21f00054	CCV				04/21/15 10:32	1.0	13 1	
055	15d21f00055	X	XCCB			04/21/15 10:37	1.0	1	
056	15d21f00056	CCB				04/21/15 10:42	1.0	1	
057	15d21f00057	MSS	266019-005	Filtrate	222258	04/21/15 10:47	5.0	1	3:NA=30000
058	15d21f00058	X	RINSE			04/21/15 10:52	1.0	1	
059	15d21f00059	MS	QC784306	Filtrate	222258	04/21/15 10:57	5.0	1	4:NA=31000
060	15d21f00060	X	RINSE			04/21/15 11:02	1.0	1	
061	15d21f00061	MSD	QC784307	Filtrate	222258	04/21/15 11:06	5.0	1	4:NA=30000
062	15d21f00062	X	RINSE			04/21/15 11:11	1.0	1	
063	15d21f00063	SER	QC784308	Filtrate	222258	04/21/15 11:16	25.0	1	
064	15d21f00064	X	RINSE			04/21/15 11:21	1.0	1	
065	15d21f00065	PDS	QC784309	Filtrate	222258	04/21/15 11:26	5.0	14 15 16 1	1:NA=34000
066	15d21f00066	X	RINSE			04/21/15 11:31	1.0	1	
067	15d21f00067	SAMPLE	266019-003	Filtrate	222258	04/21/15 11:35	5.0	1	4:CA=35000
068	15d21f00068	X	RINSE			04/21/15 11:40	1.0	1	
069	15d21f00069	CCV				04/21/15 11:45	1.0	13 1	
070	15d21f00070	X	XCCB			04/21/15 11:50	1.0	1	
071	15d21f00071	CCB				04/21/15 11:55	1.0	1	
072	15d21f00072	MSS	266019-005	Filtrate	222258	04/21/15 12:00	5.0	1	4:NA=31000
073	15d21f00073	X	RINSE			04/21/15 12:05	1.0	1	
074	15d21f00074	MS	QC784306	Filtrate	222258	04/21/15 12:10	5.0	1	3:NA=32000
075	15d21f00075	X	RINSE			04/21/15 12:15	1.0	1	
076	15d21f00076	MSD	QC784307	Filtrate	222258	04/21/15 12:20	5.0	1	4:NA=32000
077	15d21f00077	X	RINSE			04/21/15 12:24	1.0	1	
078	15d21f00078	MSS	266019-005	Filtrate	222258	04/21/15 12:29	5.0	1	3:NA=31000
079	15d21f00079	X	RINSE			04/21/15 12:34	1.0	1	
080	15d21f00080	SER	QC784308	Filtrate	222258	04/21/15 12:39	25.0	1	
081	15d21f00081	X	RINSE			04/21/15 12:44	1.0	1	
082	15d21f00082	PDS	QC784309	Filtrate	222258	04/21/15 12:49	5.0	14 15 16 1	1:NA=34000
083	15d21f00083	X	RINSE			04/21/15 12:53	1.0	1	
084	15d21f00084	SAMPLE	266019-003	Filtrate	222258	04/21/15 12:58	5.0	1	4:CA=33000
085	15d21f00085	X	RINSE			04/21/15 13:03	1.0	1	
086	15d21f00086	CCV				04/21/15 13:08	1.0	13 1	
087	15d21f00087	X	XCCB			04/21/15 13:13	1.0	1	
088	15d21f00088	CCB				04/21/15 13:18	1.0	1	
089	15d21f00089	MSS	266087-001	Filtrate	222325	04/21/15 13:23	5.0	1	4:CA=35000
090	15d21f00090	X	RINSE			04/21/15 13:28	1.0	1	
091	15d21f00091	MS	QC784573	Filtrate	222325	04/21/15 13:32	5.0	1	4:CA=34000
092	15d21f00092	X	RINSE			04/21/15 13:37	1.0	1	
093	15d21f00093	MSD	QC784574	Filtrate	222325	04/21/15 13:42	5.0	1	4:CA=35000
094	15d21f00094	X	RINSE			04/21/15 13:47	1.0	1	
095	15d21f00095	SER	QC784575	Filtrate	222325	04/21/15 13:52	25.0	1	
096	15d21f00096	X	RINSE			04/21/15 13:57	1.0	1	
097	15d21f00097	PDS	QC784576	Filtrate	222325	04/21/15 14:01	5.0	14 15 16 1	
098	15d21f00098	X	RINSE			04/21/15 14:06	1.0	1	
099	15d21f00099	X	RINSE			04/21/15 14:11	1.0	1	
100	15d21f00100	X	RINSE			04/21/15 14:16	1.0	1	
101	15d21f00101	BLANK	QC784945	Filtrate	222114	04/21/15 14:21	5.0	1	
102	15d21f00102	X	RINSE			04/21/15 14:26	1.0	1	
103	15d21f00103	CCV				04/21/15 14:31	1.0	13 1	
104	15d21f00104	X	XCCB			04/21/15 14:36	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d21f00105	CCB				04/21/15 14:41	1.0	1	
106	15d21f00106	SAMPLE	266087-002	Filtrate	222325	04/21/15 14:46	5.0	1	
107	15d21f00107	X	RINSE			04/21/15 14:50	1.0	1	
108	15d21f00108	SAMPLE	266087-003	Filtrate	222325	04/21/15 14:55	5.0	1	
109	15d21f00109	X	RINSE			04/21/15 15:00	1.0	1	
110	15d21f00110	SAMPLE	265899-005	Filtrate	222114	04/21/15 15:08	50.0	1	2:NA=120000
111	15d21f00111	X	RINSE			04/21/15 15:13	1.0	1	
112	15d21f00112	SAMPLE	265899-006	Filtrate	222114	04/21/15 15:18	50.0	1	1:NA=28000
113	15d21f00113	X	RINSE			04/21/15 15:23	1.0	1	
114	15d21f00114	CCV				04/21/15 15:28	1.0	13 1	
115	15d21f00115	X	XCCB			04/21/15 15:33	1.0	1	
116	15d21f00116	CCB				04/21/15 15:38	1.0	1	
117	15d21f00117	ICSA				04/21/15 15:42	1.0	11 1	8:CA=300000
118	15d21f00118	ICSAB				04/21/15 15:47	1.0	12 1	10:CA=290000
119	15d21f00119	X	RINSE			04/21/15 15:52	1.0	1	
120	15d21f00120	X	RINSE			04/21/15 15:57	1.0	1	
121	15d21f00121	SAMPLE	266087-004	Filtrate	222325	04/21/15 16:02	5.0	1	
122	15d21f00122	X	RINSE			04/21/15 16:07	1.0	1	
123	15d21f00123	SAMPLE	266087-006	Filtrate	222325	04/21/15 16:12	5.0	1	
124	15d21f00124	X	RINSE			04/21/15 16:16	1.0	1	
125	15d21f00125	SAMPLE	266087-007	Filtrate	222325	04/21/15 16:21	5.0	1	
126	15d21f00126	X	RINSE			04/21/15 16:26	1.0	1	
127	15d21f00127	SAMPLE	266087-009	Filtrate	222325	04/21/15 16:31	5.0	1	4:CA=55000
128	15d21f00128	X	RINSE			04/21/15 16:36	1.0	1	
129	15d21f00129	CCV				04/21/15 16:41	1.0	13 1	
130	15d21f00130	X	XCCB			04/21/15 16:46	1.0	1	
131	15d21f00131	CCB				04/21/15 16:56	1.0	1	
132	15d21f00132	SAMPLE	266091-004	Filtrate	222325	04/21/15 17:01	500.0	1	
133	15d21f00133	SAMPLE	266091-005	Filtrate	222325	04/21/15 17:06	500.0	1	
134	15d21f00134	SAMPLE	266091-006	Filtrate	222325	04/21/15 17:10	500.0	1	
135	15d21f00135	SAMPLE	266091-007	Filtrate	222325	04/21/15 17:15	500.0	1	
136	15d21f00136	CCV				04/21/15 17:20	1.0	13 1	
137	15d21f00137	X	XCCB			04/21/15 17:25	1.0	1	
138	15d21f00138	CCB				04/21/15 17:30	1.0	1	
139	15d21f00139	SAMPLE	266091-002	Filtrate	222325	04/21/15 17:35	5.0	1	4:CA=130000
140	15d21f00140	X	RINSE			04/21/15 17:39	1.0	1	
141	15d21f00141	SAMPLE	266091-004	Filtrate	222325	04/21/15 17:44	5.0	1	1:NA=21000
142	15d21f00142	X	RINSE			04/21/15 17:49	1.0	1	
143	15d21f00143	SAMPLE	266091-005	Filtrate	222325	04/21/15 17:54	5.0	1	1:NA=20000
144	15d21f00144	X	RINSE			04/21/15 17:59	1.0	1	
145	15d21f00145	SAMPLE	266091-008	Filtrate	222325	04/21/15 18:04	5.0	1	
146	15d21f00146	X	RINSE			04/21/15 18:09	1.0	1	
147	15d21f00147	SAMPLE	266091-009	Filtrate	222325	04/21/15 18:14	5.0	1	1:NA=63000
148	15d21f00148	X	RINSE			04/21/15 18:19	1.0	1	
149	15d21f00149	SAMPLE	266091-010	Filtrate	222325	04/21/15 18:23	5.0	1	4:NA=32000
150	15d21f00150	X	RINSE			04/21/15 18:28	1.0	1	
151	15d21f00151	SAMPLE	266091-012	Filtrate	222325	04/21/15 18:33	5.0	1	
152	15d21f00152	X	RINSE			04/21/15 18:38	1.0	1	
153	15d21f00153	CCV				04/21/15 18:57	1.0	13 1	
154	15d21f00154	X	XCCB			04/21/15 19:01	1.0	1	
155	15d21f00155	CCB				04/21/15 19:06	1.0	1	
156	15d21f00156	ICSA				04/21/15 19:11	1.0	11 1	8:CA=280000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015160186

Instrument : MET26
 Method : EPA 6020

Begun : 04/21/15 05:46
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
157	15d21f00157	ICSAB				04/21/15 19:16	1.0	12 1	9:CA=340000
158	15d21f00158	X	RINSE			04/21/15 19:21	1.0	1	
159	15d21f00159	X	RINSE			04/21/15 19:26	1.0	1	
160	15d21f00160	X	RINSE			04/21/15 19:31	1.0	1	
161	15d21f00161	X	RINSE			04/21/15 19:36	1.0	1	
162	15d21f00162	CCV				04/21/15 19:41	1.0	13 1	
163	15d21f00163	X	XCCB			04/21/15 19:45	1.0	1	
164	15d21f00164	CCB				04/21/15 19:50	1.0	1	
165	15d21f00165	ICSA				04/21/15 19:55	1.0	11 1	8:CA=280000
166	15d21f00166	XICSAB				04/21/15 20:00	1.0	12 1	8:CA=380000
167	15d21f00167	ICSAB				04/21/15 20:05	1.0	12 1	9:CA=290000
168	15d21f00168	X	RINSE			04/21/15 20:09	1.0	1	
169	15d21f00169	X	RINSE			04/21/15 20:14	1.0	1	
170	15d21f00170	X	RINSE			04/21/15 20:19	1.0	1	
171	15d21f00171	X	RINSE			04/21/15 20:24	1.0	1	
172	15d21f00172	X	RINSE			04/21/15 20:29	1.0	1	
173	15d21f00173	X	RINSE			04/21/15 20:34	1.0	1	
174	15d21f00174	X	RINSE			04/21/15 20:39	1.0	1	
175	15d21f00175	X	RINSE			04/21/15 20:44	1.0	1	

NT 04/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 175.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015160186

Date : 04/21/15
 Sequence : MET26 15d21f00

Reference : 15d21f00004
 Analyzed : 04/21/15 06:00

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	80929	217916	24038	160718	43273	12195	456321	520569	416861	734609
		LOWER LIMIT	24279	65375	7211	48215	12982	3659	136896	156171	125058	220383
		UPPER LIMIT	97115	261499	28846	192862	51928	14634	547585	624683	500233	881531
016	ICB		85069	238009	25472	138702	38877	12697	493500	554531	455053	794803
018	ICSA		73897	213721	23830	162411	42925	13372	417614	447225	416362	726297
019	ICSAB		68588	203728	22588	158088	42181	12872	403757	431525	402509	699845
025	BLANK	QC784864	78424	220688	23617	164290	43695	11878	461498	519496	426099	742090
026	BS	QC784865	78129	218443	23779	157165	41734	12013	452412	506773	422953	734280
027	BSD	QC784866	80878	225273	23996	157531	42250	12180	466955	521859	433632	758349
029	MS	QC784867	75716	221522	23366	161297	42455	12051	447049	491398	425439	738017
030	MSD	QC784868	71242	197706	23924	146702	40971	12027	410698	452739	388341	673091
034	CCV		73687	214785	23171	168950	43995	11793	441353	480865	415778	720795
036	CCB		90693	244559	24269	153379	43117	12736	511725	572672	467181	826662
037	BLANK	QC784864	98001 *	267741 *	25249	171887	46915	13074	547563	609635	500718 *	872754
039	CCV		90675	248286	24730	171623	46279	12978	505543	556204	472764	837922
041	CCB		97252 *	257289	25494	176959	48005	13088	530520	590701	484467	858047
042	ICSA		82755	236674	23884	169847	45148	13690	459325	485138	453186	798636
043	ICSAB		81156	237071	22582	168223	44914	12940	459646	485335	456351	800315
046	MS	QC784304	69684	213541	21585	151539	39564	10874	421150	435955	408847	710102
048	MSD	QC784305	69078	217665	21107	146977	38258	10507	420688	433989	409113	711495
050	MS	QC784304	78291	228302	20645	149037	40544	11198	463325	493901	432865	757200
052	MSD	QC784305	72952	204507	23621	151449	41105	11950	424023	454142	394657	687310
054	CCV		64423	182944	23655	147745	39447	11606	375827	403911	355288	598866
056	CCB		76067	218678	22190	149111	40309	11393	458218	492295	423317	722513
057	MSS	266019-005	71520	206825	22258	151039	40793	11510	423820	450340	398139	680552
059	MS	QC784306	69373	199785	22183	145852	39386	11370	402877	428516	383866	650329
061	MSD	QC784307	69899	203186	23018	145600	38781	11519	406159	430378	389092	657939
063	SER	QC784308	74397	207712	21695	144739	39464	11148	428038	457827	395851	678503
065	PDS	QC784309	76190	208110	22756	150018	39811	11449	417146	447276	398362	682629
067	SAMPLE	266019-003	78150	216312	21782	151015	40488	11271	434348	463774	408763	702815
069	CCV		80469	222694	22094	152091	40507	11481	446787	476411	421568	721564
071	CCB		84146	220509	23102	159971	42695	11796	450548	490069	417130	710977
072	MSS	266019-005	79257	212848	22060	144539	39430	11322	432891	457339	408662	696962
074	MS	QC784306	80854	232651	22324	150545	40095	11525	458207	477903	435926	739975
076	MSD	QC784307	77244	218091	22399	150382	40148	11346	430977	454076	411103	696045
078	MSS	266019-005	74285	212579	21792	148077	39793	11397	426189	444984	403251	677977
080	SER	QC784308	79022	212474	22431	151265	40998	11527	430410	458998	401297	677366
082	PDS	QC784309	77667	215325	22867	150992	39881	11452	418761	442108	402330	679452
084	SAMPLE	266019-003	78530	224459	22344	157127	41298	11371	442298	458881	421311	707396
086	CCV		81936	230406	23124	151936	40238	11691	455108	473678	433602	726530
088	CCB		84934	225632	23142	156006	41662	11764	458846	489813	426566	716494
089	MSS	266087-001	75412	203976	22988	153123	40803	11567	407071	430881	384972	648063
091	MS	QC784573	84924	219202	21660	148341	38819	10920	424889	448706	402596	693802
093	MSD	QC784574	78435	209494	21732	158053	40684	10961	411855	433359	392489	663747
095	SER	QC784575	83133	225759	21017	148683	40093	11165	448734	474665	420136	711929
097	PDS	QC784576	84199	215930	21175	146362	38473	10915	414384	438269	397495	678622
101	BLANK	QC784945	85523	220369	21488	142720	38493	11070	439738	469083	407911	695038
103	CCV		88751	230277	20657	159587	40707	10925	439134	462580	415767	710889
105	CCB		92245	227823	22012	153291	40664	11311	453602	483257	418088	711869
106	SAMPLE	266087-002	93113	229362	21565	152732	40390	11058	441153	467805	411774	704511
108	SAMPLE	266087-003	91181	217988	21785	131203	37172	10995	417776	445375	389831	669822

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015160186

Date : 04/21/15
 Sequence : MET26 15d21f00

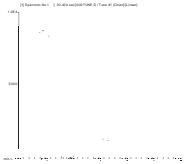
Reference : 15d21f00004
 Analyzed : 04/21/15 06:00

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
110	SAMPLE	265899-005	79400	199832	19193	137116	35571	9682	388789	401334	366827	631616
112	SAMPLE	265899-006	87754	213158	18872	137945	36606	9893	413833	438022	384173	666188
114	CCV		94624	218295	19640	138939	36187	10071	412698	441158	388494	675116
116	CCB		100112 *	212482	19873	140932	37298	10250	412582	450376	379924	649727
117	ICSA		85655	205695	18741	134782	35021	10415	374631	386824	371206	650146
118	ICSAB		80986	206284	18708	138719	36248	10437	381691	393083	379415	658974
121	SAMPLE	266087-004	95236	220519	19723	140826	37479	10357	424067	445542	392190	677747
123	SAMPLE	266087-006	100815 *	221739	20311	135547	36717	10425	414958	442568	385313	671004
125	SAMPLE	266087-007	98495 *	216608	19696	138492	36711	10145	419060	448813	387018	665585
127	SAMPLE	266087-009	88930	212253	19559	140283	36763	10029	406720	428131	380758	657082
129	CCV		107618 *	220386	18480	134903	35431	9730	408375	434818	382569	664574
131	CCB		110509 *	225862	19363	139326	36372	9970	424296	455668	390481	679137
132	SAMPLE	266091-004	116043 *	239175	19120	138393	36988	10078	449159	480016	415447	711702
133	SAMPLE	266091-005	111601 *	230360	19502	138807	36835	10022	426733	458071	394048	684150
134	SAMPLE	266091-006	105546 *	224184	19127	137921	35738	9800	426021	455029	394968	683532
135	SAMPLE	266091-007	107599 *	218199	19760	138823	36113	9923	413028	441988	381538	664485
136	CCV		108888 *	222872	18882	135189	34907	9729	410186	436307	385473	673934
138	CCB		118365 *	223565	18945	137620	36031	9826	416017	451224	383737	670421
139	SAMPLE	266091-002	91091	203032	17846	126373	32498	9035	371517	385640	359417	626592
141	SAMPLE	266091-004	100189 *	214522	17568	129431	34403	9320	400892	431417	370897	644620
143	SAMPLE	266091-005	99435 *	221738	19510	140345	37383	10155	419105	446911	389172	672051
145	SAMPLE	266091-008	102454 *	228761	20351	143812	37851	10381	432836	457829	400951	686039
147	SAMPLE	266091-009	96237	217487	19373	152623	38491	10094	408016	429225	381622	656835
149	SAMPLE	266091-010	101455 *	219336	19934	143524	38083	10363	409561	427746	383958	665363
151	SAMPLE	266091-012	95193	219086	19838	142115	37542	10137	417478	439137	388600	663006
153	CCV		97417 *	222539	20475	150147	37400	10455	418925	438270	395463	679124
155	CCB		107049 *	232406	21382	146858	38674	10827	443567	472742	411500	707219
156	ICSA		91105	220525	19172	144890	37088	10389	393062	401433	392702	681494
157	ICSAB		81973	183197	19217	137105	35792	10368	338039	356667	334137	582054
162	CCV		98086 *	220709	19576	143768	37110	10157	416691	441560	393445	680308
164	CCB		106950 *	230045	20461	146488	38563	10573	441663	468655	406130	700205
165	ICSA		90533	211329	17882	134925	34727	9886	374228	384091	372495	651751
167	ICSAB		83534	185818	15970	121260	31154	8561	332076	342500	327263	576269

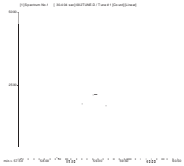
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D21f00.B\002TUNE.D
 Date Acquired: Apr 21 2015 05:50 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

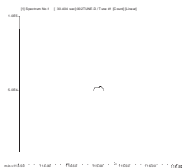
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	7707	7886	7872	7952	7839	1.26	5.00	
59 Co	12790	12634	12800	12726	12582	1.83	5.00	
115 In	267232	263180	264002	265932	265910	0.73	5.00	
205 Tl	17646	17593	17635	17505	17406	2.69	5.00	



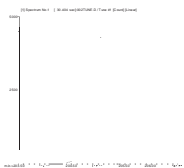
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266091 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015160186001
 Units : ug/L
 Date : 21-APR-2015 06:00
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d21f00005	1015160186005	21-APR-2015 06:05	S27043, S26751	
L2	15d21f00006	1015160186006	21-APR-2015 06:09	S27044, S26751	
L3	15d21f00007	1015160186007	21-APR-2015 06:14	S27045, S26751	
L4	15d21f00008	1015160186008	21-APR-2015 06:19	S27046, S26751	
L5	15d21f00009	1015160186009	21-APR-2015 06:24	S27041, S26751	
L6	15d21f00010	1015160186010	21-APR-2015 06:28	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0055	0.0055	0.0051	0.0047	0.0042	0.0044	BLNK	-0.6950	229.819		0.0049	0.999	0.995	
Antimony	A	0.0033	0.0027	0.0027	0.0029	0.0027	0.0028	BLNK	-0.0141	361.996		0.0028	0.999	0.995	
Barium	A	7.1E-4	6.8E-4	6.0E-4	6.6E-4	6.2E-4	6.5E-4	BLNK	-0.0095	1560.35		6.5E-4	1.000	0.995	
Beryllium	A	0.0039	0.0035	0.0040	0.0038	0.0037	0.0038	BLNK	-0.0219	265.241		0.0038	1.000	0.995	
Cadmium	A	9.4E-4	7.4E-4	7.7E-4	7.3E-4	6.8E-4	7.0E-4	BLNK	-0.0174	1431.18		7.6E-4	1.000	0.995	
Calcium	A	6.2E-4	3.0E-4	2.1E-4	1.9E-4	1.7E-4	1.6E-4	BLNK	-25.444	6145.01		2.7E-4	0.999	0.995	
Lead	A	0.0142	0.0085	0.0071	0.0069	0.0062	0.0063	BLNK	-0.1237	159.839		0.0082	1.000	0.995	
Magnesium	A	0.0089	0.0054	0.0045	0.0039	0.0034	0.0036	BLNK	-12.754	284.472		0.0049	0.999	0.995	
Molybdenum	A	0.0032	0.0023	0.0023	0.0020	0.0020	0.0021	BLNK	-0.0693	490.532		0.0023	0.999	0.995	
Potassium	A	0.1076	0.0269	0.0153	0.0062	0.0048	0.0050	BLNK	-214.50	205.029		0.0276	0.999	0.995	
Silver	A	0.0037	0.0033	0.0031	0.0034	0.0032	0.0033	BLNK	-0.0053	307.716		0.0033	1.000	0.995	
Thallium	A	0.0068	0.0069	0.0066	0.0070	0.0067	0.0070	BLNK	-0.0062	144.503		0.0068	1.000	0.995	
Arsenic	E	0.0095	0.0061	0.0057	0.0053	0.0052	0.0052	BLNK	-0.0994	193.571		0.0062	1.000	0.995	
Chromium	E	0.0617	0.0287	0.0261	0.0220	0.0204	0.0210	BLNK	-0.1714	47.9372		0.0300	1.000	0.995	
Cobalt	E	0.0405	0.0336	0.0364	0.0332	0.0306	0.0313	BLNK	-0.0302	32.1256		0.0343	1.000	0.995	
Copper	E	0.4142	0.0918	0.0543	0.0262	0.0217	0.0219	BLNK	-1.8889	46.1658		0.1050	1.000	0.995	
Manganese	E	0.0311	0.0189	0.0173	0.0150	0.0141	0.0144	BLNK	-0.1217	69.7947		0.0185	1.000	0.995	
Nickel	E	0.0527	0.0187	0.0141	0.0092	0.0081	0.0083	BLNK	-0.4908	121.615		0.0185	1.000	0.995	
Sodium	E	0.0261	0.0091	0.0075	0.0050	0.0041	0.0041	BLNK	-52.418	243.331		0.0093	1.000	0.995	
Vanadium	E	0.0562	0.0262	0.0232	0.0182	0.0171	0.0177	BLNK	-0.2047	56.9917		0.0264	1.000	0.995	
Zinc	E		0.0154	0.0061	0.0046	0.0042	0.0041	BLNK	-0.3438	242.633		0.0069	1.000	0.995	
Iron	H	0.0153	0.0102	0.0093	0.0069	0.0058	0.0062	BLNK	-13.401	164.211		0.0089	0.999	0.995	
Selenium	H	0.0013	0.0011	0.0010	0.0010	8.9E-4	9.1E-4	BLNK	-0.0113	1102.55		0.0010	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	19	50.000	24	100.00	17	1000.0	8	10000	-4	20000	1
Antimony	A	0.1000	5	0.5000	-4	1.0000	-4	10.000	4	100.00	-4	200.00	1
Barium	A	0.1000	1	0.5000	5	1.0000	-7	10.000	2	100.00	-3	200.00	1
Beryllium	A	0.1000	-19	0.5000	-10	1.0000	3	10.000	1	100.00	-3	200.00	1
Cadmium	A	0.1000	16	0.5000	2	1.0000	8	10.000	4	100.00	-3	200.00	1
Calcium	A	10.000	26	50.000	32	100.00	3	1000.0	11	10000	4	20000	-1
Lead	A	0.1000	2	0.5000	11	1.0000	0	10.000	8	100.00	-2	200.00	0
Magnesium	A	10.000	25	50.000	29	100.00	16	1000.0	10	10000	-4	20000	1
Molybdenum	A	0.1000	-11	0.5000	0	1.0000	6	10.000	-1	100.00	-4	200.00	1
Potassium	A	10.000	-38	50.000	23	100.00	-1	1000.0	5	10000	-4	20000	1
Silver	A	0.1000	10	0.5000	2	1.0000	-6	10.000	5	100.00	-2	200.00	1
Thallium	A	0.0500	-14	0.2500	-3	0.5000	-6	5.0000	1	50.000	-3	100.00	1
Arsenic	E	0.1000	-15	0.5000	-1	1.0000	1	10.000	1	100.00	0	200.00	0
Chromium	E	0.1000	24	0.5000	3	1.0000	8	10.000	4	100.00	-2	200.00	1
Cobalt	E	0.1000	0	0.5000	2	1.0000	14	10.000	6	100.00	-2	200.00	0
Copper	E	0.1000	-77	0.5000	-54	1.0000	-38	10.000	2	100.00	-2	200.00	0
Manganese	E	0.1000	-5	0.5000	8	1.0000	9	10.000	4	100.00	-2	200.00	0
Nickel	E	0.1000	51	0.5000	29	1.0000	22	10.000	7	100.00	-2	200.00	0
Sodium	E	10.000	12	50.000	17	100.00	31	1000.0	17	10000	-1	20000	0
Vanadium	E	0.1000	16	0.5000	8	1.0000	12	10.000	2	100.00	-3	200.00	1
Zinc	E			0.5000	205	1.0000	13	10.000	9	100.00	1	200.00	0
Iron	H	10.000	17	50.000	40	100.00	39	1000.0	12	10000	-5	20000	1
Selenium	H	0.1000	33	0.5000	17	1.0000	15	10.000	10	100.00	-2	200.00	1

NT 04/21/15 : Low Cu bias in Calibration.

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015160186001

Cal Date : 21-APR-2015

ICV 1015160186013 (15d21f00013 21-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10330	ug/L	3	10	
Antimony	A	100.0	104.3	ug/L	4	10	
Barium	A	100.0	104.7	ug/L	5	10	
Beryllium	A	100.0	101.8	ug/L	2	10	
Cadmium	A	100.0	104.5	ug/L	5	10	
Calcium	A	10000	11030	ug/L	10	10	
Lead	A	100.0	105.1	ug/L	5	10	
Magnesium	A	10000	10370	ug/L	4	10	
Molybdenum	A	100.0	102.3	ug/L	2	10	
Potassium	A	10000	10340	ug/L	3	10	
Silver	A	100.0	102.8	ug/L	3	10	
Thallium	A	50.00	50.93	ug/L	2	10	
Arsenic	E	100.0	100.9	ug/L	1	10	
Chromium	E	100.0	99.73	ug/L	0	10	
Cobalt	E	100.0	100.2	ug/L	0	10	
Copper	E	100.0	99.79	ug/L	0	10	
Manganese	E	100.0	99.92	ug/L	0	10	
Nickel	E	100.0	100.2	ug/L	0	10	
Sodium	E	10000	10090	ug/L	1	10	
Vanadium	E	100.0	99.72	ug/L	0	10	
Zinc	E	100.0	101.5	ug/L	2	10	
Iron	H	10000	10390	ug/L	4	10	
Selenium	H	100.0	103.1	ug/L	3	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186016 File : 15d21f00016 Time : 21-APR-2015 07:08
 Cal : 1015160186001 Caldate : 21-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.06170]	0.1000	---	ug/L	!ICB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	85069	5.12
Scandium	A	217916	238009	9.22
Scandium	E	24038	25472	5.97
Scandium	H	160718	138702	-13.70
Germanium	H	43273	38877	-10.16
Germanium	E	12195	12697	4.12
Indium	A	456321	493500	8.15
Bismuth	A	520569	554531	6.52
Yttrium	A	416861	455053	9.16
Terbium	A	734609	794803	8.19

!=warning ICB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186042 File : 15d21f00042 Time : 21-APR-2015 09:35
 Cal : 1015160186001 Caldate : 21-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4911	0.1000	ug/L	
Barium	A	1.886	0.1000	ug/L	
Beryllium	A	[-0.004100]	0.1000	ug/L	
Cadmium	A	3.157	0.1000	ug/L	
Lead	A	0.2121	0.1000	ug/L	
Silver	A	[0.08560]	0.1000	ug/L	
Thallium	A	[0.02000]	0.05000	ug/L	
Arsenic	E	0.6705	0.1000	ug/L	
Chromium	E	0.8611	0.1000	ug/L	
Cobalt	E	1.177	0.1000	ug/L	
Copper	E	1.076	0.1000	ug/L	
Manganese	E	7.287	0.1000	ug/L	
Nickel	E	0.8577	0.1000	ug/L	
Vanadium	E	0.1719	0.1000	ug/L	
Zinc	E	1.959	0.5000	ug/L	
Selenium	H	0.1245	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	102700	ug/L	103
Calcium	A	300000	290500	ug/L	97
Magnesium	A	100000	100400	ug/L	100
Molybdenum	A	2000	1993	ug/L	100
Potassium	A	100000	102600	ug/L	103
Sodium	E	250000	228200	ug/L	91
Phosphorus	E	100000	94510	ug/L	95
Iron	H	250000	240500	ug/L	96

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	82755	2.26
Scandium	A	217916	236674	8.61
Scandium	E	24038	23884	-0.64
Scandium	H	160718	169847	5.68
Germanium	H	43273	45148	4.33
Germanium	E	12195	13690	12.26
Indium	A	456321	459325	0.66
Bismuth	A	520569	485138	-6.81
Yttrium	A	416861	453186	8.71
Terbium	A	734609	798636	8.72

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015160186043
 Cal : 1015160186001
 Standards: S26728, S26751

File : 15d21f00043
 Caldate : 21-APR-2015

IDF : 1.0
 Time : 21-APR-2015 09:39

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	97550	ug/L	-2		
Cadmium	A	100.0	99.73	ug/L	0	20	
Calcium	A	300000	275800	ug/L	-8		
Magnesium	A	100000	95090	ug/L	-5		
Molybdenum	A	2000	1937	ug/L	-3		
Potassium	A	100000	97680	ug/L	-2		
Silver	A	50.00	48.23	ug/L	-4	20	
Arsenic	E	100.0	96.82	ug/L	-3	20	
Chromium	E	200.0	203.0	ug/L	2	20	
Cobalt	E	200.0	199.2	ug/L	0	20	
Copper	E	200.0	193.9	ug/L	-3	20	
Manganese	E	200.0	204.2	ug/L	2	20	
Nickel	E	200.0	196.0	ug/L	-2	20	
Sodium	E	250000	234200	ug/L	-6		
Vanadium	E	200.0	205.8	ug/L	3	20	
Zinc	E	100.0	94.28	ug/L	-6	20	
Iron	H	250000	239600	ug/L	-4		
Selenium	H	100.0	99.17	ug/L	-1	20	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	160718	168223	4.67
Scandium	A	217916	237071	8.79
Scandium	E	24038	22582	-6.06
Germanium	H	43273	44914	3.79
Germanium	E	12195	12940	6.11
Indium	A	456321	459646	0.73
Yttrium	A	416861	456351	9.47

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186086 File : 15d21f00086 Time : 21-APR-2015 13:08
 Cal : 1015160186001 Caldate : 21-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0049	0.0043	10000	9986	ug/L	0	10	
Antimony	A	0.0028	0.0028	100.0	101.0	ug/L	1	10	
Barium	A	6.5E-4	6.7E-4	100.0	104.8	ug/L	5	10	
Beryllium	A	0.0038	0.0036	100.0	96.19	ug/L	-4	10	
Cadmium	A	7.6E-4	7.0E-4	100.0	100.4	ug/L	0	10	
Calcium	A	2.7E-4	1.7E-4	10000	10680	ug/L	7	10	
Lead	A	0.0082	0.0062	100.0	98.64	ug/L	-1	10	
Magnesium	A	0.0049	0.0035	10000	9957	ug/L	0	10	
Molybdenum	A	0.0023	0.0020	100.0	97.38	ug/L	-3	10	
Potassium	A	0.0276	0.0051	10000	10180	ug/L	2	10	
Silver	A	0.0033	0.0032	100.0	99.77	ug/L	0	10	
Thallium	A	0.0068	0.0069	50.00	49.54	ug/L	-1	10	
Arsenic	E	0.0062	0.0052	100.0	101.0	ug/L	1	10	
Chromium	E	0.0300	0.0207	100.0	99.13	ug/L	-1	10	
Cobalt	E	0.0343	0.0310	100.0	99.43	ug/L	-1	10	
Copper	E	0.1050	0.0220	100.0	99.69	ug/L	0	10	
Manganese	E	0.0185	0.0142	100.0	99.18	ug/L	-1	10	
Nickel	E	0.0185	0.0082	100.0	99.07	ug/L	-1	10	
Sodium	E	0.0093	0.0042	10000	10070	ug/L	1	10	
Vanadium	E	0.0264	0.0176	100.0	100.0	ug/L	0	10	
Zinc	E	0.0069	0.0042	100.0	101.2	ug/L	1	10	
Iron	H	0.0089	0.0064	10000	10520	ug/L	5	10	
Selenium	H	0.0010	9.6E-4	100.0	105.8	ug/L	6	10	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	81936	1.24
Scandium	A	217916	230406	5.73
Scandium	E	24038	23124	-3.80
Scandium	H	160718	151936	-5.46
Germanium	H	43273	40238	-7.01
Germanium	E	12195	11691	-4.13
Indium	A	456321	455108	-0.27
Bismuth	A	520569	473678	-9.01
Yttrium	A	416861	433602	4.02
Terbium	A	734609	726530	-1.10

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186088 File : 15d21f00088 Time : 21-APR-2015 13:18
 Cal : 1015160186001 Caldate : 21-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	[0.05520]	0.1000	0.05000	ug/L	!CCB
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.08400]	0.1000	---	ug/L	!CCB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	[0.08380]	0.1000	0.05000	ug/L	!CCB
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	84934	4.95
Scandium	A	217916	225632	3.54
Scandium	E	24038	23142	-3.73
Scandium	H	160718	156006	-2.93
Germanium	H	43273	41662	-3.72
Germanium	E	12195	11764	-3.53
Indium	A	456321	458846	0.55
Bismuth	A	520569	489813	-5.91
Yttrium	A	416861	426566	2.33
Terbium	A	734609	716494	-2.47

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186103 File : 15d21f00103 Time : 21-APR-2015 14:31
 Cal : 1015160186001 Caldate : 21-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0049	0.0045	10000	10360	ug/L	4	10	
Antimony	A	0.0028	0.0029	100.0	103.5	ug/L	4	10	
Barium	A	6.5E-4	6.8E-4	100.0	105.8	ug/L	6	10	
Beryllium	A	0.0038	0.0035	100.0	91.96	ug/L	-8	10	
Cadmium	A	7.6E-4	7.3E-4	100.0	103.8	ug/L	4	10	
Calcium	A	2.7E-4	1.8E-4	10000	10990	ug/L	10	10	
Lead	A	0.0082	0.0063	100.0	100.7	ug/L	1	10	
Magnesium	A	0.0049	0.0037	10000	10430	ug/L	4	10	
Molybdenum	A	0.0023	0.0020	100.0	100.0	ug/L	0	10	
Potassium	A	0.0276	0.0053	10000	10580	ug/L	6	10	
Silver	A	0.0033	0.0033	100.0	101.9	ug/L	2	10	
Thallium	A	0.0068	0.0071	50.00	51.00	ug/L	2	10	
Arsenic	E	0.0062	0.0052	100.0	101.0	ug/L	1	10	
Chromium	E	0.0300	0.0222	100.0	106.2	ug/L	6	10	
Cobalt	E	0.0343	0.0333	100.0	106.9	ug/L	7	10	
Copper	E	0.1050	0.0235	100.0	106.8	ug/L	7	10	
Manganese	E	0.0185	0.0150	100.0	104.6	ug/L	5	10	
Nickel	E	0.0185	0.0088	100.0	106.1	ug/L	6	10	
Sodium	E	0.0093	0.0044	10000	10740	ug/L	7	10	
Vanadium	E	0.0264	0.0188	100.0	107.1	ug/L	7	10	
Zinc	E	0.0069	0.0044	100.0	107.0	ug/L	7	10	
Iron	H	0.0089	0.0059	10000	9692	ug/L	-3	10	
Selenium	H	0.0010	9.0E-4	100.0	99.47	ug/L	-1	10	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	88751	9.67
Scandium	A	217916	230277	5.67
Scandium	E	24038	20657	-14.07
Scandium	H	160718	159587	-0.70
Germanium	H	43273	40707	-5.93
Germanium	E	12195	10925	-10.41
Indium	A	456321	439134	-3.77
Bismuth	A	520569	462580	-11.14
Yttrium	A	416861	415767	-0.26
Terbium	A	734609	710889	-3.23

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015160186105 File : 15d21f00105 Time : 21-APR-2015 14:41
 Cal : 1015160186001 Caldate : 21-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.07660]	0.1000	---	ug/L	!CCB
Potassium	A	13.99	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	[0.05460]	0.1000	0.05000	ug/L	!CCB
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	92245	13.98
Scandium	A	217916	227823	4.55
Scandium	E	24038	22012	-8.43
Scandium	H	160718	153291	-4.62
Germanium	H	43273	40664	-6.03
Germanium	E	12195	11311	-7.25
Indium	A	456321	453602	-0.60
Bismuth	A	520569	483257	-7.17
Yttrium	A	416861	418088	0.29
Terbium	A	734609	711869	-3.10

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015160186117 File : 15d21f00117
 Cal : 1015160186001 Caldate : 21-APR-2015
 Standards: S26727, S26751

IDF : 1.0
 Time : 21-APR-2015 15:42

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.5202	0.1000	ug/L	
Barium	A	1.754	0.1000	ug/L	
Beryllium	A	[0.01970]	0.1000	ug/L	
Cadmium	A	2.499	0.1000	ug/L	
Lead	A	0.2135	0.1000	ug/L	
Silver	A	[0.07810]	0.1000	ug/L	
Thallium	A	[0.02260]	0.05000	ug/L	
Arsenic	E	0.5237	0.1000	ug/L	
Chromium	E	0.8630	0.1000	ug/L	
Cobalt	E	1.129	0.1000	ug/L	
Copper	E	0.3929	0.1000	ug/L	
Manganese	E	7.051	0.1000	ug/L	
Nickel	E	0.8627	0.1000	ug/L	
Vanadium	E	[0.07590]	0.1000	ug/L	
Zinc	E	1.722	0.5000	ug/L	
Selenium	H	[0.08680]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	107300	ug/L	107
Calcium	A	300000	296100	ug/L	99
Magnesium	A	100000	106700	ug/L	107
Molybdenum	A	2000	2005	ug/L	100
Potassium	A	100000	106900	ug/L	107
Sodium	E	250000	234400	ug/L	94
Phosphorus	E	100000	92030	ug/L	92
Iron	H	250000	241800	ug/L	97

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	80929	85655	5.84
Scandium	A	217916	205695	-5.61
Scandium	E	24038	18741	-22.04
Scandium	H	160718	134782	-16.14
Germanium	H	43273	35021	-19.07
Germanium	E	12195	10415	-14.60
Indium	A	456321	374631	-17.90
Bismuth	A	520569	386824	-25.69
Yttrium	A	416861	371206	-10.95
Terbium	A	734609	650146	-11.50

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015160186118
 Cal : 1015160186001
 Standards: S26728, S26751

File : 15d21f00118
 Caldate : 21-APR-2015

IDF : 1.0
 Time : 21-APR-2015 15:47

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	103300	ug/L	3		
Cadmium	A	100.0	99.68	ug/L	0	20	
Calcium	A	300000	286200	ug/L	-5		
Magnesium	A	100000	102300	ug/L	2		
Molybdenum	A	2000	1920	ug/L	-4		
Potassium	A	100000	103900	ug/L	4		
Silver	A	50.00	47.94	ug/L	-4	20	
Arsenic	E	100.0	94.66	ug/L	-5	20	
Chromium	E	200.0	200.9	ug/L	0	20	
Cobalt	E	200.0	195.8	ug/L	-2	20	
Copper	E	200.0	190.6	ug/L	-5	20	
Manganese	E	200.0	199.6	ug/L	0	20	
Nickel	E	200.0	192.7	ug/L	-4	20	
Sodium	E	250000	238200	ug/L	-5		
Vanadium	E	200.0	203.9	ug/L	2	20	
Zinc	E	100.0	92.04	ug/L	-8	20	
Iron	H	250000	237700	ug/L	-5		
Selenium	H	100.0	95.19	ug/L	-5	20	

ISTD (ICALBLK 15d21f00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	160718	138719	-13.69
Scandium	A	217916	206284	-5.34
Scandium	E	24038	18708	-22.17
Germanium	H	43273	36248	-16.23
Germanium	E	12195	10437	-14.42
Indium	A	456321	381691	-16.35
Yttrium	A	416861	379415	-8.98

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015161893

Instrument : MET26
 Method : EPA 6020

Begun : 04/22/15 10:13
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d22k00001	X	RINSE			04/22/15 10:13	1.0	1	
002	15d22k00002	TUN				04/22/15 10:18	1.0	2	
003	15d22k00003	X	RINSE			04/22/15 10:22	1.0	1	
004	15d22k00004	ICALBLK	CALBLANK			04/22/15 10:27	1.0	1	
005	15d22k00005	ICAL				04/22/15 10:32	1.0	3 1	
006	15d22k00006	ICAL				04/22/15 10:40	1.0	4 1	
007	15d22k00007	ICAL				04/22/15 10:45	1.0	5 1	
008	15d22k00008	ICAL				04/22/15 10:49	1.0	6 1	
009	15d22k00009	ICAL				04/22/15 10:54	1.0	7 1	
010	15d22k00010	ICAL				04/22/15 10:58	1.0	8 1	
011	15d22k00011	X	RINSE			04/22/15 11:02	1.0	1	
012	15d22k00012	ICV				04/22/15 11:07	1.0	9 1	
013	15d22k00013	XCRI				04/22/15 11:12	1.0	10 1	
014	15d22k00014	ICB				04/22/15 11:16	1.0	1	
015	15d22k00015	CRI				04/22/15 11:21	1.0	10 1	
016	15d22k00016	ICSA				04/22/15 11:26	1.0	11 1	8:CA=290000
017	15d22k00017	ICSAB				04/22/15 11:30	1.0	12 1	12:CA=290000
018	15d22k00018	X	RINSE			04/22/15 11:35	1.0	1	
019	15d22k00019	X	RINSE			04/22/15 11:40	1.0	1	
020	15d22k00020	X	RINSE			04/22/15 11:45	1.0	1	
021	15d22k00021	X	RINSE			04/22/15 11:50	1.0	1	
022	15d22k00022	X	RINSE			04/22/15 11:54	1.0	1	
023	15d22k00023	MS	QC784304	Filtrate	222258	04/22/15 11:59	50.0	1	2:NA=71000
024	15d22k00024	MSD	QC784305	Filtrate	222258	04/22/15 12:04	50.0	1	2:NA=77000
025	15d22k00025	X	RINSE			04/22/15 12:08	1.0	1	
026	15d22k00026	MS	QC784304	Filtrate	222258	04/22/15 12:13	500.0	1	
027	15d22k00027	MSD	QC784305	Filtrate	222258	04/22/15 12:17	500.0	1	
028	15d22k00028	CCV				04/22/15 12:22	1.0	13 1	
029	15d22k00029	X	XCCB			04/22/15 12:27	1.0	1	
030	15d22k00030	CCB				04/22/15 12:31	1.0	1	
031	15d22k00031	SAMPLE	266091-004	Filtrate	222325	04/22/15 12:36	5000	1	
032	15d22k00032	SAMPLE	266091-005	Filtrate	222325	04/22/15 12:41	5000	1	
033	15d22k00033	SAMPLE	266091-006	Filtrate	222325	04/22/15 12:45	5000	1	
034	15d22k00034	SAMPLE	266091-007	Filtrate	222325	04/22/15 12:50	5000	1	
035	15d22k00035	CCV				04/22/15 12:55	1.0	13 1	
036	15d22k00036	X	XCCB			04/22/15 12:59	1.0	1	
037	15d22k00037	CCB				04/22/15 13:04	1.0	1	
038	15d22k00038	MSS	266087-001	Filtrate	222325	04/22/15 13:09	5.0	1	4:CA=33000
039	15d22k00039	MS	QC784573	Filtrate	222325	04/22/15 13:13	5.0	1	4:CA=34000
040	15d22k00040	MSD	QC784574	Filtrate	222325	04/22/15 13:18	5.0	1	4:CA=38000
041	15d22k00041	SER	QC784575	Filtrate	222325	04/22/15 13:22	25.0	1	
042	15d22k00042	PDS	QC784576	Filtrate	222325	04/22/15 13:27	5.0	14 15 16 1	
043	15d22k00043	SAMPLE	266087-002	Filtrate	222325	04/22/15 13:31	5.0	1	
044	15d22k00044	SAMPLE	266087-003	Filtrate	222325	04/22/15 13:36	5.0	1	
045	15d22k00045	SAMPLE	266087-004	Filtrate	222325	04/22/15 13:41	5.0	1	
046	15d22k00046	SAMPLE	266087-006	Filtrate	222325	04/22/15 13:45	5.0	1	
047	15d22k00047	SAMPLE	266087-007	Filtrate	222325	04/22/15 13:50	5.0	1	
048	15d22k00048	CCV				04/22/15 13:55	1.0	13 1	
049	15d22k00049	X	XCCB			04/22/15 13:59	1.0	1	
050	15d22k00050	CCB				04/22/15 14:04	1.0	1	
051	15d22k00051	SAMPLE	266087-009	Filtrate	222325	04/22/15 14:09	5.0	1	4:CA=53000
052	15d22k00052	CCV				04/22/15 14:13	1.0	13 1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015161893

Instrument : MET26
 Method : EPA 6020

Begun : 04/22/15 10:13
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d22k00053	X	XCCB			04/22/15 14:18	1.0	1	
054	15d22k00054	CCB				04/22/15 14:23	1.0	1	
055	15d22k00055	SAMPLE	266091-002	Filtrate	222325	04/22/15 14:27	5.0	1	4:CA=130000
056	15d22k00056	SAMPLE	266091-004	Filtrate	222325	04/22/15 14:32	5.0	1	
057	15d22k00057	SAMPLE	266091-005	Filtrate	222325	04/22/15 14:36	5.0	1	
058	15d22k00058	SAMPLE	266091-008	Filtrate	222325	04/22/15 14:41	5.0	1	
059	15d22k00059	SAMPLE	266091-009	Filtrate	222325	04/22/15 14:46	5.0	1	1:NA=65000
060	15d22k00060	SAMPLE	266091-010	Filtrate	222325	04/22/15 14:50	5.0	1	4:NA=32000
061	15d22k00061	SAMPLE	266091-012	Filtrate	222325	04/22/15 14:55	5.0	1	
062	15d22k00062	CCV				04/22/15 15:00	1.0	13 1	
063	15d22k00063	X	XCCB			04/22/15 15:04	1.0	1	
064	15d22k00064	CCB				04/22/15 15:09	1.0	1	
065	15d22k00065	ICSA				04/22/15 15:14	1.0	11 1	8:CA=290000
066	15d22k00066	ICSAB				04/22/15 15:18	1.0	12 1	10:CA=280000
067	15d22k00067	X	RINSE			04/22/15 15:23	1.0	1	
068	15d22k00068	X	RINSE			04/22/15 15:28	1.0	1	
069	15d22k00069	BLANK	QC784945	Filtrate	222114	04/22/15 15:33	5.0	1	
070	15d22k00070	X	RINSE			04/22/15 15:37	1.0	1	
071	15d22k00071	SAMPLE	265899-001	Filtrate	222114	04/22/15 15:42	5.0	1	4:NA=120000
072	15d22k00072	X	RINSE			04/22/15 15:47	1.0	1	
073	15d22k00073	SAMPLE	265899-003	Filtrate	222114	04/22/15 15:51	5.0	1	4:NA=970000
074	15d22k00074	X	RINSE			04/22/15 15:56	1.0	1	
075	15d22k00075	SAMPLE	265899-004	Filtrate	222114	04/22/15 16:01	5.0	1	4:NA=890000
076	15d22k00076	X	RINSE			04/22/15 16:06	1.0	1	
077	15d22k00077	SAMPLE	265899-005	Filtrate	222114	04/22/15 16:10	5.0	1	5:NA=1000000
078	15d22k00078	X	RINSE			04/22/15 16:15	1.0	1	
079	15d22k00079	SAMPLE	265899-006	Filtrate	222114	04/22/15 16:20	5.0	1	3:NA=240000
080	15d22k00080	X	RINSE			04/22/15 16:25	1.0	1	
081	15d22k00081	CCV				04/22/15 16:29	1.0	13 1	
082	15d22k00082	X	XCCB			04/22/15 16:34	1.0	1	
083	15d22k00083	CCB				04/22/15 16:39	1.0	1	
084	15d22k00084	ICSA				04/22/15 16:44	1.0	11 1	8:CA=290000
085	15d22k00085	ICSAB				04/22/15 16:48	1.0	12 1	10:CA=290000
086	15d22k00086	X	RINSE			04/22/15 16:53	1.0	1	
087	15d22k00087	X	RINSE			04/22/15 16:58	1.0	1	
088	15d22k00088	X	RINSE			04/22/15 17:03	1.0	1	
089	15d22k00089	X	RINSE			04/22/15 17:08	1.0	1	
090	15d22k00090	X	RINSE			04/22/15 17:12	1.0	1	
091	15d22k00091	X	RINSE			04/22/15 17:17	1.0	1	
092	15d22k00092	X	RINSE			04/22/15 17:22	1.0	1	
093	15d22k00093	CCV				04/22/15 17:27	1.0	13 1	
094	15d22k00094	X	XCCB			04/22/15 17:31	1.0	1	
095	15d22k00095	CCB				04/22/15 17:36	1.0	1	
096	15d22k00096	X	RINSE			04/22/15 17:41	1.0	1	
097	15d22k00097	X	RINSE			04/22/15 21:31	1.0	1	
098	15d22k00098	BLANK	QC785199	Miscell.	222494	04/22/15 21:36	25.0	1	
099	15d22k00099	BS	QC785200	Miscell.	222494	04/22/15 21:40	25.0	1	
100	15d22k00100	BSD	QC785201	Miscell.	222494	04/22/15 21:45	25.0	1	
101	15d22k00101	MSS	266255-003	Miscell.	222494	04/22/15 21:49	25.0	1	2:CA=55000
102	15d22k00102	MS	QC785202	Miscell.	222494	04/22/15 21:54	25.0	1	
103	15d22k00103	MSD	QC785203	Miscell.	222494	04/22/15 21:59	25.0	1	
104	15d22k00104	SAMPLE	266181-001	Miscell.	222494	04/22/15 22:03	25.0	1	1:ZN=370

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015161893

Instrument : MET26
 Method : EPA 6020

Begun : 04/22/15 10:13
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d22k00105	SAMPLE	266255-001	Miscell.	222494	04/22/15 22:08	25.0	1	3:CA=69000
106	15d22k00106	SAMPLE	266255-002	Miscell.	222494	04/22/15 22:12	25.0	1	2:CA=45000
107	15d22k00107	SAMPLE	266255-004	Miscell.	222494	04/22/15 22:17	25.0	1	2:CA=61000
108	15d22k00108	CCV				04/22/15 22:22	1.0	13 1	
109	15d22k00109	X	XCCB			04/22/15 22:26	1.0	1	
110	15d22k00110	CCB				04/22/15 22:31	1.0	1	
111	15d22k00111	SAMPLE	266255-005	Miscell.	222494	04/22/15 22:36	25.0	1	3:CA=41000
112	15d22k00112	SAMPLE	266255-006	Miscell.	222494	04/22/15 22:40	25.0	1	2:CA=59000
113	15d22k00113	CCV				04/22/15 22:45	1.0	13 1	
114	15d22k00114	X	XCCB			04/22/15 22:50	1.0	1	
115	15d22k00115	CCB				04/22/15 22:54	1.0	1	
116	15d22k00116	ICSA				04/22/15 22:59	1.0	11 1	8:CA=290000
117	15d22k00117	ICSAB				04/22/15 23:04	1.0	12 1	9:CA=270000
118	15d22k00118	X	RINSE			04/22/15 23:09	1.0	1	
119	15d22k00119	X	RINSE			04/22/15 23:14	1.0	1	
120	15d22k00120	X	RINSE			04/22/15 23:18	1.0	1	
121	15d22k00121	X	RINSE			04/22/15 23:23	1.0	1	
122	15d22k00122	X	RINSE			04/22/15 23:28	1.0	1	
123	15d22k00123	X	RINSE			04/22/15 23:33	1.0	1	
124	15d22k00124	X	RINSE			04/22/15 23:38	1.0	1	
125	15d22k00125	X	RINSE			04/22/15 23:42	1.0	1	

CRT 04/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 85.

NT 04/23/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 86 through 125.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015161893

Date : 04/22/15
 Sequence : MET26 15d22k00

Reference : 15d22k00004
 Analyzed : 04/22/15 10:27

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	1999945	2853629	188614	1640199	390445	94073	3651265	2445386	3998464	4475593
		LOWER LIMIT	599984	856089	56584	492060	117134	28222	1095380	733616	1199539	1342678
		UPPER LIMIT	2399934	3424355	226337	1968239	468534	112888	4381518	2934463	4798157	5370712
014	ICB		2031970	2937841	201397	1660577	394618	99062	3769570	2495790	4151721	4613334
016	ICSA		1519983	2365928	166190	1488119	347502	89077	2953629	1975424	3439882	4006558
017	ICSAB		1446519	2268997	148791	1333300	321475	81642	2851823	1909734	3301304	3851888
023	MS	QC784304	1794492	2671825	189047	1526990	360338	91246	3390779	2213527	3765803	4277313
024	MSD	QC784305	1772638	2577763	172546	1482245	353661	86097	3268861	2146730	3645296	4107125
026	MS	QC784304	1767850	2491145	176649	1444125	351300	88205	3310082	2233529	3599262	4081653
027	MSD	QC784305	1722089	2439295	172613	1461993	351828	86796	3203062	2184173	3481487	3950860
028	CCV		1745733	2518003	180918	1441870	343831	88208	3281744	2212528	3600858	4161547
030	CCB		1898066	2749326	182229	1455064	345602	89576	3584467	2418128	3910851	4451043
031	SAMPLE	266091-004	1794745	2507018	190279	1485550	357871	91898	3297412	2242169	3586495	4083755
032	SAMPLE	266091-005	1768544	2433549	182452	1309234	325179	89460	3224153	2202431	3510881	3992775
033	SAMPLE	266091-006	1836347	2582727	179521	1470907	351679	88173	3411439	2311965	3696050	4220043
034	SAMPLE	266091-007	1842441	2560442	180882	1486814	355003	88331	3387174	2292392	3653438	4179398
035	CCV		1781891	2538012	178668	1468501	351389	87704	3274934	2209338	3618693	4169208
037	CCB		1903246	2644607	194644	1547849	368056	93326	3421520	2295660	3734724	4192270
038	MSS	266087-001	1721537	2456385	177011	1439051	341164	87500	3224783	2228728	3522563	4158140
039	MS	QC784573	1608475	2349678	170681	1407673	340320	84627	3110685	2191922	3432060	4076735
040	MSD	QC784574	1459869	2109088	164059	1419401	340053	82189	2810728	2013007	3069488	3688535
041	SER	QC784575	1597559	2320219	173426	1197335	312024	86926	3213496	2271761	3432138	4114925
042	PDS	QC784576	1506056	2283588	168423	1104581	276800	84190	3016554	2158425	3319616	4015280
043	SAMPLE	266087-002	1489206	2225588	170979	1340029	331121	85875	3048963	2174482	3271795	3954429
044	SAMPLE	266087-003	1411737	2091267	168877	1300045	325520	84950	2882952	2074054	3071703	3748190
045	SAMPLE	266087-004	1444700	2155942	173150	1292621	321458	85327	2945982	2140687	3170081	3859141
046	SAMPLE	266087-006	1446226	2146010	138636	1305145	319433	73647	2992256	2160059	3181814	3910369
047	SAMPLE	266087-007	1376102	2007500	166823	1195050	297609	81234	2851338	2086712	3012120	3683419
048	CCV		1454959	2211714	161135	1342783	317231	80542	3066584	2191051	3319610	4027289
050	CCB		1344503	1724765	173447	1339109	328366	85626	2495240	1851096	2613139	3128035
051	SAMPLE	266087-009	1458113	2203862	165179	1267542	308820	82652	2995324	2119566	3253677	3889733
052	CCV		1521136	2312736	176937	1353903	329367	87072	3104420	2131617	3396519	3996563
054	CCB		1563428	2229394	174852	1361277	332718	85477	3089660	2178301	3301044	3894766
055	SAMPLE	266091-002	1510053	2220096	171082	1317085	306903	82606	2800660	1895155	3143458	3693338
056	SAMPLE	266091-004	1466442	2154027	178130	1342240	330295	87381	2914837	2066865	3146419	3720267
057	SAMPLE	266091-005	1535685	2229635	170478	1282025	317883	84112	3070986	2157332	3269628	3926240
058	SAMPLE	266091-008	1562232	2215847	164476	1357466	323856	81326	3042093	2133397	3262129	3839220
059	SAMPLE	266091-009	1546157	2193716	161787	1268056	309318	80621	2961478	2096329	3197570	3832528
060	SAMPLE	266091-010	1562804	2254051	166163	1288488	314015	82716	3005882	2061621	3266342	3839642
061	SAMPLE	266091-012	1573338	2252044	176515	1346815	326932	85651	3054504	2137166	3297362	3837418
062	CCV		1602186	2286858	158293	1200088	298314	78997	3040294	2087065	3337818	3906825
064	CCB		1595135	2257143	170060	1355112	326601	83912	3080189	2149229	3335113	3845782
065	ICSA		1318766	2073481	146560	1239509	296504	78686	2683668	1810326	3054892	3658422
066	ICSAB		1228710	1992671	133514	1159300	277451	72415	2634455	1800001	3005018	3620930
069	BLANK	QC784945	1197547	1699391	150177	1125059	285142	75156	2479551	1789052	2616506	3141813
071	SAMPLE	265899-001	1329297	2050529	148321	1178530	281548	73066	2694226	1788855	2984484	3506647
073	SAMPLE	265899-003	1401778	2205574	163435	1283148	294295	78480	2638072	1615091	3011614	3348872
075	SAMPLE	265899-004	1441548	2314217	170711	1268060	292212	80165	2689370	1683273	3149716	3432824
077	SAMPLE	265899-005	1599475	2471538	181484	1370167	308349	83648	2728807	1628501	3254113	3411577
079	SAMPLE	265899-006	1228809	1936766	144489	1161505	279068	71197	2554796	1700783	2826187	3302197
081	CCV		1285098	1998852	143864	1125594	275846	72876	2768744	1911242	3004358	3564455

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015161893

Date : 04/22/15
 Sequence : MET26 15d22k00

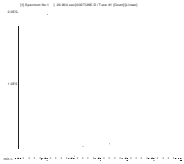
Reference : 15d22k00004
 Analyzed : 04/22/15 10:27

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
083	CCB		1427104	2088251	155160	1223171	300237	76775	2886146	1983410	3100895	3594896
084	ICSA		1163462	1917139	134223	1114782	269852	72138	2537634	1685998	2868993	3450177
085	ICSAB		1047362	1756903	125061	1064298	260677	67826	2346163	1619432	2685325	3210781
093	CCV		1242693	1922754	139783	1101721	272561	70643	2709016	1875965	2936347	3524084
095	CCB		1296058	1971785	144334	1130353	281890	72599	2845569	1971335	3004014	3569601
098	BLANK	QC785199	1308684	2065596	149165	1217653	299857	75785	2904161	1970799	3129928	3594745
099	BS	QC785200	1221913	1858356	155045	1225393	299887	76989	2668067	1836400	2851242	3325420
100	BSD	QC785201	1251654	1996197	149325	1159975	287351	74873	2831083	1925328	3050925	3522497
101	MSS	266255-003	1249035	2025713	152803	1151446	279020	74847	2829445	1899123	3143326	3575071
102	MS	QC785202	1230916	2031861	149349	1173706	280896	73208	2768945	1863578	3112996	3514241
103	MSD	QC785203	1210212	1977015	139332	1153549	274518	69319	2734453	1848043	3047695	3480145
104	SAMPLE	266181-001	1246579	1948422	147126	1140861	284010	73764	2772366	1894750	2969155	3451519
105	SAMPLE	266255-001	1157190	1869067	142159	1104720	267389	70194	2603652	1794056	2902723	3303196
106	SAMPLE	266255-002	1180118	1960476	141533	1101609	268718	69767	2695531	1855251	3019402	3437952
107	SAMPLE	266255-004	1163933	1899948	143469	1128951	269304	69989	2640166	1806869	2931927	3371990
108	CCV		1221477	1990496	142274	1120972	277266	72461	2790352	1845436	3048454	3548524
110	CCB		1262160	1994927	143798	1085627	277573	71797	2813212	1898157	3006137	3479207
111	SAMPLE	266255-005	1152923	1908293	139694	1131479	270008	69302	2628379	1796232	2953292	3357386
112	SAMPLE	266255-006	1158825	1905139	143581	1127070	269393	70881	2645016	1809924	2953996	3378878
113	CCV		1205814	1979341	141010	1123018	276041	71333	2776677	1844566	3026497	3521085
115	CCB		1192556	1932646	139767	1100245	274447	70311	2792889	1879644	2945734	3460995
116	ICSA		959899	1704456	121133	1030467	252429	66450	2355190	1557711	2647058	3161206
117	ICSAB		820627	1621621	116872	948081	236924	63458	2208962	1502590	2546600	3012032

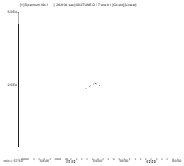
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D22k00.B\002TUNE.D
 Date Acquired: Apr 22 2015 10:18 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

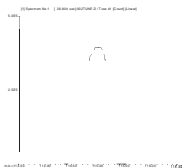
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	135694	136270	135407	133904	133186	1.12	5.00	
59 Co	150396	149176	148536	148235	147846	1.50	5.00	
115 In	2017262	2093478	2065005	2001019	1979828	2.78	5.00	
205 Tl	82105	80892	80531	80298	79428	1.36	5.00	



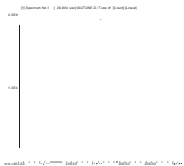
7 Li
Mass Calib.
 Actual: 6.95
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266091 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015161893001
 Units : ug/L
 Date : 22-APR-2015 10:27
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d22k00005	1015161893005	22-APR-2015 10:32	S27043, S26751	
L2	15d22k00006	1015161893006	22-APR-2015 10:40	S27044, S26751	
L3	15d22k00007	1015161893007	22-APR-2015 10:45	S27045, S26751	
L4	15d22k00008	1015161893008	22-APR-2015 10:49	S27046, S26751	
L5	15d22k00009	1015161893009	22-APR-2015 10:54	S27041, S26751	
L6	15d22k00010	1015161893010	22-APR-2015 10:58	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0057	0.0058	0.0055	0.0051	0.0052	0.0052	BLNK	-0.4015	192.144		0.0054	1.000	0.995	
Antimony	A	0.0030	0.0029	0.0027	0.0026	0.0029	0.0029	BLNK	-0.0118	341.195		0.0029	1.000	0.995	
Barium	A	9.1E-4	8.0E-4	7.8E-4	7.4E-4	7.5E-4	7.6E-4	BLNK	-0.0151	1312.114		7.9E-4	1.000	0.995	
Beryllium	A	0.0027	0.0027	0.0025	0.0025	0.0025	0.0026	BLNK	-0.0065	389.624		0.0026	1.000	0.995	
Cadmium	A	8.4E-4	8.3E-4	7.9E-4	7.4E-4	7.5E-4	7.7E-4	BLNK	-0.0124	1309.30		7.9E-4	1.000	0.995	
Calcium	A	0.0024	6.3E-4	3.9E-4	1.9E-4	1.8E-4	1.8E-4	BLNK	-120.87	5542.30		6.6E-4	1.000	0.995	
Lead	A	0.0093	0.0064	0.0057	0.0051	0.0052	0.0053	BLNK	-0.0708	188.804		0.0062	1.000	0.995	
Magnesium	A	0.0056	0.0050	0.0047	0.0043	0.0044	0.0043	BLNK	-1.0297	230.116		0.0047	1.000	0.995	
Molybdenum	A	0.0038	0.0027	0.0021	0.0020	0.0020	0.0021	BLNK	-0.1073	478.129		0.0024	0.999	0.995	
Potassium	A	0.0744	0.0199	0.0125	0.0062	0.0057	0.0057	BLNK	-120.67	176.928		0.0207	1.000	0.995	
Silver	A	0.0037	0.0038	0.0037	0.0036	0.0038	0.0038	BLNK	-0.0072	264.205		0.0037	1.000	0.995	
Thallium	A	0.0081	0.0073	0.0069	0.0067	0.0070	0.0079	BLNK	-0.0137	129.914		0.0073	0.997	0.995	
Arsenic	E	0.0094	0.0061	0.0063	0.0055	0.0055	0.0055	BLNK	-0.0906	182.656		0.0064	1.000	0.995	
Chromium	E	0.0585	0.0311	0.0290	0.0246	0.0239	0.0250	BLNK	-0.1290	40.3372		0.0320	1.000	0.995	
Cobalt	E	0.0383	0.0375	0.0393	0.0371	0.0363	0.0371	BLNK	-0.0053	27.0519		0.0376	1.000	0.995	
Copper	E	0.1078	0.0451	0.0360	0.0277	0.0260	0.0254	BLNK	-0.3870	39.2429		0.0447	1.000	0.995	
Manganese	E	0.0164	0.0151	0.0157	0.0148	0.0147	0.0145	BLNK	-0.0078	68.8417		0.0152	1.000	0.995	
Nickel	E	0.0130	0.0110	0.0112	0.0101	0.0098	0.0095	BLNK	-0.0179	104.541		0.0108	1.000	0.995	
Sodium	E	0.0243	0.0091	0.0071	0.0053	0.0048	0.0047	BLNK	-42.519	212.714		0.0092	1.000	0.995	
Vanadium	E	0.0797	0.0312	0.0268	0.0201	0.0197	0.0195	BLNK	-0.3206	51.2584		0.0328	1.000	0.995	
Zinc	E		0.0176	0.0070	0.0049	0.0046	0.0045	BLNK	-0.3874	222.219		0.0077	1.000	0.995	
Iron	H	0.0079	0.0082	0.0081	0.0077	0.0073	0.0071	BLNK	-1.0924	140.372		0.0077	1.000	0.995	
Selenium	H	0.0010	10.0E-4	0.0010	0.0010	9.7E-4	9.4E-4	BLNK	-0.0186	1054.59		0.0010	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	5	50.000	10	100.00	5	1000.0	-2	10000	0	20000	0
Antimony	A	0.1000	-8	0.5000	-3	1.0000	-8	10.000	-10	100.00	-1	200.00	0
Barium	A	0.1000	4	0.5000	2	1.0000	0	10.000	-3	100.00	-1	200.00	0
Beryllium	A	0.1000	-1	0.5000	3	1.0000	-5	10.000	-4	100.00	-2	200.00	1
Cadmium	A	0.1000	-2	0.5000	6	1.0000	2	10.000	-3	100.00	-2	200.00	0
Calcium	A	10.000	24	50.000	9	100.00	-4	1000.0	-7	10000	0	20000	0
Lead	A	0.1000	5	0.5000	7	1.0000	1	10.000	-5	100.00	-2	200.00	0
Magnesium	A	10.000	19	50.000	13	100.00	7	1000.0	-1	10000	1	20000	0
Molybdenum	A	0.1000	-24	0.5000	7	1.0000	-10	10.000	-8	100.00	-6	200.00	1
Potassium	A	10.000	10	50.000	11	100.00	0	1000.0	-2	10000	0	20000	0
Silver	A	0.1000	-9	0.5000	-2	1.0000	-2	10.000	-6	100.00	0	200.00	0
Thallium	A	0.0500	-22	0.2500	-10	0.5000	-13	5.0000	-13	50.000	-10	100.00	2
Arsenic	E	0.1000	-19	0.5000	-6	1.0000	6	10.000	0	100.00	0	200.00	0
Chromium	E	0.1000	7	0.5000	0	1.0000	4	10.000	-2	100.00	-4	200.00	1
Cobalt	E	0.1000	-2	0.5000	0	1.0000	6	10.000	0	100.00	-2	200.00	0
Copper	E	0.1000	-64	0.5000	0	1.0000	3	10.000	5	100.00	2	200.00	0
Manganese	E	0.1000	5	0.5000	3	1.0000	7	10.000	2	100.00	1	200.00	0
Nickel	E	0.1000	18	0.5000	11	1.0000	15	10.000	6	100.00	2	200.00	0
Sodium	E	10.000	-9	50.000	8	100.00	8	1000.0	8	10000	2	20000	0
Vanadium	E	0.1000	-12	0.5000	-4	1.0000	5	10.000	0	100.00	0	200.00	0
Zinc	E			0.5000	214	1.0000	16	10.000	4	100.00	2	200.00	-1
Iron	H	10.000	0	50.000	13	100.00	12	1000.0	7	10000	2	20000	-1
Selenium	H	0.1000	-9	0.5000	1	1.0000	9	10.000	6	100.00	2	200.00	-1

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015161893001

Cal Date : 22-APR-2015

ICV 1015161893012 (15d22k00012 22-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10110	ug/L	1	10	
Antimony	A	100.0	101.6	ug/L	2	10	
Barium	A	100.0	100.6	ug/L	1	10	
Beryllium	A	100.0	98.38	ug/L	-2	10	
Cadmium	A	100.0	100.7	ug/L	1	10	
Calcium	A	10000	9989	ug/L	0	10	
Lead	A	100.0	100.0	ug/L	0	10	
Magnesium	A	10000	10170	ug/L	2	10	
Molybdenum	A	100.0	96.69	ug/L	-3	10	
Potassium	A	10000	10170	ug/L	2	10	
Silver	A	100.0	101.9	ug/L	2	10	
Thallium	A	50.00	46.07	ug/L	-8	10	
Arsenic	E	100.0	102.1	ug/L	2	10	
Chromium	E	100.0	98.00	ug/L	-2	10	
Cobalt	E	100.0	100.0	ug/L	0	10	
Copper	E	100.0	103.5	ug/L	4	10	
Manganese	E	100.0	102.9	ug/L	3	10	
Nickel	E	100.0	104.2	ug/L	4	10	
Sodium	E	10000	10280	ug/L	3	10	
Vanadium	E	100.0	102.4	ug/L	2	10	
Zinc	E	100.0	103.4	ug/L	3	10	
Iron	H	10000	10450	ug/L	5	10	
Selenium	H	100.0	104.0	ug/L	4	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015161893014 File : 15d22k00014 Time : 22-APR-2015 11:16
 Cal : 1015161893001 Caldate : 22-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	[0.05140]	0.1000	0.05000	ug/L	!ICB
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.07520]	0.1000	---	ug/L	!ICB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	2031970	1.60
Scandium	A	2853629	2937841	2.95
Scandium	E	188614	201397	6.78
Scandium	H	1640199	1660577	1.24
Germanium	H	390445	394618	1.07
Germanium	E	94073	99062	5.30
Indium	A	3651265	3769570	3.24
Bismuth	A	2445386	2495790	2.06
Yttrium	A	3998464	4151721	3.83
Terbium	A	4475593	4613334	3.08

!=warning ICB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015161893016
 Cal : 1015161893001
 Standards: S26727, S26751
 File : 15d22k00016
 Caldate : 22-APR-2015
 IDF : 1.0
 Time : 22-APR-2015 11:26

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4677	0.1000	ug/L	
Barium	A	1.805	0.1000	ug/L	
Beryllium	A	[0.005800]	0.1000	ug/L	
Cadmium	A	2.432	0.1000	ug/L	
Lead	A	0.1983	0.1000	ug/L	
Silver	A	[0.06540]	0.1000	ug/L	
Thallium	A	[0.01620]	0.05000	ug/L	
Arsenic	E	0.6910	0.1000	ug/L	
Chromium	E	0.8507	0.1000	ug/L	
Cobalt	E	1.127	0.1000	ug/L	
Copper	E	1.119	0.1000	ug/L	
Manganese	E	7.696	0.1000	ug/L	
Nickel	E	1.216	0.1000	ug/L	
Vanadium	E	[-0.06020]	0.1000	ug/L	
Zinc	E	2.801	0.5000	ug/L	
Selenium	H	[0.07710]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94480	ug/L	94
Calcium	A	300000	289000	ug/L	96
Magnesium	A	100000	91560	ug/L	92
Molybdenum	A	2000	1935	ug/L	97
Potassium	A	100000	95210	ug/L	95
Sodium	E	250000	237800	ug/L	95
Phosphorus	E	100000	105300	ug/L	105
Iron	H	250000	238000	ug/L	95

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1519983	-24.00
Scandium	A	2853629	2365928	-17.09
Scandium	E	188614	166190	-11.89
Scandium	H	1640199	1488119	-9.27
Germanium	H	390445	347502	-11.00
Germanium	E	94073	89077	-5.31
Indium	A	3651265	2953629	-19.11
Bismuth	A	2445386	1975424	-19.22
Yttrium	A	3998464	3439882	-13.97
Terbium	A	4475593	4006558	-10.48

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015161893017
 Cal : 1015161893001
 Standards: S26728, S26751

File : 15d22k00017
 Caldate : 22-APR-2015

IDF : 1.0
 Time : 22-APR-2015 11:30

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	94670	ug/L	-5		
Cadmium	A	100.0	99.48	ug/L	-1	20	
Calcium	A	300000	289100	ug/L	-4		
Magnesium	A	100000	91880	ug/L	-8		
Molybdenum	A	2000	1959	ug/L	-2		
Potassium	A	100000	95330	ug/L	-5		
Silver	A	50.00	46.56	ug/L	-7	20	
Arsenic	E	100.0	100.9	ug/L	1	20	
Chromium	E	200.0	199.4	ug/L	0	20	
Cobalt	E	200.0	206.8	ug/L	3	20	
Copper	E	200.0	198.1	ug/L	-1	20	
Manganese	E	200.0	217.5	ug/L	9	20	
Nickel	E	200.0	200.4	ug/L	0	20	
Sodium	E	250000	247200	ug/L	-1		
Vanadium	E	200.0	212.4	ug/L	6	20	
Zinc	E	100.0	97.98	ug/L	-2	20	
Iron	H	250000	247600	ug/L	-1		
Selenium	H	100.0	98.24	ug/L	-2	20	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	1640199	1333300	-18.71
Scandium	A	2853629	2268997	-20.49
Scandium	E	188614	148791	-21.11
Germanium	H	390445	321475	-17.66
Germanium	E	94073	81642	-13.21
Indium	A	3651265	2851823	-21.89
Yttrium	A	3998464	3301304	-17.44

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015161893028 File : 15d22k00028 Time : 22-APR-2015 12:22
 Cal : 1015161893001 Caldate : 22-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0054	0.0054	10000	10290	ug/L	3	10	
Antimony	A	0.0029	0.0030	100.0	103.3	ug/L	3	10	
Barium	A	7.9E-4	7.9E-4	100.0	103.4	ug/L	3	10	
Beryllium	A	0.0026	0.0025	100.0	96.64	ug/L	-3	10	
Cadmium	A	7.9E-4	7.8E-4	100.0	102.5	ug/L	3	10	
Calcium	A	6.6E-4	1.9E-4	10000	10260	ug/L	3	10	
Lead	A	0.0062	0.0055	100.0	103.4	ug/L	3	10	
Magnesium	A	0.0047	0.0045	10000	10320	ug/L	3	10	
Molybdenum	A	0.0024	0.0021	100.0	98.79	ug/L	-1	10	
Potassium	A	0.0207	0.0060	10000	10410	ug/L	4	10	
Silver	A	0.0037	0.0039	100.0	104.3	ug/L	4	10	
Thallium	A	0.0073	0.0073	50.00	47.24	ug/L	-6	10	
Arsenic	E	0.0064	0.0055	100.0	100.6	ug/L	1	10	
Chromium	E	0.0320	0.0234	100.0	94.22	ug/L	-6	10	
Cobalt	E	0.0376	0.0355	100.0	96.03	ug/L	-4	10	
Copper	E	0.0447	0.0254	100.0	99.38	ug/L	-1	10	
Manganese	E	0.0152	0.0146	100.0	100.5	ug/L	1	10	
Nickel	E	0.0108	0.0095	100.0	99.80	ug/L	0	10	
Sodium	E	0.0092	0.0047	10000	10040	ug/L	0	10	
Vanadium	E	0.0328	0.0193	100.0	98.75	ug/L	-1	10	
Zinc	E	0.0077	0.0045	100.0	99.86	ug/L	0	10	
Iron	H	0.0077	0.0074	10000	10440	ug/L	4	10	
Selenium	H	0.0010	9.9E-4	100.0	104.1	ug/L	4	10	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1745733	-12.71
Scandium	A	2853629	2518003	-11.76
Scandium	E	188614	180918	-4.08
Scandium	H	1640199	1441870	-12.09
Germanium	H	390445	343831	-11.94
Germanium	E	94073	88208	-6.23
Indium	A	3651265	3281744	-10.12
Bismuth	A	2445386	2212528	-9.52
Yttrium	A	3998464	3600858	-9.94
Terbium	A	4475593	4161547	-7.02

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015161893030 File : 15d22k00030 Time : 22-APR-2015 12:31
 Cal : 1015161893001 Caldate : 22-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	---	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1898066	-5.09
Scandium	A	2853629	2749326	-3.66
Scandium	E	188614	182229	-3.39
Scandium	H	1640199	1455064	-11.29
Germanium	H	390445	345602	-11.49
Germanium	E	94073	89576	-4.78
Indium	A	3651265	3584467	-1.83
Bismuth	A	2445386	2418128	-1.11
Yttrium	A	3998464	3910851	-2.19
Terbium	A	4475593	4451043	-0.55

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015161893035 File : 15d22k00035 Time : 22-APR-2015 12:55
 Cal : 1015161893001 Caldate : 22-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0054	0.0053	10000	10260	ug/L	3	10	
Antimony	A	0.0029	0.0030	100.0	103.1	ug/L	3	10	
Barium	A	7.9E-4	7.8E-4	100.0	102.2	ug/L	2	10	
Beryllium	A	0.0026	0.0025	100.0	95.60	ug/L	-4	10	
Cadmium	A	7.9E-4	7.8E-4	100.0	101.8	ug/L	2	10	
Calcium	A	6.6E-4	1.9E-4	10000	10190	ug/L	2	10	
Lead	A	0.0062	0.0054	100.0	102.3	ug/L	2	10	
Magnesium	A	0.0047	0.0045	10000	10320	ug/L	3	10	
Molybdenum	A	0.0024	0.0020	100.0	97.69	ug/L	-2	10	
Potassium	A	0.0207	0.0059	10000	10330	ug/L	3	10	
Silver	A	0.0037	0.0039	100.0	103.3	ug/L	3	10	
Thallium	A	0.0073	0.0072	50.00	46.94	ug/L	-6	10	
Arsenic	E	0.0064	0.0056	100.0	102.2	ug/L	2	10	
Chromium	E	0.0320	0.0241	100.0	97.01	ug/L	-3	10	
Cobalt	E	0.0376	0.0365	100.0	98.76	ug/L	-1	10	
Copper	E	0.0447	0.0260	100.0	101.8	ug/L	2	10	
Manganese	E	0.0152	0.0151	100.0	103.8	ug/L	4	10	
Nickel	E	0.0108	0.0098	100.0	102.5	ug/L	3	10	
Sodium	E	0.0092	0.0049	10000	10450	ug/L	5	10	
Vanadium	E	0.0328	0.0199	100.0	101.8	ug/L	2	10	
Zinc	E	0.0077	0.0046	100.0	102.5	ug/L	3	10	
Iron	H	0.0077	0.0075	10000	10570	ug/L	6	10	
Selenium	H	0.0010	9.9E-4	100.0	104.4	ug/L	4	10	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1781891	-10.90
Scandium	A	2853629	2538012	-11.06
Scandium	E	188614	178668	-5.27
Scandium	H	1640199	1468501	-10.47
Germanium	H	390445	351389	-10.00
Germanium	E	94073	87704	-6.77
Indium	A	3651265	3274934	-10.31
Bismuth	A	2445386	2209338	-9.65
Yttrium	A	3998464	3618693	-9.50
Terbium	A	4475593	4169208	-6.85

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015161893037 File : 15d22k00037 Time : 22-APR-2015 13:04
 Cal : 1015161893001 Caldate : 22-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	---	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1903246	-4.84
Scandium	A	2853629	2644607	-7.32
Scandium	E	188614	194644	3.20
Scandium	H	1640199	1547849	-5.63
Germanium	H	390445	368056	-5.73
Germanium	E	94073	93326	-0.79
Indium	A	3651265	3421520	-6.29
Bismuth	A	2445386	2295660	-6.12
Yttrium	A	3998464	3734724	-6.60
Terbium	A	4475593	4192270	-6.33

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015161893052 File : 15d22k00052 Time : 22-APR-2015 14:13
 Cal : 1015161893001 Caldate : 22-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0054	0.0053	10000	10170	ug/L	2	10	
Antimony	A	0.0029	0.0031	100.0	105.5	ug/L	6	10	
Barium	A	7.9E-4	7.9E-4	100.0	103.9	ug/L	4	10	
Beryllium	A	0.0026	0.0025	100.0	99.09	ug/L	-1	10	
Cadmium	A	7.9E-4	7.9E-4	100.0	103.5	ug/L	4	10	
Calcium	A	6.6E-4	1.9E-4	10000	10200	ug/L	2	10	
Lead	A	0.0062	0.0055	100.0	104.7	ug/L	5	10	
Magnesium	A	0.0047	0.0044	10000	10190	ug/L	2	10	
Molybdenum	A	0.0024	0.0021	100.0	99.45	ug/L	-1	10	
Potassium	A	0.0207	0.0059	10000	10300	ug/L	3	10	
Silver	A	0.0037	0.0040	100.0	104.4	ug/L	4	10	
Thallium	A	0.0073	0.0074	50.00	47.98	ug/L	-4	10	
Arsenic	E	0.0064	0.0056	100.0	102.0	ug/L	2	10	
Chromium	E	0.0320	0.0233	100.0	93.70	ug/L	-6	10	
Cobalt	E	0.0376	0.0352	100.0	95.26	ug/L	-5	10	
Copper	E	0.0447	0.0249	100.0	97.45	ug/L	-3	10	
Manganese	E	0.0152	0.0149	100.0	102.4	ug/L	2	10	
Nickel	E	0.0108	0.0094	100.0	98.62	ug/L	-1	10	
Sodium	E	0.0092	0.0047	10000	9981	ug/L	0	10	
Vanadium	E	0.0328	0.0194	100.0	99.04	ug/L	-1	10	
Zinc	E	0.0077	0.0045	100.0	100.5	ug/L	1	10	
Iron	H	0.0077	0.0076	10000	10650	ug/L	7	10	
Selenium	H	0.0010	9.9E-4	100.0	104.2	ug/L	4	10	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1521136	-23.94
Scandium	A	2853629	2312736	-18.95
Scandium	E	188614	176937	-6.19
Scandium	H	1640199	1353903	-17.45
Germanium	H	390445	329367	-15.64
Germanium	E	94073	87072	-7.44
Indium	A	3651265	3104420	-14.98
Bismuth	A	2445386	2131617	-12.83
Yttrium	A	3998464	3396519	-15.05
Terbium	A	4475593	3996563	-10.70

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015161893054
Cal : 1015161893001

File : 15d22k00054
Caldate : 22-APR-2015

IDF : 1.0
Time : 22-APR-2015 14:23

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	---	ug/L	
Potassium	A	22.03	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1563428	-21.83
Scandium	A	2853629	2229394	-21.88
Scandium	E	188614	174852	-7.30
Scandium	H	1640199	1361277	-17.01
Germanium	H	390445	332718	-14.78
Germanium	E	94073	85477	-9.14
Indium	A	3651265	3089660	-15.38
Bismuth	A	2445386	2178301	-10.92
Yttrium	A	3998464	3301044	-17.44
Terbium	A	4475593	3894766	-12.98

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015161893062 File : 15d22k00062 Time : 22-APR-2015 15:00
 Cal : 1015161893001 Caldate : 22-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg		Spiked	Quant	Units	%D	Max %D	Flags
		RF/CF	RF/CF						
Aluminum	A	0.0054	0.0054	10000	10370	ug/L	4	10	
Antimony	A	0.0029	0.0031	100.0	104.8	ug/L	5	10	
Barium	A	7.9E-4	7.9E-4	100.0	103.7	ug/L	4	10	
Beryllium	A	0.0026	0.0025	100.0	96.80	ug/L	-3	10	
Cadmium	A	7.9E-4	7.9E-4	100.0	103.1	ug/L	3	10	
Calcium	A	6.6E-4	1.9E-4	10000	10300	ug/L	3	10	
Lead	A	0.0062	0.0055	100.0	103.5	ug/L	4	10	
Magnesium	A	0.0047	0.0045	10000	10370	ug/L	4	10	
Molybdenum	A	0.0024	0.0021	100.0	98.22	ug/L	-2	10	
Potassium	A	0.0207	0.0060	10000	10510	ug/L	5	10	
Silver	A	0.0037	0.0039	100.0	103.7	ug/L	4	10	
Thallium	A	0.0073	0.0073	50.00	47.23	ug/L	-6	10	
Arsenic	E	0.0064	0.0059	100.0	107.7	ug/L	8	10	
Chromium	E	0.0320	0.0251	100.0	100.9	ug/L	1	10	
Cobalt	E	0.0376	0.0379	100.0	102.4	ug/L	2	10	
Copper	E	0.0447	0.0269	100.0	105.3	ug/L	5	10	
Manganese	E	0.0152	0.0159	100.0	109.6	ug/L	10	10	
Nickel	E	0.0108	0.0102	100.0	106.5	ug/L	7	10	
Sodium	E	0.0092	0.0051	10000	10890	ug/L	9	10	
Vanadium	E	0.0328	0.0208	100.0	106.3	ug/L	6	10	
Zinc	E	0.0077	0.0049	100.0	108.7	ug/L	9	10	
Iron	H	0.0077	0.0082	10000	11480	ug/L	15	10	c+ ***
Selenium	H	0.0010	0.0010	100.0	110.4	ug/L	10	10	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1602186	-19.89
Scandium	A	2853629	2286858	-19.86
Scandium	E	188614	158293	-16.08
Scandium	H	1640199	1200088	-26.83
Germanium	H	390445	298314	-23.60
Germanium	E	94073	78997	-16.03
Indium	A	3651265	3040294	-16.73
Bismuth	A	2445386	2087065	-14.65
Yttrium	A	3998464	3337818	-16.52
Terbium	A	4475593	3906825	-12.71

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015161893064 File : 15d22k00064 Time : 22-APR-2015 15:09
 Cal : 1015161893001 Caldate : 22-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	---	ug/L	
Potassium	A	32.64	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	[0.09080]	0.1000	0.05000	ug/L	!CCB
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1595135	-20.24
Scandium	A	2853629	2257143	-20.90
Scandium	E	188614	170060	-9.84
Scandium	H	1640199	1355112	-17.38
Germanium	H	390445	326601	-16.35
Germanium	E	94073	83912	-10.80
Indium	A	3651265	3080189	-15.64
Bismuth	A	2445386	2149229	-12.11
Yttrium	A	3998464	3335113	-16.59
Terbium	A	4475593	3845782	-14.07

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015161893065 File : 15d22k00065
 Cal : 1015161893001 Caldate : 22-APR-2015
 Standards: S26727, S26751

IDF : 1.0
 Time : 22-APR-2015 15:14

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4679	0.1000	ug/L	
Barium	A	1.821	0.1000	ug/L	
Beryllium	A	[0.01020]	0.1000	ug/L	
Cadmium	A	2.587	0.1000	ug/L	
Lead	A	0.2012	0.1000	ug/L	
Silver	A	[0.06960]	0.1000	ug/L	
Thallium	A	[0.01580]	0.05000	ug/L	
Arsenic	E	0.7091	0.1000	ug/L	
Chromium	E	0.8480	0.1000	ug/L	
Cobalt	E	1.107	0.1000	ug/L	
Copper	E	1.114	0.1000	ug/L	
Manganese	E	7.761	0.1000	ug/L	
Nickel	E	1.206	0.1000	ug/L	
Vanadium	E	[-0.04970]	0.1000	ug/L	
Zinc	E	2.775	0.5000	ug/L	
Selenium	H	0.1150	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94440	ug/L	94
Calcium	A	300000	287800	ug/L	96
Magnesium	A	100000	91890	ug/L	92
Molybdenum	A	2000	1950	ug/L	98
Potassium	A	100000	95560	ug/L	96
Sodium	E	250000	238400	ug/L	95
Phosphorus	E	100000	107700	ug/L	108
Iron	H	250000	244400	ug/L	98

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1999945	1318766	-34.06
Scandium	A	2853629	2073481	-27.34
Scandium	E	188614	146560	-22.30
Scandium	H	1640199	1239509	-24.43
Germanium	H	390445	296504	-24.06
Germanium	E	94073	78686	-16.36
Indium	A	3651265	2683668	-26.50
Bismuth	A	2445386	1810326	-25.97
Yttrium	A	3998464	3054892	-23.60
Terbium	A	4475593	3658422	-18.26

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015161893066 File : 15d22k00066
 Cal : 1015161893001 Caldate : 22-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 22-APR-2015 15:18

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	89550	ug/L	-10		
Cadmium	A	100.0	95.68	ug/L	-4	20	
Calcium	A	300000	278400	ug/L	-7		
Magnesium	A	100000	86920	ug/L	-13		
Molybdenum	A	2000	1873	ug/L	-6		
Potassium	A	100000	91470	ug/L	-9		
Silver	A	50.00	44.32	ug/L	-11	20	
Arsenic	E	100.0	100.8	ug/L	1	20	
Chromium	E	200.0	189.5	ug/L	-5	20	
Cobalt	E	200.0	196.3	ug/L	-2	20	
Copper	E	200.0	187.4	ug/L	-6	20	
Manganese	E	200.0	211.1	ug/L	6	20	
Nickel	E	200.0	190.7	ug/L	-5	20	
Sodium	E	250000	242000	ug/L	-3		
Vanadium	E	200.0	202.8	ug/L	1	20	
Zinc	E	100.0	94.97	ug/L	-5	20	
Iron	H	250000	243300	ug/L	-3		
Selenium	H	100.0	99.42	ug/L	-1	20	

ISTD (ICALBLK 15d22k00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	1640199	1159300	-29.32
Scandium	A	2853629	1992671	-30.17
Scandium	E	188614	133514	-29.21
Germanium	H	390445	277451	-28.94
Germanium	E	94073	72415	-23.02
Indium	A	3651265	2634455	-27.85
Yttrium	A	3998464	3005018	-24.85

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015163352

Instrument : MET26
 Method : EPA 6020

Begun : 04/23/15 10:32
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d23k00001	X	RINSE			04/23/15 10:32	1.0	1	
002	15d23k00002	XTUN				04/23/15 10:37	1.0	2	t
003	15d23k00003	TUN				04/23/15 10:41	1.0	2	
004	15d23k00004	X	RINSE			04/23/15 10:45	1.0	1	
005	15d23k00005	ICALBLK	CALBLANK			04/23/15 10:50	1.0	1	
006	15d23k00006	ICAL				04/23/15 10:54	1.0	3 1	
007	15d23k00007	ICAL				04/23/15 10:59	1.0	4 1	
008	15d23k00008	ICAL				04/23/15 11:04	1.0	5 1	
009	15d23k00009	ICAL				04/23/15 11:08	1.0	6 1	
010	15d23k00010	ICAL				04/23/15 11:13	1.0	7 1	
011	15d23k00011	ICAL				04/23/15 11:17	1.0	8 1	
012	15d23k00012	X	RINSE			04/23/15 11:22	1.0	1	
013	15d23k00013	XICV				04/23/15 11:27	1.0	9 1	
014	15d23k00014	XICV				04/23/15 11:31	1.0	9 1	
015	15d23k00015	ICV				04/23/15 11:36	1.0	9 1	
016	15d23k00016	XCRI				04/23/15 11:41	1.0	10 1	
017	15d23k00017	XICB				04/23/15 11:45	1.0	1	
018	15d23k00018	ICB				04/23/15 11:50	1.0	1	
019	15d23k00019	CRI				04/23/15 11:55	1.0	10 1	
020	15d23k00020	ICSA				04/23/15 12:00	1.0	11 1	8:CA=280000
021	15d23k00021	ICSAB				04/23/15 12:04	1.0	12 1	8:CA=280000
022	15d23k00022	X	RINSE			04/23/15 12:09	1.0	1	
023	15d23k00023	X	RINSE			04/23/15 12:14	1.0	1	
024	15d23k00024	X	RINSE			04/23/15 12:19	1.0	1	
025	15d23k00025	X	RINSE			04/23/15 12:23	1.0	1	
026	15d23k00026	X	RINSE			04/23/15 12:28	1.0	1	
027	15d23k00027	MSS	266087-001	Filtrate	222325	04/23/15 12:33	10.0	1	1:MN=200
028	15d23k00028	X	RINSE			04/23/15 12:38	1.0	1	
029	15d23k00029	MS	QC784573	Filtrate	222325	04/23/15 12:43	10.0	1	1:MN=230
030	15d23k00030	X	RINSE			04/23/15 12:47	1.0	1	
031	15d23k00031	MSD	QC784574	Filtrate	222325	04/23/15 12:52	10.0	1	1:MN=210
032	15d23k00032	X	RINSE			04/23/15 12:57	1.0	1	
033	15d23k00033	SER	QC784575	Filtrate	222325	04/23/15 13:02	50.0	1	
034	15d23k00034	X	RINSE			04/23/15 13:06	1.0	1	
035	15d23k00035	PDS	QC784576	Filtrate	222325	04/23/15 13:11	10.0	13 14 15 1	1:CA=21000
036	15d23k00036	X	RINSE			04/23/15 13:16	1.0	1	
037	15d23k00037	SAMPLE	266087-002	Filtrate	222325	04/23/15 13:20	10.0	1	
038	15d23k00038	X	RINSE			04/23/15 13:25	1.0	1	
039	15d23k00039	SAMPLE	266087-003	Filtrate	222325	04/23/15 13:30	10.0	1	
040	15d23k00040	X	RINSE			04/23/15 13:35	1.0	1	
041	15d23k00041	SAMPLE	266087-004	Filtrate	222325	04/23/15 13:40	10.0	1	
042	15d23k00042	X	RINSE			04/23/15 13:44	1.0	1	
043	15d23k00043	SAMPLE	266087-006	Filtrate	222325	04/23/15 13:49	10.0	1	
044	15d23k00044	X	RINSE			04/23/15 13:54	1.0	1	
045	15d23k00045	SAMPLE	266087-007	Filtrate	222325	04/23/15 13:58	10.0	1	
046	15d23k00046	CCV				04/23/15 14:03	1.0	16 1	
047	15d23k00047	X	XCCB			04/23/15 14:08	1.0	1	
048	15d23k00048	CCB				04/23/15 14:13	1.0	1	
049	15d23k00049	X	RINSE			04/23/15 14:18	1.0	1	
050	15d23k00050	SAMPLE	266087-009	Filtrate	222325	04/23/15 14:22	10.0	1	3:CA=26000
051	15d23k00051	X	RINSE			04/23/15 14:27	1.0	1	
052	15d23k00052	CCV				04/23/15 14:32	1.0	16 1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015163352

Instrument : MET26
 Method : EPA 6020

Begun : 04/23/15 10:32
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d23k00053	X	XCCB			04/23/15 14:37	1.0	1	
054	15d23k00054	CCB				04/23/15 14:41	1.0	1	
055	15d23k00055	SAMPLE	266091-002	Filtrate	222325	04/23/15 14:46	10.0	1	4:CA=64000
056	15d23k00056	X	RINSE			04/23/15 14:51	1.0	1	
057	15d23k00057	SAMPLE	266091-004	Filtrate	222325	04/23/15 14:56	10.0	1	
058	15d23k00058	X	RINSE			04/23/15 15:00	1.0	1	
059	15d23k00059	SAMPLE	266091-005	Filtrate	222325	04/23/15 15:05	10.0	1	
060	15d23k00060	X	RINSE			04/23/15 15:10	1.0	1	
061	15d23k00061	SAMPLE	266091-008	Filtrate	222325	04/23/15 15:15	10.0	1	
062	15d23k00062	X	RINSE			04/23/15 15:19	1.0	1	
063	15d23k00063	SAMPLE	266091-009	Filtrate	222325	04/23/15 15:24	10.0	1	1:NA=29000
064	15d23k00064	X	RINSE			04/23/15 15:29	1.0	1	
065	15d23k00065	SAMPLE	266091-010	Filtrate	222325	04/23/15 15:34	10.0	1	1:MN=620
066	15d23k00066	X	RINSE			04/23/15 15:39	1.0	1	
067	15d23k00067	SAMPLE	266091-012	Filtrate	222325	04/23/15 15:43	10.0	1	
068	15d23k00068	X	RINSE			04/23/15 15:48	1.0	1	
069	15d23k00069	CCV				04/23/15 15:53	1.0	16	1
070	15d23k00070	X	XCCB			04/23/15 15:58	1.0	1	
071	15d23k00071	CCB				04/23/15 16:02	1.0	1	
072	15d23k00072	ICSA				04/23/15 16:07	1.0	11	1
073	15d23k00073	ICSAB				04/23/15 16:12	1.0	12	1
074	15d23k00074	X	RINSE			04/23/15 16:17	1.0	1	
075	15d23k00075	X	RINSE			04/23/15 16:21	1.0	1	
076	15d23k00076	X	RINSE			04/23/15 17:04	1.0	1	
077	15d23k00077	X	RINSE			04/23/15 17:09	1.0	1	
078	15d23k00078	X	RINSE			04/23/15 17:14	1.0	1	
079	15d23k00079	X	RINSE			04/23/15 17:19	1.0	1	
080	15d23k00080	CCV				04/23/15 17:24	1.0	16	1
081	15d23k00081	X	XCCB			04/23/15 17:28	1.0	1	
082	15d23k00082	CCB				04/23/15 17:33	1.0	1	
083	15d23k00083	X	RINSE			04/23/15 17:38	1.0	1	
084	15d23k00084	X	RINSE			04/23/15 17:43	1.0	1	
085	15d23k00085	X	RINSE			04/23/15 17:48	1.0	1	
086	15d23k00086	X	RINSE			04/23/15 17:53	1.0	1	
087	15d23k00087	CCV				04/23/15 17:57	1.0	16	1
088	15d23k00088	X	XCCB			04/23/15 18:02	1.0	1	
089	15d23k00089	CCB				04/23/15 18:07	1.0	1	
090	15d23k00090	ICSA				04/23/15 18:12	1.0	11	1
091	15d23k00091	XICSAB				04/23/15 18:16	1.0	12	1
092	15d23k00092	ICSAB				04/23/15 18:21	1.0	12	1
093	15d23k00093	X	RINSE			04/23/15 18:26	1.0	1	
094	15d23k00094	X	RINSE			04/23/15 20:08	1.0	1	
095	15d23k00095	X	RINSE			04/23/15 20:12	1.0	1	
096	15d23k00096	X	RINSE			04/23/15 20:17	1.0	1	
097	15d23k00097	X	RINSE			04/23/15 20:22	1.0	1	
098	15d23k00098	X	RINSE			04/23/15 20:27	1.0	1	
099	15d23k00099	X	RINSE			04/23/15 20:32	1.0	1	
100	15d23k00100	X	RINSE			04/23/15 20:37	1.0	1	

NT 04/24/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 100.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015163352

Instrument : MET26
Method : EPA 6020

Begun : 04/23/15 10:32
SOP Version : icpms_rv10

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
12=S26728 13=S26229 14=S26230 15=S26912 16=S26726

Flags used: t=tune failure

Page 3 of 3

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015163352

Date : 04/23/15
 Sequence : MET26 15d23k00

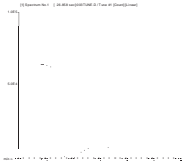
Reference : 15d23k00005
 Analyzed : 04/23/15 10:50

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	651914	1193630	91790	664113	180114	46875	1909489	1343030	1976165	2432585
		LOWER LIMIT	195574	358089	27537	199234	54034	14063	572847	402909	592850	729776
		UPPER LIMIT	782297	1432356	110148	796936	216137	56250	2291387	1611636	2371398	2919102
018	ICB		657707	1242534	95500	646641	178187	48549	1969975	1379045	2044313	2472699
020	ICSA		426674	1061608	80843	612833	161307	44399	1548755	1064809	1739183	2134813
021	ICSAB		398258	1024652	77927	600877	160744	42824	1504392	1033407	1688210	2076564
027	MSS	266087-001	474443	1091153	84257	578655	158270	43137	1726590	1194526	1787466	2220670
029	MS	QC784573	709257	1253133	78183	582685	158413	41553	1937525	1311986	1999656	2521007
031	MSD	QC784574	706872	1184190	83806	594542	162384	43264	1808447	1235275	1873923	2361548
033	SER	QC784575	677356	1088952	85918	653643	173148	43907	1746401	1217353	1781266	2252058
035	PDS	QC784576	730932	1216173	88771	625845	165852	44220	1851274	1275615	1918912	2422469
037	SAMPLE	266087-002	739760	1222006	83992	630999	168443	43145	1883385	1278732	1925288	2442022
039	SAMPLE	266087-003	732368	1253296	92289	628555	168252	46429	1942020	1330619	1994383	2518922
041	SAMPLE	266087-004	729785	1193792	85531	636735	171691	44242	1860608	1288432	1892887	2390153
043	SAMPLE	266087-006	693724	1202206	82392	645372	172480	43571	1889351	1319057	1928195	2465456
045	SAMPLE	266087-007	647546	1144953	86152	627083	167298	43836	1820305	1270662	1859891	2325931
046	CCV		663793	1193881	87388	645327	169569	44145	1866641	1293991	1938043	2479314
048	CCB		642839	1171043	89032	644103	172404	44953	1856815	1308066	1906978	2371188
050	SAMPLE	266087-009	786250 *	1298109	88123	634913	164726	45564	1963787	1349032	2042655	2560875
052	CCV		790481 *	1284213	89935	671933	175533	45778	1932311	1312463	2021420	2530548
054	CCB		809873 *	1267826	93293	671664	178179	46657	1962684	1350814	1996716	2492709
055	SAMPLE	266091-002	787217 *	1293060	89309	661811	173978	45184	1867687	1246256	1985321	2474036
057	SAMPLE	266091-004	752109	1280040	93309	700057	182458	46537	1952296	1343854	2013691	2496501
059	SAMPLE	266091-005	707896	1178105	87575	632082	171396	45424	1850264	1304252	1897891	2388743
061	SAMPLE	266091-008	674392	1141346	85834	630666	168998	43540	1779672	1249652	1827561	2295928
063	SAMPLE	266091-009	753112	1305044	97979	698779	181206	48686	1992793	1380361	2073821	2593347
065	SAMPLE	266091-010	784235 *	1292773	91117	656965	177278	46734	1981039	1337224	2042054	2555212
067	SAMPLE	266091-012	764987	1290550	92208	662015	176553	46543	1978533	1357495	2039116	2529901
069	CCV		724294	1239264	89396	666990	175520	45970	1909923	1303472	1981764	2483672
071	CCB		777190	1252471	90552	663439	177123	45938	1936810	1341879	1995852	2477596
072	ICSA		605019	1121938	79902	611139	159733	42884	1607751	1077179	1794391	2233646
073	ICSAB		494410	950867	71379	596683	155728	39116	1387550	939750	1516772	1902266
080	CCV		668782	1181866	85970	655116	170539	43695	1803426	1226050	1879813	2358590
082	CCB		713897	1214376	96135	692767	174904	46692	1887440	1274297	1939244	2411325
087	CCV		690841	1198809	86548	653675	168948	43750	1832860	1233962	1928045	2388768
089	CCB		711949	1225857	87518	556533	158172	44040	1909301	1279575	1950756	2431444
090	ICSA		579463	1097915	81584	623731	158962	42895	1551375	998790	1727657	2106424
092	ICSAB		447323	1020083	70994	550694	145606	38267	1470930	928912	1646182	2029420

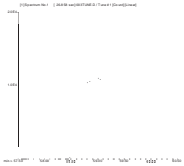
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D23k00.B\003TUNE.D
 Date Acquired: Apr 23 2015 10:41 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

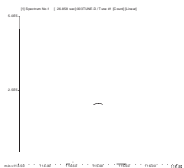
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	43984	44463	43818	44239	44046	1.00	5.00	
59 Co	62676	63315	63436	63373	61972	1.20	5.00	
115 In	1000007	1038303	1034308	1039355	1081740	2.46	5.00	
205 Tl	44426	44373	44731	44416	43737	1.09	5.00	



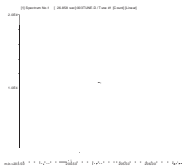
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266091 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015163352001
 Units : ug/L
 Date : 23-APR-2015 10:50
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d23k00006	1015163352006	23-APR-2015 10:54	S27043, S26751	
L2	15d23k00007	1015163352007	23-APR-2015 10:59	S27044, S26751	
L3	15d23k00008	1015163352008	23-APR-2015 11:04	S27045, S26751	
L4	15d23k00009	1015163352009	23-APR-2015 11:08	S27046, S26751	
L5	15d23k00010	1015163352010	23-APR-2015 11:13	S27041, S26751	
L6	15d23k00011	1015163352011	23-APR-2015 11:17	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	%RSD	MnR^2	Flg
Aluminum	A	0.0053	0.0053	0.0052	0.0051	0.0048	0.0049	BLNK	-0.2604	205.252		0.0051	1.000	0.995	
Antimony	A	0.0030	0.0029	0.0027	0.0028	0.0028	0.0029	BLNK	-0.0175	346.467		0.0029	0.999	0.995	
Barium	A	0.0011	8.4E-4	7.9E-4	8.1E-4	7.9E-4	7.5E-4	BLNK	-0.0125	1303.12		8.4E-4	1.000	0.995	
Beryllium	A	0.0030	0.0026	0.0025	0.0028	0.0026	0.0030	BLNK	-0.0101	345.696		0.0027	0.996	0.995	
Cadmium	A	8.0E-4	7.8E-4	7.0E-4	7.7E-4	7.5E-4	7.3E-4	BLNK	-0.0103	1366.33		7.6E-4	1.000	0.995	
Calcium	A	7.2E-4	3.0E-4	2.2E-4	1.9E-4	1.8E-4	1.8E-4	BLNK	-24.828	5464.53		3.0E-4	1.000	0.995	
Lead	A	0.0091	0.0064	0.0056	0.0055	0.0053	0.0052	BLNK	-0.0590	191.159		0.0062	1.000	0.995	
Magnesium	A	0.0052	0.0046	0.0043	0.0042	0.0040	0.0040	BLNK	-0.7799	251.894		0.0044	1.000	0.995	
Molybdenum	A	0.0031	0.0021	0.0020	0.0020	0.0020	0.0020	BLNK	-0.0519	504.136		0.0022	1.000	0.995	
Potassium	A	0.0952	0.0247	0.0146	0.0068	0.0058	0.0057	BLNK	-157.02	175.696		0.0255	1.000	0.995	
Silver	A	0.0039	0.0036	0.0035	0.0036	0.0035	0.0036	BLNK	-0.0054	278.752		0.0036	1.000	0.995	
Thallium	A	0.0083	0.0074	0.0069	0.0072	0.0071	0.0073	BLNK	-0.0115	137.980		0.0074	1.000	0.995	
Arsenic	E	0.0104	0.0061	0.0058	0.0055	0.0052	0.0058	BLNK	-0.1048	175.594		0.0065	0.997	0.995	
Chromium	E	0.0565	0.0290	0.0270	0.0232	0.0207	0.0253	BLNK	-0.1183	40.9872		0.0303	0.992	0.995	r2 ***
Cobalt	E	0.0374	0.0363	0.0361	0.0350	0.0313	0.0383	BLNK	-0.0051	27.1114		0.0357	0.992	0.995	r2 ***
Copper	E	0.0977	0.0414	0.0323	0.0259	0.0225	0.0268	BLNK	-0.2487	38.5565		0.0411	0.994	0.995	r2 ***
Manganese	E	0.0199	0.0163	0.0156	0.0152	0.0139	0.0168	BLNK	-0.0167	61.5629		0.0163	0.992	0.995	r2 ***
Nickel	E	0.0118	0.0105	0.0099	0.0095	0.0084	0.0101	BLNK	-0.0206	102.275		0.0100	0.993	0.995	r2 ***
Sodium	E	0.0242	0.0086	0.0064	0.0047	0.0041	0.0050	BLNK	-39.267	208.545		0.0088	0.993	0.995	r2 ***
Vanadium	E	0.0651	0.0272	0.0231	0.0192	0.0174	0.0213	BLNK	-0.2248	48.8588		0.0289	0.992	0.995	r2 ***
Zinc	E		0.0177	0.0066	0.0049	0.0042	0.0050	BLNK	-0.1831	208.263		0.0077	0.993	0.995	r2 ***
Iron	H	0.0091	0.0084	0.0082	0.0075	0.0081	0.0080	BLNK	-0.4340	124.628		0.0082	1.000	0.995	
Selenium	H	9.2E-4	9.9E-4	9.5E-4	9.3E-4	9.7E-4	9.5E-4	BLNK	-0.0155	1049.70		9.5E-4	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	5	50.000	9	100.00	6	1000.0	5	10000	0	20000	0
Antimony	A	0.1000	-13	0.5000	-2	1.0000	-9	10.000	-3	100.00	-4	200.00	1
Barium	A	0.1000	26	0.5000	7	1.0000	2	10.000	6	100.00	2	200.00	-1
Beryllium	A	0.1000	-8	0.5000	-11	1.0000	-13	10.000	-5	100.00	-10	200.00	3
Cadmium	A	0.1000	-1	0.5000	5	1.0000	-5	10.000	5	100.00	2	200.00	-1
Calcium	A	10.000	43	50.000	15	100.00	-2	1000.0	-1	10000	0	20000	0
Lead	A	0.1000	15	0.5000	11	1.0000	2	10.000	5	100.00	1	200.00	0
Magnesium	A	10.000	24	50.000	14	100.00	7	1000.0	7	10000	0	20000	0
Molybdenum	A	0.1000	7	0.5000	-6	1.0000	-5	10.000	2	100.00	1	200.00	0
Potassium	A	10.000	3	50.000	19	100.00	0	1000.0	4	10000	0	20000	0
Silver	A	0.1000	3	0.5000	-1	1.0000	-4	10.000	2	100.00	-2	200.00	0
Thallium	A	0.0500	-8	0.2500	-2	0.5000	-7	5.0000	-1	50.000	-2	100.00	1
Arsenic	E	0.1000	-22	0.5000	-14	1.0000	-9	10.000	-4	100.00	-10	200.00	2
Chromium	E	0.1000	13	0.5000	-5	1.0000	-1	10.000	-6	100.00	-15	200.00	4
Cobalt	E	0.1000	-4	0.5000	-3	1.0000	-3	10.000	-5	100.00	-15	200.00	4
Copper	E	0.1000	28	0.5000	10	1.0000	0	10.000	-3	100.00	-13	200.00	3
Manganese	E	0.1000	6	0.5000	-3	1.0000	-6	10.000	-6	100.00	-15	200.00	4
Nickel	E	0.1000	1	0.5000	3	1.0000	0	10.000	-3	100.00	-14	200.00	3
Sodium	E	10.000	12	50.000	1	100.00	-6	1000.0	-6	10000	-14	20000	4
Vanadium	E	0.1000	-7	0.5000	-12	1.0000	-10	10.000	-8	100.00	-15	200.00	4
Zinc	E			0.5000	231	1.0000	19	10.000	0	100.00	-13	200.00	3
Iron	H	10.000	9	50.000	4	100.00	2	1000.0	-6	10000	1	20000	0
Selenium	H	0.1000	-19	0.5000	0	1.0000	-2	10.000	-2	100.00	2	200.00	0

PRW 04/28/15 : Poor recoveries in He gas mode. Those analytes will not be reported from this sequence.

r2=ICAL r^2 failure

Instrument amount = a0 + response * a1 + response^2 * a2; BLNK=Y=aX+ [blank]

Page 2 of 2

1015163352001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015163352001

Cal Date : 23-APR-2015

ICV 1015163352015 (15d23k00015 23-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	9615	ug/L	-4	10	
Antimony	A	100.0	92.00	ug/L	-8	10	
Barium	A	100.0	97.63	ug/L	-2	10	
Beryllium	A	100.0	83.29	ug/L	-17	10	v- ***
Cadmium	A	100.0	97.70	ug/L	-2	10	
Calcium	A	10000	9657	ug/L	-3	10	
Lead	A	100.0	95.49	ug/L	-5	10	
Magnesium	A	10000	9629	ug/L	-4	10	
Molybdenum	A	100.0	96.82	ug/L	-3	10	
Potassium	A	10000	9633	ug/L	-4	10	
Silver	A	100.0	94.21	ug/L	-6	10	
Thallium	A	50.00	47.83	ug/L	-4	10	
Arsenic	E	100.0	92.07	ug/L	-8	10	
Chromium	E	100.0	87.61	ug/L	-12	10	v- ***
Cobalt	E	100.0	88.92	ug/L	-11	10	v- ***
Copper	E	100.0	89.02	ug/L	-11	10	v- ***
Manganese	E	100.0	88.02	ug/L	-12	10	v- ***
Nickel	E	100.0	88.86	ug/L	-11	10	v- ***
Sodium	E	10000	8827	ug/L	-12	10	v- ***
Vanadium	E	100.0	87.38	ug/L	-13	10	v- ***
Zinc	E	100.0	88.70	ug/L	-11	10	v- ***
Iron	H	10000	10020	ug/L	0	10	
Selenium	H	100.0	100.6	ug/L	1	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015163352018 File : 15d23k00018 Time : 23-APR-2015 11:50
 Cal : 1015163352001 Caldate : 23-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	[0.05500]	0.1000	0.05000	ug/L	!ICB
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.07300]	0.1000	---	ug/L	!ICB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	651914	657707	0.89
Scandium	A	1193630	1242534	4.10
Scandium	E	91790	95500	4.04
Scandium	H	664113	646641	-2.63
Germanium	H	180114	178187	-1.07
Germanium	E	46875	48549	3.57
Indium	A	1909489	1969975	3.17
Bismuth	A	1343030	1379045	2.68
Yttrium	A	1976165	2044313	3.45
Terbium	A	2432585	2472699	1.65

!=warning ICB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015163352020
 Cal : 1015163352001
 Standards: S26727, S26751

File : 15d23k00020
 Caldate : 23-APR-2015

IDF : 1.0
 Time : 23-APR-2015 12:00

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4874	0.1000	ug/L	
Barium	A	1.801	0.1000	ug/L	
Beryllium	A	[0.01430]	0.1000	ug/L	
Cadmium	A	2.628	0.1000	ug/L	
Lead	A	0.2145	0.1000	ug/L	
Silver	A	[0.07990]	0.1000	ug/L	
Thallium	A	[0.02170]	0.05000	ug/L	
Arsenic	E	0.6572	0.1000	ug/L	
Chromium	E	0.8368	0.1000	ug/L	
Cobalt	E	1.077	0.1000	ug/L	
Copper	E	1.152	0.1000	ug/L	
Manganese	E	7.041	0.1000	ug/L	
Nickel	E	1.108	0.1000	ug/L	
Vanadium	E	[0.04390]	0.1000	ug/L	
Zinc	E	2.734	0.5000	ug/L	
Selenium	H	0.1318	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94210	ug/L	94
Calcium	A	300000	284100	ug/L	95
Magnesium	A	100000	91820	ug/L	92
Molybdenum	A	2000	2021	ug/L	101
Potassium	A	100000	94430	ug/L	94
Sodium	E	250000	225800	ug/L	90
Phosphorus	E	100000	92220	ug/L	92
Iron	H	250000	235800	ug/L	94

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	651914	426674	-34.55
Scandium	A	1193630	1061608	-11.06
Scandium	E	91790	80843	-11.93
Scandium	H	664113	612833	-7.72
Germanium	H	180114	161307	-10.44
Germanium	E	46875	44399	-5.28
Indium	A	1909489	1548755	-18.89
Bismuth	A	1343030	1064809	-20.72
Yttrium	A	1976165	1739183	-11.99
Terbium	A	2432585	2134813	-12.24

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015163352021 File : 15d23k00021
 Cal : 1015163352001 Caldate : 23-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 23-APR-2015 12:04

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	91930	ug/L	-8		
Cadmium	A	100.0	98.44	ug/L	-2	20	
Calcium	A	300000	278300	ug/L	-7		
Magnesium	A	100000	89450	ug/L	-11		
Molybdenum	A	2000	2013	ug/L	1		
Potassium	A	100000	92390	ug/L	-8		
Silver	A	50.00	46.57	ug/L	-7	20	
Arsenic	E	100.0	94.41	ug/L	-6	20	
Chromium	E	200.0	188.7	ug/L	-6	20	
Cobalt	E	200.0	184.6	ug/L	-8	20	
Copper	E	200.0	181.0	ug/L	-9	20	
Manganese	E	200.0	190.8	ug/L	-5	20	
Nickel	E	200.0	182.6	ug/L	-9	20	
Sodium	E	250000	229900	ug/L	-8		
Vanadium	E	200.0	190.9	ug/L	-5	20	
Zinc	E	100.0	87.27	ug/L	-13	20	
Iron	H	250000	237900	ug/L	-5		
Selenium	H	100.0	96.20	ug/L	-4	20	

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	664113	600877	-9.52
Scandium	A	1193630	1024652	-14.16
Scandium	E	91790	77927	-15.10
Germanium	H	180114	160744	-10.75
Germanium	E	46875	42824	-8.64
Indium	A	1909489	1504392	-21.21
Yttrium	A	1976165	1688210	-14.57

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015163352046 File : 15d23k00046 Time : 23-APR-2015 14:03
 Cal : 1015163352001 Caldate : 23-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0051	0.0048	10000	9890	ug/L	-1	10	
Antimony	A	0.0029	0.0027	100.0	93.97	ug/L	-6	10	
Barium	A	8.4E-4	7.5E-4	100.0	97.86	ug/L	-2	10	
Beryllium	A	0.0027	0.0024	100.0	81.48	ug/L	-19	10	c- v- ***
Cadmium	A	7.6E-4	7.2E-4	100.0	98.20	ug/L	-2	10	
Calcium	A	3.0E-4	1.8E-4	10000	9745	ug/L	-3	10	
Lead	A	0.0062	0.0050	100.0	94.82	ug/L	-5	10	
Magnesium	A	0.0044	0.0040	10000	9978	ug/L	0	10	
Molybdenum	A	0.0022	0.0019	100.0	97.30	ug/L	-3	10	
Potassium	A	0.0255	0.0056	10000	9750	ug/L	-2	10	
Silver	A	0.0036	0.0034	100.0	94.48	ug/L	-6	10	
Thallium	A	0.0074	0.0070	50.00	48.09	ug/L	-4	10	
Arsenic	E	0.0065	0.0054	100.0	95.22	ug/L	-5	10	
Chromium	E	0.0303	0.0228	100.0	93.15	ug/L	-7	10	r2 v- ***
Cobalt	E	0.0357	0.0345	100.0	93.59	ug/L	-6	10	r2 v- ***
Copper	E	0.0411	0.0246	100.0	94.79	ug/L	-5	10	r2 v- ***
Manganese	E	0.0163	0.0149	100.0	91.83	ug/L	-8	10	r2 v- ***
Nickel	E	0.0100	0.0092	100.0	94.39	ug/L	-6	10	r2 v- ***
Sodium	E	0.0088	0.0046	10000	9627	ug/L	-4	10	r2 v- ***
Vanadium	E	0.0289	0.0191	100.0	92.86	ug/L	-7	10	r2 v- ***
Zinc	E	0.0077	0.0045	100.0	93.71	ug/L	-6	10	r2 v- ***
Iron	H	0.0082	0.0078	10000	9681	ug/L	-3	10	
Selenium	H	9.5E-4	9.4E-4	100.0	99.03	ug/L	-1	10	

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	651914	663793	1.82
Scandium	A	1193630	1193881	0.02
Scandium	E	91790	87388	-4.80
Scandium	H	664113	645327	-2.83
Germanium	H	180114	169569	-5.85
Germanium	E	46875	44145	-5.82
Indium	A	1909489	1866641	-2.24
Bismuth	A	1343030	1293991	-3.65
Yttrium	A	1976165	1938043	-1.93
Terbium	A	2432585	2479314	1.92

--low bias c=CCV r2=ICAL r^2 failure v=ICV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015163352048 File : 15d23k00048 Time : 23-APR-2015 14:13
 Cal : 1015163352001 Caldate : 23-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.08670]	0.1000	---	ug/L	!CCB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	651914	642839	-1.39
Scandium	A	1193630	1171043	-1.89
Scandium	E	91790	89032	-3.00
Scandium	H	664113	644103	-3.01
Germanium	H	180114	172404	-4.28
Germanium	E	46875	44953	-4.10
Indium	A	1909489	1856815	-2.76
Bismuth	A	1343030	1308066	-2.60
Yttrium	A	1976165	1906978	-3.50
Terbium	A	2432585	2371188	-2.52

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015163352072 File : 15d23k00072 Time : 23-APR-2015 16:07
 Cal : 1015163352001 Caldate : 23-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4650	0.1000	ug/L	
Barium	A	1.840	0.1000	ug/L	
Beryllium	A	[0.01280]	0.1000	ug/L	
Cadmium	A	1.956	0.1000	ug/L	
Lead	A	0.2102	0.1000	ug/L	
Silver	A	[0.06730]	0.1000	ug/L	
Thallium	A	[0.01540]	0.05000	ug/L	
Arsenic	E	0.6677	0.1000	ug/L	
Chromium	E	0.8740	0.1000	ug/L	
Cobalt	E	1.099	0.1000	ug/L	
Copper	E	1.200	0.1000	ug/L	
Manganese	E	6.929	0.1000	ug/L	
Nickel	E	1.140	0.1000	ug/L	
Vanadium	E	[0.006300]	0.1000	ug/L	
Zinc	E	2.758	0.5000	ug/L	
Selenium	H	[0.08960]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	97480	ug/L	97
Calcium	A	300000	288400	ug/L	96
Magnesium	A	100000	96460	ug/L	96
Molybdenum	A	2000	2047	ug/L	102
Potassium	A	100000	96180	ug/L	96
Sodium	E	250000	233500	ug/L	93
Phosphorus	E	100000	90330	ug/L	90
Iron	H	250000	236300	ug/L	95

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	651914	605019	-7.19
Scandium	A	1193630	1121938	-6.01
Scandium	E	91790	79902	-12.95
Scandium	H	664113	611139	-7.98
Germanium	H	180114	159733	-11.32
Germanium	E	46875	42884	-8.51
Indium	A	1909489	1607751	-15.80
Bismuth	A	1343030	1077179	-19.79
Yttrium	A	1976165	1794391	-9.20
Terbium	A	2432585	2233646	-8.18

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015163352073
 Cal : 1015163352001
 Standards: S26728, S26751

File : 15d23k00073
 Caldate : 23-APR-2015

IDF : 1.0
 Time : 23-APR-2015 16:12

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	108700	ug/L	9		
Cadmium	A	100.0	111.7	ug/L	12	20	
Calcium	A	300000	325600	ug/L	9		
Magnesium	A	100000	106700	ug/L	7		
Molybdenum	A	2000	2353	ug/L	18		
Potassium	A	100000	108600	ug/L	9		
Silver	A	50.00	52.84	ug/L	6	20	
Arsenic	E	100.0	100.3	ug/L	0	20	
Chromium	E	200.0	197.6	ug/L	-1	20	
Cobalt	E	200.0	194.5	ug/L	-3	20	
Copper	E	200.0	189.8	ug/L	-5	20	
Manganese	E	200.0	200.0	ug/L	0	20	
Nickel	E	200.0	190.7	ug/L	-5	20	
Sodium	E	250000	244300	ug/L	-2		
Vanadium	E	200.0	200.0	ug/L	0	20	
Zinc	E	100.0	91.61	ug/L	-8	20	
Iron	H	250000	231500	ug/L	-7		
Selenium	H	100.0	94.30	ug/L	-6	20	

ISTD (ICALBLK 15d23k00005)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	664113	596683	-10.15
Scandium	A	1193630	950867	-20.34
Scandium	E	91790	71379	-22.24
Germanium	H	180114	155728	-13.54
Germanium	E	46875	39116	-16.55
Indium	A	1909489	1387550	-27.33
Yttrium	A	1976165	1516772	-23.25

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015164741

Instrument : MET26
 Method : EPA 6020

Begun : 04/24/15 09:41
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d24j00001	X	RINSE			04/24/15 09:41	1.0	1	
002	15d24j00002	TUN				04/24/15 09:46	1.0	2	
003	15d24j00003	X	RINSE			04/24/15 09:50	1.0	1	
004	15d24j00004	ICALBLK	CALBLANK			04/24/15 09:55	1.0	1	
005	15d24j00005	ICAL				04/24/15 10:00	1.0	3 1	
006	15d24j00006	ICAL				04/24/15 10:04	1.0	4 1	
007	15d24j00007	ICAL				04/24/15 10:09	1.0	5 1	
008	15d24j00008	ICAL				04/24/15 10:14	1.0	6 1	
009	15d24j00009	ICAL				04/24/15 10:18	1.0	7 1	
010	15d24j00010	ICAL				04/24/15 10:23	1.0	8 1	
011	15d24j00011	X	RINSE			04/24/15 10:27	1.0	1	
012	15d24j00012	ICV				04/24/15 10:32	1.0	9 1	
013	15d24j00013	XCRI				04/24/15 10:37	1.0	10 1	
014	15d24j00014	XICB				04/24/15 10:42	1.0	1	
015	15d24j00015	ICB				04/24/15 10:46	1.0	1	
016	15d24j00016	CRI				04/24/15 10:51	1.0	10 1	
017	15d24j00017	ICSA				04/24/15 10:56	1.0	11 1	8:CA=270000
018	15d24j00018	ICSAB				04/24/15 11:00	1.0	12 1	8:CA=310000
019	15d24j00019	X	RINSE			04/24/15 11:05	1.0	1	
020	15d24j00020	X	RINSE			04/24/15 11:10	1.0	1	
021	15d24j00021	X	RINSE			04/24/15 11:15	1.0	1	
022	15d24j00022	X	RINSE			04/24/15 11:20	1.0	1	
023	15d24j00023	X	RINSE			04/24/15 11:25	1.0	1	
024	15d24j00024	SER	QC784575	Filtrate	222325	04/24/15 11:30	50.0	1	
025	15d24j00025	X	RINSE			04/24/15 11:34	1.0	1	
026	15d24j00026	SAMPLE	266087-003	Filtrate	222325	04/24/15 11:39	10.0	1	
027	15d24j00027	X	RINSE			04/24/15 11:44	1.0	1	
028	15d24j00028	CCV				04/24/15 11:49	1.0	13 1	
029	15d24j00029	X	XCCB			04/24/15 11:54	1.0	1	
030	15d24j00030	CCB				04/24/15 11:58	1.0	1	
031	15d24j00031	SAMPLE	266087-009	Filtrate	222325	04/24/15 12:03	50.0	1	1:MN=340
032	15d24j00032	X	RINSE			04/24/15 12:08	1.0	1	
033	15d24j00033	CCV				04/24/15 12:13	1.0	13 1	
034	15d24j00034	X	XCCB			04/24/15 12:18	1.0	1	
035	15d24j00035	CCB				04/24/15 12:22	1.0	1	
036	15d24j00036	SAMPLE	266091-002	Filtrate	222325	04/24/15 12:27	10.0	1	4:CA=68000
037	15d24j00037	X	RINSE			04/24/15 12:32	1.0	1	
038	15d24j00038	SAMPLE	266091-004	Filtrate	222325	04/24/15 12:37	10.0	1	
039	15d24j00039	X	RINSE			04/24/15 12:42	1.0	1	
040	15d24j00040	SAMPLE	266091-005	Filtrate	222325	04/24/15 12:46	10.0	1	
041	15d24j00041	X	RINSE			04/24/15 12:51	1.0	1	
042	15d24j00042	SAMPLE	266091-008	Filtrate	222325	04/24/15 12:56	10.0	1	
043	15d24j00043	X	RINSE			04/24/15 13:01	1.0	1	
044	15d24j00044	SAMPLE	266091-009	Filtrate	222325	04/24/15 13:06	50.0	1	
045	15d24j00045	X	RINSE			04/24/15 13:10	1.0	1	
046	15d24j00046	SAMPLE	266091-010	Filtrate	222325	04/24/15 13:15	10.0	1	1:MN=720
047	15d24j00047	X	RINSE			04/24/15 13:20	1.0	1	
048	15d24j00048	SAMPLE	266091-012	Filtrate	222325	04/24/15 13:25	10.0	1	
049	15d24j00049	X	RINSE			04/24/15 13:30	1.0	1	
050	15d24j00050	CCV				04/24/15 13:34	1.0	13 1	
051	15d24j00051	X	XCCB			04/24/15 13:39	1.0	1	
052	15d24j00052	CCB				04/24/15 13:44	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015164741

Instrument : MET26
 Method : EPA 6020

Begun : 04/24/15 09:41
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d24j00053	ICSA				04/24/15 13:49	1.0	11 1	8:CA=310000
054	15d24j00054	ICSAB				04/24/15 13:53	1.0	12 1	10:CA=320000
055	15d24j00055	X	RINSE			04/24/15 13:58	1.0	1	
056	15d24j00056	X	RINSE			04/24/15 14:03	1.0	1	
057	15d24j00057	CCV				04/24/15 14:08	1.0	13 1	
058	15d24j00058	X	XCCB			04/24/15 14:13	1.0	1	
059	15d24j00059	CCB				04/24/15 15:18	1.0	1	
060	15d24j00060	ICSA				04/24/15 15:23	1.0	11 1	8:CA=320000
061	15d24j00061	ICSAB				04/24/15 15:27	1.0	12 1	8:CA=310000
062	15d24j00062	X	RINSE			04/24/15 15:32	1.0	1	
063	15d24j00063	X	RINSE			04/24/15 15:37	1.0	1	
064	15d24j00064	?BLANK	QC785236		222325	04/24/15 15:42	1.0	1	
065	15d24j00065	?SAMPLE	256092-050		222325	04/24/15 15:46	1.0	1	
066	15d24j00066	CCV				04/24/15 15:51	1.0	13 1	
067	15d24j00067	X	XCCB			04/24/15 15:56	1.0	1	
068	15d24j00068	CCB				04/24/15 16:01	1.0	1	
069	15d24j00069	ICSA				04/24/15 16:06	1.0	11 1	8:CA=350000
070	15d24j00070	ICSAB				04/24/15 16:10	1.0	12 1	8:CA=320000
071	15d24j00071	X	RINSE			04/24/15 16:15	1.0	1	
072	15d24j00072	X	RINSE			04/24/15 16:20	1.0	1	
073	15d24j00073	X	RINSE			04/24/15 16:25	1.0	1	
074	15d24j00074	X	RINSE			04/24/15 16:30	1.0	1	
075	15d24j00075	X	RINSE			04/24/15 16:35	1.0	1	
076	15d24j00076	X	RINSE			04/24/15 16:40	1.0	1	
077	15d24j00077	X	RINSE			04/24/15 16:45	1.0	1	
078	15d24j00078	X	RINSE			04/24/15 16:50	1.0	1	

NT 04/27/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 78.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015164741

Date : 04/24/15
 Sequence : MET26 15d24j00

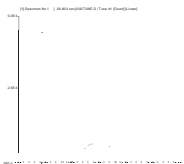
Reference : 15d24j00004
 Analyzed : 04/24/15 09:55

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	388541	888879	67063	518978	133169	32708	1212348	661395	1364591	1358520
		LOWER LIMIT	116562	266664	20119	155693	39951	9812	363704	198419	409377	407556
		UPPER LIMIT	466249	1066655	80476	622774	159803	39250	1454818	793674	1637509	1630224
015	ICB		436194	960897	74231	531972	136389	35730	1309846	686788	1467913	1437131
017	ICSA		409846	972868	68213	508503	124978	34501	1165623	592824	1439126	1380608
018	ICSAB		275661	641887	60871	477530	119798	30878	870257	470133	1074148	1082628
024	SER	QC784575	291037	704248	60384	403671	104797	28700	1007068	565611	1135745	1164655
026	SAMPLE	266087-003	276928	661306	58613	407565	104648	27938	977091	550160	1081498	1129803
028	CCV		264202	631736	57187	400594	100750	26977	935907	534558	1078559	1113328
030	CCB		274332	653020	59026	411272	104135	27787	956714	555546	1103586	1108606
031	SAMPLE	266087-009	268228	665976	58618	405671	104092	27804	955447	556858	1090085	1113002
033	CCV		259803	627559	59393	358107	93287	27166	926516	522418	1059891	1097445
035	CCB		268263	614811	58170	409053	103438	27555	921358	537468	1036258	1063461
036	SAMPLE	266091-002	284077	666686	59646	409699	99236	27209	904252	498511	1088480	1087365
038	SAMPLE	266091-004	288183	662299	56655	411090	104240	27138	959437	539864	1089778	1106334
040	SAMPLE	266091-005	266766	614946	57485	401294	101696	27104	901369	531443	1030042	1061740
042	SAMPLE	266091-008	262363	617802	56151	385594	97968	26102	913612	533884	1025524	1070255
044	SAMPLE	266091-009	259167	609689	57096	386142	98798	26491	913437	541820	1026190	1080168
046	SAMPLE	266091-010	267995	626384	49180	373522	95275	24103	937675	537630	1050940	1114705
048	SAMPLE	266091-012	272218	619146	54893	385562	98186	25989	929834	536868	1044922	1091073
050	CCV		261111	607476	54750	379546	96337	25617	920729	526342	1040581	1096601
052	CCB		267891	631539	52950	393380	98426	25256	948560	550593	1047616	1115743
053	ICSA		253969	597043	52012	375414	91164	25635	790150	447094	1008000	1021434
054	ICSAB		251255	581224	49087	362125	90497	24783	779853	439345	984546	1001590
057	CCV		248010	595708	52866	395011	97711	24934	880678	498554	1005964	1053631
059	CCB		265971	677731	58588	378354	95166	26390	918652	540796	1077652	1102262
060	ICSA		234450	568832	53167	372474	88328	25139	732225	424735	951647	954671
061	ICSAB		240150	566740	51110	362217	88911	24863	748983	425459	966616	969673
066	CCV		253461	618042	54981	375668	94214	25587	895979	501534	1055539	1056559
068	CCB		254787	610985	56786	377261	95371	26060	881799	501460	1007553	1015938
069	ICSA		202440	496459	49492	329773	81432	24138	642955	384362	822576	808966
070	ICSAB		196855	508251	46810	339853	84021	22886	671086	392838	854886	845035

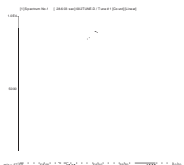
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D24j00.B\002TUNE.D
 Date Acquired: Apr 24 2015 09:46 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

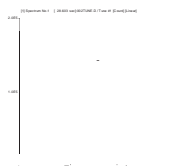
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	36895	36468	36795	36567	35919	1.21	5.00	
59 Co	51462	51273	51016	50715	49983	1.26	5.00	
115 In	720713	708452	724317	725688	711888	1.49	5.00	
205 Tl	25129	25043	25121	24657	24392	2.04	5.00	



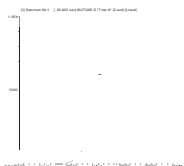
7 Li
Mass Calib.
 Actual: 6.95
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266091 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015164741001
 Units : ug/L
 Date : 24-APR-2015 09:55
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d24j00005	1015164741005	24-APR-2015 10:00	S27043, S26751	
L2	15d24j00006	1015164741006	24-APR-2015 10:04	S27044, S26751	
L3	15d24j00007	1015164741007	24-APR-2015 10:09	S27045, S26751	
L4	15d24j00008	1015164741008	24-APR-2015 10:14	S27046, S26751	
L5	15d24j00009	1015164741009	24-APR-2015 10:18	S27041, S26751	
L6	15d24j00010	1015164741010	24-APR-2015 10:23	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0054	0.0051	0.0053	0.0051	0.0049	0.0050	BLNK	-0.4260	201.078		0.0051	1.000	0.995	
Antimony	A	0.0031	0.0026	0.0026	0.0027	0.0027	0.0027	BLNK	-0.0154	371.229		0.0027	1.000	0.995	
Barium	A	9.8E-4	9.0E-4	8.3E-4	8.4E-4	8.4E-4	8.4E-4	BLNK	-0.0156	1188.11		8.7E-4	1.000	0.995	
Beryllium	A	0.0036	0.0032	0.0033	0.0032	0.0032	0.0032	BLNK	-0.0196	312.171		0.0033	1.000	0.995	
Cadmium	A	9.4E-4	7.7E-4	7.5E-4	7.7E-4	7.3E-4	7.3E-4	BLNK	-0.0113	1375.61		7.8E-4	1.000	0.995	
Calcium	A	0.0022	5.7E-4	3.6E-4	2.0E-4	1.9E-4	1.9E-4	BLNK	-102.50	5432.56		6.1E-4	1.000	0.995	
Lead	A	0.0087	0.0056	0.0053	0.0049	0.0047	0.0047	BLNK	-0.0703	213.827		0.0056	1.000	0.995	
Magnesium	A	0.0055	0.0044	0.0044	0.0042	0.0040	0.0041	BLNK	-1.4814	246.125		0.0044	1.000	0.995	
Molybdenum	A	0.0028	0.0019	0.0021	0.0019	0.0019	0.0019	BLNK	-0.0588	523.424		0.0021	1.000	0.995	
Potassium	A	0.1174	0.0284	0.0173	0.0070	0.0059	0.0059	BLNK	-190.42	171.162		0.0303	1.000	0.995	
Silver	A	0.0040	0.0037	0.0037	0.0036	0.0035	0.0035	BLNK	-0.0073	283.229		0.0037	1.000	0.995	
Thallium	A	0.0078	0.0072	0.0075	0.0074	0.0074	0.0075	BLNK	-0.0094	133.281		0.0075	1.000	0.995	
Arsenic	E	0.0131	0.0070	0.0062	0.0056	0.0057	0.0056	BLNK	-0.1317	177.976		0.0072	1.000	0.995	
Chromium	E	0.0580	0.0301	0.0276	0.0235	0.0226	0.0223	BLNK	-0.1440	44.7256		0.0307	1.000	0.995	
Cobalt	E	0.0375	0.0351	0.0374	0.0352	0.0336	0.0330	BLNK	-0.0077	30.1763		0.0353	1.000	0.995	
Copper	E	0.1169	0.0430	0.0358	0.0257	0.0239	0.0232	BLNK	-0.3808	42.9880		0.0448	1.000	0.995	
Manganese	E	0.0165	0.0158	0.0158	0.0154	0.0149	0.0146	BLNK	-0.0166	68.1042		0.0155	1.000	0.995	
Nickel	E	0.0149	0.0108	0.0102	0.0096	0.0090	0.0088	BLNK	-0.0457	113.421		0.0106	1.000	0.995	
Sodium	E	0.0225	0.0086	0.0069	0.0051	0.0049	0.0048	BLNK	-35.313	208.241		0.0088	1.000	0.995	
Vanadium	E	0.0682	0.0289	0.0259	0.0194	0.0189	0.0189	BLNK	-0.2833	52.9992		0.0300	1.000	0.995	
Zinc	E		0.0168	0.0071	0.0048	0.0044	0.0042	BLNK	-0.2132	235.373		0.0075	1.000	0.995	
Iron	H	0.0087	0.0084	0.0081	0.0081	0.0079	0.0078	BLNK	-1.0058	127.454		0.0082	1.000	0.995	
Selenium	H	8.9E-4	0.0010	0.0010	0.0010	9.9E-4	9.6E-4	BLNK	-0.0206	1031.09		9.9E-4	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	5	50.000	2	100.00	5	1000.0	3	10000	-1	20000	0
Antimony	A	0.1000	1	0.5000	-6	1.0000	-4	10.000	1	100.00	-1	200.00	0
Barium	A	0.1000	1	0.5000	3	1.0000	-2	10.000	0	100.00	0	200.00	0
Beryllium	A	0.1000	-8	0.5000	-4	1.0000	1	10.000	-1	100.00	-1	200.00	0
Cadmium	A	0.1000	18	0.5000	3	1.0000	2	10.000	5	100.00	1	200.00	0
Calcium	A	10.000	47	50.000	3	100.00	-8	1000.0	-4	10000	0	20000	0
Lead	A	0.1000	15	0.5000	6	1.0000	6	10.000	4	100.00	0	200.00	0
Magnesium	A	10.000	21	50.000	5	100.00	6	1000.0	4	10000	-1	20000	0
Molybdenum	A	0.1000	-15	0.5000	-12	1.0000	5	10.000	-1	100.00	0	200.00	0
Potassium	A	10.000	5	50.000	6	100.00	6	1000.0	1	10000	-1	20000	0
Silver	A	0.1000	5	0.5000	2	1.0000	3	10.000	3	100.00	0	200.00	0
Thallium	A	0.0500	-15	0.2500	-7	0.5000	-2	5.0000	-1	50.000	-1	100.00	0
Arsenic	E	0.1000	2	0.5000	-1	1.0000	-3	10.000	-1	100.00	1	200.00	0
Chromium	E	0.1000	15	0.5000	6	1.0000	9	10.000	4	100.00	1	200.00	0
Cobalt	E	0.1000	5	0.5000	4	1.0000	12	10.000	6	100.00	1	200.00	0
Copper	E	0.1000	22	0.5000	9	1.0000	16	10.000	6	100.00	2	200.00	-1
Manganese	E	0.1000	-4	0.5000	4	1.0000	6	10.000	5	100.00	1	200.00	0
Nickel	E	0.1000	24	0.5000	13	1.0000	12	10.000	8	100.00	2	200.00	0
Sodium	E	10.000	16	50.000	9	100.00	9	1000.0	3	10000	2	20000	0
Vanadium	E	0.1000	-22	0.5000	-3	1.0000	9	10.000	0	100.00	0	200.00	0
Zinc	E			0.5000	254	1.0000	46	10.000	11	100.00	3	200.00	-1
Iron	H	10.000	1	50.000	6	100.00	3	1000.0	3	10000	0	20000	0
Selenium	H	0.1000	-29	0.5000	3	1.0000	5	10.000	4	100.00	2	200.00	-1

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015164741001

Cal Date : 24-APR-2015

ICV 1015164741012 (15d24j00012 24-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10210	ug/L	2	10	
Antimony	A	100.0	100.9	ug/L	1	10	
Barium	A	100.0	101.4	ug/L	1	10	
Beryllium	A	100.0	98.31	ug/L	-2	10	
Cadmium	A	100.0	101.9	ug/L	2	10	
Calcium	A	10000	10290	ug/L	3	10	
Lead	A	100.0	101.9	ug/L	2	10	
Magnesium	A	10000	10230	ug/L	2	10	
Molybdenum	A	100.0	101.3	ug/L	1	10	
Potassium	A	10000	10190	ug/L	2	10	
Silver	A	100.0	101.3	ug/L	1	10	
Thallium	A	50.00	50.20	ug/L	0	10	
Arsenic	E	100.0	98.83	ug/L	-1	10	
Chromium	E	100.0	98.45	ug/L	-2	10	
Cobalt	E	100.0	99.17	ug/L	-1	10	
Copper	E	100.0	99.03	ug/L	-1	10	
Manganese	E	100.0	98.48	ug/L	-2	10	
Nickel	E	100.0	99.52	ug/L	0	10	
Sodium	E	10000	10030	ug/L	0	10	
Vanadium	E	100.0	98.35	ug/L	-2	10	
Zinc	E	100.0	98.50	ug/L	-1	10	
Iron	H	10000	9666	ug/L	-3	10	
Selenium	H	100.0	97.98	ug/L	-2	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015164741015 File : 15d24j00015 Time : 24-APR-2015 10:46
 Cal : 1015164741001 Caldate : 24-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.07030]	0.1000	---	ug/L	!ICB
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d24j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	388541	436194	12.26
Scandium	A	888879	960897	8.10
Scandium	E	67063	74231	10.69
Scandium	H	518978	531972	2.50
Germanium	H	133169	136389	2.42
Germanium	E	32708	35730	9.24
Indium	A	1212348	1309846	8.04
Bismuth	A	661395	686788	3.84
Yttrium	A	1364591	1467913	7.57
Terbium	A	1358520	1437131	5.79

!=warning ICB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015164741017
 Cal : 1015164741001
 Standards: S26727, S26751

File : 15d24j00017
 Caldate : 24-APR-2015

IDF : 1.0
 Time : 24-APR-2015 10:56

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4640	0.1000	ug/L	
Barium	A	1.787	0.1000	ug/L	
Beryllium	A	[-0.001800]	0.1000	ug/L	
Cadmium	A	2.340	0.1000	ug/L	
Lead	A	0.2146	0.1000	ug/L	
Silver	A	[0.08420]	0.1000	ug/L	
Thallium	A	[0.01800]	0.05000	ug/L	
Arsenic	E	0.6836	0.1000	ug/L	
Chromium	E	0.8455	0.1000	ug/L	
Cobalt	E	1.123	0.1000	ug/L	
Copper	E	1.239	0.1000	ug/L	
Manganese	E	7.087	0.1000	ug/L	
Nickel	E	1.221	0.1000	ug/L	
Vanadium	E	[0.006800]	0.1000	ug/L	
Zinc	E	2.407	0.5000	ug/L	
Selenium	H	0.1206	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	92880	ug/L	93
Calcium	A	300000	274500	ug/L	92
Magnesium	A	100000	91910	ug/L	92
Molybdenum	A	2000	1992	ug/L	100
Potassium	A	100000	91990	ug/L	92
Sodium	E	250000	233700	ug/L	93
Phosphorus	E	100000	93690	ug/L	94
Iron	H	250000	225900	ug/L	90

ISTD (ICALBLK 15d24j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	388541	409846	5.48
Scandium	A	888879	972868	9.45
Scandium	E	67063	68213	1.71
Scandium	H	518978	508503	-2.02
Germanium	H	133169	124978	-6.15
Germanium	E	32708	34501	5.48
Indium	A	1212348	1165623	-3.85
Bismuth	A	661395	592824	-10.37
Yttrium	A	1364591	1439126	5.46
Terbium	A	1358520	1380608	1.63

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015164741018
 Cal : 1015164741001
 Standards: S26728, S26751

File : 15d24j00018
 Caldate : 24-APR-2015

IDF : 1.0
 Time : 24-APR-2015 11:00

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	104600	ug/L	5		
Cadmium	A	100.0	98.96	ug/L	-1	20	
Calcium	A	300000	312300	ug/L	4		
Magnesium	A	100000	101900	ug/L	2		
Molybdenum	A	2000	2010	ug/L	1		
Potassium	A	100000	104000	ug/L	4		
Silver	A	50.00	47.89	ug/L	-4	20	
Arsenic	E	100.0	98.22	ug/L	-2	20	
Chromium	E	200.0	194.5	ug/L	-3	20	
Cobalt	E	200.0	191.0	ug/L	-4	20	
Copper	E	200.0	191.1	ug/L	-4	20	
Manganese	E	200.0	199.2	ug/L	0	20	
Nickel	E	200.0	187.1	ug/L	-6	20	
Sodium	E	250000	233600	ug/L	-7		
Vanadium	E	200.0	198.3	ug/L	-1	20	
Zinc	E	100.0	91.77	ug/L	-8	20	
Iron	H	250000	230400	ug/L	-8		
Selenium	H	100.0	93.72	ug/L	-6	20	

ISTD (ICALBLK 15d24j00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	518978	477530	-7.99
Scandium	A	888879	641887	-27.79
Scandium	E	67063	60871	-9.23
Germanium	H	133169	119798	-10.04
Germanium	E	32708	30878	-5.59
Indium	A	1212348	870257	-28.22
Yttrium	A	1364591	1074148	-21.28

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015164741033 File : 15d24j00033 Time : 24-APR-2015 12:13
 Cal : 1015164741001 Caldate : 24-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0051	0.0054	10000	10790	ug/L	8	10	
Antimony	A	0.0027	0.0026	100.0	98.12	ug/L	-2	10	
Barium	A	8.7E-4	8.3E-4	100.0	98.06	ug/L	-2	10	
Beryllium	A	0.0033	0.0034	100.0	106.0	ug/L	6	10	
Cadmium	A	7.8E-4	7.1E-4	100.0	97.59	ug/L	-2	10	
Calcium	A	6.1E-4	2.0E-4	10000	10980	ug/L	10	10	
Lead	A	0.0056	0.0048	100.0	101.9	ug/L	2	10	
Magnesium	A	0.0044	0.0043	10000	10640	ug/L	6	10	
Molybdenum	A	0.0021	0.0019	100.0	97.34	ug/L	-3	10	
Potassium	A	0.0303	0.0065	10000	10930	ug/L	9	10	
Silver	A	0.0037	0.0035	100.0	98.56	ug/L	-1	10	
Thallium	A	0.0075	0.0073	50.00	48.92	ug/L	-2	10	
Arsenic	E	0.0072	0.0054	100.0	96.32	ug/L	-4	10	
Chromium	E	0.0307	0.0207	100.0	92.27	ug/L	-8	10	
Cobalt	E	0.0353	0.0310	100.0	93.63	ug/L	-6	10	
Copper	E	0.0448	0.0216	100.0	92.68	ug/L	-7	10	
Manganese	E	0.0155	0.0139	100.0	94.79	ug/L	-5	10	
Nickel	E	0.0106	0.0082	100.0	93.01	ug/L	-7	10	
Sodium	E	0.0088	0.0046	10000	9627	ug/L	-4	10	
Vanadium	E	0.0300	0.0176	100.0	93.12	ug/L	-7	10	
Zinc	E	0.0075	0.0040	100.0	93.36	ug/L	-7	10	
Iron	H	0.0082	0.0084	10000	10710	ug/L	7	10	
Selenium	H	9.9E-4	0.0010	100.0	103.9	ug/L	4	10	

ISTD (ICALBLK 15d24j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	388541	259803	-33.13
Scandium	A	888879	627559	-29.40
Scandium	E	67063	59393	-11.44
Scandium	H	518978	358107	-31.00
Germanium	H	133169	93287	-29.95
Germanium	E	32708	27166	-16.94
Indium	A	1212348	926516	-23.58
Bismuth	A	661395	522418	-21.01
Yttrium	A	1364591	1059891	-22.33
Terbium	A	1358520	1097445	-19.22

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015164741035
Cal : 1015164741001

File : 15d24j00035
Caldate : 24-APR-2015

IDF : 1.0
Time : 24-APR-2015 12:22

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	0.1186	0.1000	---	ug/L	CCB ***
Potassium	A	37.85	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d24j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	388541	268263	-30.96
Scandium	A	888879	614811	-30.83
Scandium	E	67063	58170	-13.26
Scandium	H	518978	409053	-21.18
Germanium	H	133169	103438	-22.33
Germanium	E	32708	27555	-15.75
Indium	A	1212348	921358	-24.00
Bismuth	A	661395	537468	-18.74
Yttrium	A	1364591	1036258	-24.06
Terbium	A	1358520	1063461	-21.72

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015164741050 File : 15d24j00050 Time : 24-APR-2015 13:34
 Cal : 1015164741001 Caldate : 24-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0051	0.0054	10000	10820	ug/L	8	10	
Antimony	A	0.0027	0.0027	100.0	99.10	ug/L	-1	10	
Barium	A	8.7E-4	8.2E-4	100.0	97.32	ug/L	-3	10	
Beryllium	A	0.0033	0.0033	100.0	102.3	ug/L	2	10	
Cadmium	A	7.8E-4	7.1E-4	100.0	97.77	ug/L	-2	10	
Calcium	A	6.1E-4	2.0E-4	10000	11010	ug/L	10	10	
Lead	A	0.0056	0.0048	100.0	103.0	ug/L	3	10	
Magnesium	A	0.0044	0.0044	10000	10730	ug/L	7	10	
Molybdenum	A	0.0021	0.0019	100.0	98.13	ug/L	-2	10	
Potassium	A	0.0303	0.0065	10000	10930	ug/L	9	10	
Silver	A	0.0037	0.0034	100.0	97.70	ug/L	-2	10	
Thallium	A	0.0075	0.0073	50.00	48.94	ug/L	-2	10	
Arsenic	E	0.0072	0.0056	100.0	98.67	ug/L	-1	10	
Chromium	E	0.0307	0.0216	100.0	96.65	ug/L	-3	10	
Cobalt	E	0.0353	0.0322	100.0	97.30	ug/L	-3	10	
Copper	E	0.0448	0.0226	100.0	96.95	ug/L	-3	10	
Manganese	E	0.0155	0.0145	100.0	98.48	ug/L	-2	10	
Nickel	E	0.0106	0.0085	100.0	96.90	ug/L	-3	10	
Sodium	E	0.0088	0.0049	10000	10210	ug/L	2	10	
Vanadium	E	0.0300	0.0183	100.0	96.84	ug/L	-3	10	
Zinc	E	0.0075	0.0041	100.0	97.40	ug/L	-3	10	
Iron	H	0.0082	0.0077	10000	9793	ug/L	-2	10	
Selenium	H	9.9E-4	9.6E-4	100.0	98.83	ug/L	-1	10	

ISTD (ICALBLK 15d24j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	388541	261111	-32.80
Scandium	A	888879	607476	-31.66
Scandium	E	67063	54750	-18.36
Scandium	H	518978	379546	-26.87
Germanium	H	133169	96337	-27.66
Germanium	E	32708	25617	-21.68
Indium	A	1212348	920729	-24.05
Bismuth	A	661395	526342	-20.42
Yttrium	A	1364591	1040581	-23.74
Terbium	A	1358520	1096601	-19.28

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015164741052
Cal : 1015164741001

File : 15d24j00052
Caldate : 24-APR-2015

IDF : 1.0
Time : 24-APR-2015 13:44

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	[0.07340]	0.1000	---	ug/L	!CCB
Potassium	A	22.81	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d24j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	388541	267891	-31.05
Scandium	A	888879	631539	-28.95
Scandium	E	67063	52950	-21.04
Scandium	H	518978	393380	-24.20
Germanium	H	133169	98426	-26.09
Germanium	E	32708	25256	-22.78
Indium	A	1212348	948560	-21.76
Bismuth	A	661395	550593	-16.75
Yttrium	A	1364591	1047616	-23.23
Terbium	A	1358520	1115743	-17.87

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015164741053
 Cal : 1015164741001
 Standards: S26727, S26751

File : 15d24j00053
 Caldate : 24-APR-2015

IDF : 1.0
 Time : 24-APR-2015 13:49

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.5166	0.1000	ug/L	
Barium	A	1.772	0.1000	ug/L	
Beryllium	A	[0.02010]	0.1000	ug/L	
Cadmium	A	2.343	0.1000	ug/L	
Lead	A	0.2276	0.1000	ug/L	
Silver	A	[0.07070]	0.1000	ug/L	
Thallium	A	[0.02110]	0.05000	ug/L	
Arsenic	E	0.6335	0.1000	ug/L	
Chromium	E	0.8712	0.1000	ug/L	
Cobalt	E	1.107	0.1000	ug/L	
Copper	E	1.146	0.1000	ug/L	
Manganese	E	7.165	0.1000	ug/L	
Nickel	E	1.157	0.1000	ug/L	
Vanadium	E	[0.003500]	0.1000	ug/L	
Zinc	E	2.418	0.5000	ug/L	
Selenium	H	0.1100	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	106700	ug/L	107
Calcium	A	300000	314100	ug/L	105
Magnesium	A	100000	103000	ug/L	103
Molybdenum	A	2000	2019	ug/L	101
Potassium	A	100000	105500	ug/L	106
Sodium	E	250000	237500	ug/L	95
Phosphorus	E	100000	96180	ug/L	96
Iron	H	250000	225800	ug/L	90

ISTD (ICALBLK 15d24j00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	388541	253969	-34.64
Scandium	A	888879	597043	-32.83
Scandium	E	67063	52012	-22.44
Scandium	H	518978	375414	-27.66
Germanium	H	133169	91164	-31.54
Germanium	E	32708	25635	-21.62
Indium	A	1212348	790150	-34.82
Bismuth	A	661395	447094	-32.40
Yttrium	A	1364591	1008000	-26.13
Terbium	A	1358520	1021434	-24.81

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015164741054
 Cal : 1015164741001
 Standards: S26728, S26751

File : 15d24j00054
 Caldate : 24-APR-2015

IDF : 1.0
 Time : 24-APR-2015 13:53

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	107400	ug/L	7		
Cadmium	A	100.0	102.3	ug/L	2	20	
Calcium	A	300000	317800	ug/L	6		
Magnesium	A	100000	104400	ug/L	4		
Molybdenum	A	2000	2032	ug/L	2		
Potassium	A	100000	106600	ug/L	7		
Silver	A	50.00	50.07	ug/L	0	20	
Arsenic	E	100.0	96.62	ug/L	-3	20	
Chromium	E	200.0	196.6	ug/L	-2	20	
Cobalt	E	200.0	190.5	ug/L	-5	20	
Copper	E	200.0	190.5	ug/L	-5	20	
Manganese	E	200.0	202.3	ug/L	1	20	
Nickel	E	200.0	186.5	ug/L	-7	20	
Sodium	E	250000	242200	ug/L	-3		
Vanadium	E	200.0	200.3	ug/L	0	20	
Zinc	E	100.0	90.67	ug/L	-9	20	
Iron	H	250000	230600	ug/L	-8		
Selenium	H	100.0	92.45	ug/L	-8	20	

ISTD (ICALBLK 15d24j00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	518978	362125	-30.22
Scandium	A	888879	581224	-34.61
Scandium	E	67063	49087	-26.80
Germanium	H	133169	90497	-32.04
Germanium	E	32708	24783	-24.23
Indium	A	1212348	779853	-35.67
Yttrium	A	1364591	984546	-27.85

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015170522

Instrument : MET26
 Method : EPA 6020

Begun : 04/28/15 10:02
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d28k00001	X	RINSE			04/28/15 10:02	1.0	1	
002	15d28k00002	TUN				04/28/15 10:07	1.0	2	
003	15d28k00003	X	RINSE			04/28/15 10:11	1.0	1	
004	15d28k00004	ICALBLK	CALBLANK			04/28/15 10:16	1.0	1	
005	15d28k00005	ICAL				04/28/15 10:21	1.0	3 1	
006	15d28k00006	ICAL				04/28/15 10:25	1.0	4 1	
007	15d28k00007	ICAL				04/28/15 10:30	1.0	5 1	
008	15d28k00008	ICAL				04/28/15 10:35	1.0	6 1	
009	15d28k00009	ICAL				04/28/15 10:39	1.0	7 1	
010	15d28k00010	ICAL				04/28/15 10:44	1.0	8 1	
011	15d28k00011	X	RINSE			04/28/15 10:48	1.0	1	
012	15d28k00012	ICV				04/28/15 10:53	1.0	9 1	
013	15d28k00013	XCRI				04/28/15 10:58	1.0	10 1	
014	15d28k00014	XICB				04/28/15 11:02	1.0	1	
015	15d28k00015	ICB				04/28/15 11:07	1.0	1	
016	15d28k00016	CRI				04/28/15 11:12	1.0	10 1	
017	15d28k00017	ICSA				04/28/15 11:16	1.0	11 1	8:CA=290000
018	15d28k00018	ICSAB				04/28/15 11:21	1.0	12 1	13:CA=290000
019	15d28k00019	X	RINSE			04/28/15 11:26	1.0	1	
020	15d28k00020	X	RINSE			04/28/15 11:31	1.0	1	
021	15d28k00021	X	RINSE			04/28/15 11:36	1.0	1	
022	15d28k00022	X	RINSE			04/28/15 11:40	1.0	1	
023	15d28k00023	X	RINSE			04/28/15 11:45	1.0	1	
024	15d28k00024	MSS	264136-007	Water	219962	04/28/15 11:50	5.0	1	
025	15d28k00025	X	RINSE			04/28/15 11:55	1.0	1	
026	15d28k00026	CCV				04/28/15 12:00	1.0	13 1	
027	15d28k00027	X	XCCB			04/28/15 12:04	1.0	1	
028	15d28k00028	CCB				04/28/15 12:09	1.0	1	
029	15d28k00029	BLANK	QC785676	Filtrate	222621	04/28/15 12:14	5.0	1	
030	15d28k00030	BS	QC785677	Filtrate	222621	04/28/15 12:18	5.0	1	
031	15d28k00031	BSD	QC785678	Filtrate	222621	04/28/15 12:23	5.0	1	
032	15d28k00032	MSS	266161-007	Filtrate	222621	04/28/15 12:27	5.0	1	1:NA=22000
033	15d28k00033	MS	QC785679	Filtrate	222621	04/28/15 12:32	5.0	1	1:NA=22000
034	15d28k00034	MSD	QC785680	Filtrate	222621	04/28/15 12:36	5.0	1	1:NA=23000
035	15d28k00035	MSS	266161-007	Filtrate	222621	04/28/15 12:41	500.0	1	
036	15d28k00036	SAMPLE	266263-002	Filtrate	222621	04/28/15 12:46	5.0	1	4:NA=250000
037	15d28k00037	X	RINSE			04/28/15 12:50	1.0	1	
038	15d28k00038	SAMPLE	266263-002	Filtrate	222621	04/28/15 12:55	500.0	1	
039	15d28k00039	X	RINSE			04/28/15 13:00	1.0	1	
040	15d28k00040	CCV				04/28/15 13:05	1.0	13 1	
041	15d28k00041	X	XCCB			04/28/15 13:09	1.0	1	
042	15d28k00042	CCB				04/28/15 13:14	1.0	1	
043	15d28k00043	BLANK	QC785685	Soil	222622	04/28/15 13:19	25.0	1	
044	15d28k00044	BS	QC785686	Soil	222622	04/28/15 13:23	25.0	1	
045	15d28k00045	BSD	QC785687	Soil	222622	04/28/15 13:28	25.0	1	
046	15d28k00046	MSS	266350-001	Soil	222622	04/28/15 13:32	25.0	1	1:MN=290
047	15d28k00047	MS	QC785688	Soil	222622	04/28/15 13:37	25.0	1	
048	15d28k00048	MSD	QC785689	Soil	222622	04/28/15 13:42	25.0	1	
049	15d28k00049	SAMPLE	266363-001	Soil	222622	04/28/15 13:46	25.0	1	2:CA=32000
050	15d28k00050	SAMPLE	266363-002	Soil	222622	04/28/15 13:51	25.0	1	
051	15d28k00051	SAMPLE	266363-001	Soil	222622	04/28/15 13:55	2500	1	
052	15d28k00052	CCV				04/28/15 14:00	1.0	13 1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015170522

Instrument : MET26
 Method : EPA 6020

Begun : 04/28/15 10:02
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d28k00053	X	XCCB			04/28/15 14:05	1.0	1	
054	15d28k00054	CCB				04/28/15 14:09	1.0	1	
055	15d28k00055	ICSA				04/28/15 14:14	1.0	11 1	8:CA=290000
056	15d28k00056	ICSAB				04/28/15 14:19	1.0	12 1	12:CA=290000
057	15d28k00057	X	RINSE			04/28/15 14:24	1.0	1	
058	15d28k00058	X	RINSE			04/28/15 15:17	1.0	1	
059	15d28k00059	SAMPLE	266087-009	Filtrate	222325	04/28/15 15:22	50.0	1	1:MN=330
060	15d28k00060	SAMPLE	266087-009	Filtrate	222325	04/28/15 15:27	500.0	1	
061	15d28k00061	CCV				04/28/15 15:31	1.0	13 1	
062	15d28k00062	X	XCCB			04/28/15 15:36	1.0	1	
063	15d28k00063	CCB				04/28/15 15:41	1.0	1	
064	15d28k00064	SAMPLE	266091-002	Filtrate	222325	04/28/15 15:45	50.0	1	1:MN=440
065	15d28k00065	SAMPLE	266091-004	Filtrate	222325	04/28/15 15:50	50.0	1	
066	15d28k00066	SAMPLE	266091-005	Filtrate	222325	04/28/15 16:00	50.0	1	
067	15d28k00067	SAMPLE	266091-008	Filtrate	222325	04/28/15 16:05	50.0	1	
068	15d28k00068	SAMPLE	266091-009	Filtrate	222325	04/28/15 16:09	50.0	1	
069	15d28k00069	SAMPLE	266091-010	Filtrate	222325	04/28/15 16:14	50.0	1	
070	15d28k00070	SAMPLE	266091-012	Filtrate	222325	04/28/15 16:19	50.0	1	
071	15d28k00071	CCV				04/28/15 16:23	1.0	13 1	
072	15d28k00072	X	XCCB			04/28/15 16:28	1.0	1	
073	15d28k00073	CCB				04/28/15 16:33	1.0	1	
074	15d28k00074	ICSA				04/28/15 16:37	1.0	11 1	8:CA=300000
075	15d28k00075	ICSAB				04/28/15 16:42	1.0	12 1	11:CA=290000
076	15d28k00076	X	RINSE			04/28/15 16:47	1.0	1	
077	15d28k00077	X	RINSE			04/28/15 16:52	1.0	1	
078	15d28k00078	MSS	266161-007	Filtrate	222621	04/28/15 16:56	500.0	1	
079	15d28k00079	X	RINSE			04/28/15 17:01	1.0	1	
080	15d28k00080	X	MB WET DI			04/28/15 17:06	5.0	1	
081	15d28k00081	SER	QC785681	Filtrate	222621	04/28/15 17:11	2500	1	
082	15d28k00082	PDS	QC785682	Filtrate	222621	04/28/15 17:15	500.0	14 15 16 1	
083	15d28k00083	SAMPLE	266161-009	Filtrate	222621	04/28/15 17:20	500.0	1	
084	15d28k00084	SAMPLE	266161-020	Filtrate	222621	04/28/15 17:25	500.0	1	
085	15d28k00085	CCV				04/28/15 17:30	1.0	13 1	
086	15d28k00086	X	XCCB			04/28/15 17:34	1.0	1	
087	15d28k00087	CCB				04/28/15 17:39	1.0	1	
088	15d28k00088	MSS	266161-007	Filtrate	222621	04/28/15 17:44	5.0	1	1:NA=21000
089	15d28k00089	SER	QC785681	Filtrate	222621	04/28/15 17:48	25.0	1	
090	15d28k00090	PDS	QC785682	Filtrate	222621	04/28/15 18:00	5.0	14 15 16 1	
091	15d28k00091	SAMPLE	266161-004	Filtrate	222621	04/28/15 18:05	5.0	1	
092	15d28k00092	SAMPLE	266161-005	Filtrate	222621	04/28/15 18:10	5.0	1	
093	15d28k00093	SAMPLE	266161-006	Filtrate	222621	04/28/15 18:14	5.0	1	
094	15d28k00094	SAMPLE	266161-008	Filtrate	222621	04/28/15 18:19	5.0	1	
095	15d28k00095	SAMPLE	266161-009	Filtrate	222621	04/28/15 18:23	5.0	1	
096	15d28k00096	SAMPLE	266161-016	Filtrate	222621	04/28/15 18:28	5.0	1	
097	15d28k00097	SAMPLE	266161-017	Filtrate	222621	04/28/15 18:33	5.0	1	
098	15d28k00098	CCV				04/28/15 18:38	1.0	13 1	
099	15d28k00099	X	XCCB			04/28/15 18:42	1.0	1	
100	15d28k00100	CCB				04/28/15 18:47	1.0	1	
101	15d28k00101	SAMPLE	266161-018	Filtrate	222621	04/28/15 18:52	5.0	1	
102	15d28k00102	SAMPLE	266161-019	Filtrate	222621	04/28/15 18:56	5.0	1	
103	15d28k00103	SAMPLE	266161-020	Filtrate	222621	04/28/15 19:01	5.0	1	4:MG=55000
104	15d28k00104	X	RINSE			04/28/15 19:06	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015170522

Instrument : MET26
 Method : EPA 6020

Begun : 04/28/15 10:02
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d28k00105	SAMPLE	266161-019	Filtrate	222621	04/28/15 19:10	5.0	1	
106	15d28k00106	X	RINSE			04/28/15 19:20	1.0	1	
107	15d28k00107	SAMPLE	266161-017	Filtrate	222621	04/28/15 19:25	5.0	1	
108	15d28k00108	SAMPLE	266161-021	Filtrate	222621	04/28/15 19:29	5.0	1	
109	15d28k00109	SAMPLE	266161-023	Filtrate	222621	04/28/15 19:34	5.0	1	
110	15d28k00110	SAMPLE	266161-025	Filtrate	222621	04/28/15 19:39	5.0	1	
111	15d28k00111	SAMPLE	266161-026	Filtrate	222621	04/28/15 19:43	5.0	1	
112	15d28k00112	SAMPLE	266091-010	Filtrate	222325	04/28/15 19:48	50.0	1	
113	15d28k00113	CCV				04/28/15 19:53	1.0	13 1	
114	15d28k00114	X	XCCB			04/28/15 19:57	1.0	1	
115	15d28k00115	CCB				04/28/15 20:02	1.0	1	
116	15d28k00116	X	RINSE			04/28/15 20:07	1.0	1	
117	15d28k00117	SAMPLE	266161-013	Filtrate	222621	04/28/15 20:12	500.0	1	
118	15d28k00118	SAMPLE	266161-013	Filtrate	222621	04/28/15 20:16	5.0	1	4:NA=80000
119	15d28k00119	X	RINSE			04/28/15 20:21	1.0	1	
120	15d28k00120	CCV				04/28/15 20:26	1.0	13 1	
121	15d28k00121	X	XCCB			04/28/15 20:31	1.0	1	
122	15d28k00122	CCB				04/28/15 20:36	1.0	1	
123	15d28k00123	ICSA				04/28/15 20:40	1.0	11 1	8:CA=300000
124	15d28k00124	ICSAB				04/28/15 20:45	1.0	12 1	13:CA=300000
125	15d28k00125	X	RINSE			04/28/15 20:50	1.0	1	
126	15d28k00126	X	RINSE			04/28/15 20:55	1.0	1	
127	15d28k00127	SAMPLE	266150-002	Filtrate	222567	04/28/15 20:59	5.0	1	4:NA=2400000
128	15d28k00128	SAMPLE	266150-003	Filtrate	222567	04/28/15 21:04	5.0	1	4:NA=2100000
129	15d28k00129	SAMPLE	266150-004	Filtrate	222567	04/28/15 21:09	5.0	1	4:NA=2300000
130	15d28k00130	SAMPLE	266150-005	Filtrate	222567	04/28/15 21:14	5.0	1	4:NA=2300000
131	15d28k00131	SAMPLE	266150-006	Filtrate	222567	04/28/15 21:18	5.0	1	4:NA=2300000
132	15d28k00132	SAMPLE	266150-007	Filtrate	222567	04/28/15 21:23	5.0	1	4:NA=2400000
133	15d28k00133	SAMPLE	266150-008	Filtrate	222567	04/28/15 21:28	5.0	1	5:NA=2400000
134	15d28k00134	SAMPLE	266150-009	Filtrate	222567	04/28/15 21:33	5.0	1	4:NA=2400000
135	15d28k00135	SAMPLE	266150-010	Filtrate	222567	04/28/15 21:37	5.0	1	4:NA=2000000
136	15d28k00136	X	RINSE			04/28/15 21:42	1.0	1	
137	15d28k00137	SAMPLE	266150-010	Filtrate	222567	04/28/15 21:47	500.0	1	1:NA=21000
138	15d28k00138	CCV				04/28/15 21:52	1.0	13 1	
139	15d28k00139	X	XCCB			04/28/15 21:57	1.0	1	
140	15d28k00140	CCB				04/28/15 22:02	1.0	1	
141	15d28k00141	SAMPLE	266150-011	Filtrate	222567	04/28/15 22:06	5.0	1	3:NA=640000
142	15d28k00142	SAMPLE	266150-012	Filtrate	222567	04/28/15 22:11	5.0	1	3:NA=3400000
143	15d28k00143	SAMPLE	266150-013	Filtrate	222567	04/28/15 22:16	5.0	1	5:NA=2100000
144	15d28k00144	SAMPLE	266150-014	Filtrate	222567	04/28/15 22:21	5.0	1	5:NA=2400000
145	15d28k00145	CCV				04/28/15 22:25	1.0	13 1	
146	15d28k00146	X	XCCB			04/28/15 22:30	1.0	1	
147	15d28k00147	CCB				04/28/15 22:35	1.0	1	
148	15d28k00148	ICSA				04/28/15 22:40	1.0	11 1	8:CA=310000
149	15d28k00149	ICSAB				04/28/15 22:44	1.0	12 1	10:CA=310000
150	15d28k00150	X	RINSE			04/28/15 22:49	1.0	1	
151	15d28k00151	X	RINSE			04/28/15 22:54	1.0	1	
152	15d28k00152	X	RINSE			04/28/15 22:59	1.0	1	
153	15d28k00153	X	RINSE			04/28/15 23:04	1.0	1	
154	15d28k00154	X	RINSE			04/28/15 23:09	1.0	1	
155	15d28k00155	X	RINSE			04/28/15 23:14	1.0	1	
156	15d28k00156	X	RINSE			04/28/15 23:19	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015170522

Instrument : MET26 Begun : 04/28/15 10:02
 Method : EPA 6020 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
157	15d28k00157	X	RINSE			04/28/15 23:24	1.0	1	

CRT 04/28/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 56.

NT 04/29/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 57 through 157.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 10151170522

Date : 04/28/15
 Sequence : MET26 15d28k00
 Reference : 15d28k00004
 Analyzed : 04/28/15 10:16

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
015	ICB		1068839	1624593	102819	841854	198436	49526	2333071	1525048	2351478	3024568
017	ICSA	IB+ICALBLK STD	932896	1408090	91453	713110	178823	44424	2120426	1443527	2111995	2803913
018	ICSAB	LOWER LIMIT	279869	422427	27436	213933	53647	13327	636128	433058	633599	841174
024	MSS	2641136--007	1119475	1689708	109744	855732	214588	53309	2544511	1732232	2534394	3364696
026	CCV		960218	1539719	97608	810444	190956	47335	2208218	1443357	2273448	2939534
028	CCB		1151710 *	1691152 *	105345	871197 *	203247	50839	2443362	1576012	2459194	3157902
029	BLANK	QC785676	1148354 *	1716279 *	105558	881189 *	205050	50720	2431483	1572727	2475793	3115458
030	BS	QC785677	1107232	1661126	104324	874695 *	201386	50429	2382307	1549609	2408611	3080648
031	BSD	QC785678	1079469	1629193	102675	857016 *	198303	49642	2341379	1541962	2379324	3080557
032	MSS	266161--007	953889	1509340	100010	844153	196219	48549	2271375	1472763	2281312	2984891
033	MS	QC785679	920440	1553402	98893	829009	195388	49093	2252011	1449072	2296539	2972202
034	MSD	QC785680	919144	1578123	99260	805581	193018	48651	2314271	1471225	2371861	3075047
035	MSS	266161--007	1052144	1698895 *	106640	838886	204935	52672	2490975	1592145	2507696	3170589
036	SAMPLE	266263--002	720399	1368119	95046	727406	181146	45809	1965395	1225727	2062452	2634383
038	SAMPLE	266263--002	933823	1538872	101345	787452	193357	49478	2340239	1486755	2312474	2985546
040	CCV		914479	1530535	100540	823360	195379	48909	2253426	1443065	2287241	2996603
042	CCB		1126755 *	1734579 *	110097 *	879274 *	210192	52834	2505271	1604822	2529948	3199386
043	BLANK	QC785685	1130297 *	1763668 *	108749	884881 *	208809	52670	2519170	1612994	2563295 *	3256497
044	BS	QC785686	988580	1545860	104523	857005 *	201631	50373	2199060	1460276	2250466	2890403
045	BSD	QC785687	1020928	1606307	103907	846332	199078	50039	2343851	1535813	2377661	3047070
046	MSS	266350--001	1070132	1745877 *	110828 *	866873 *	201014	52032	2420884	1550498	2615049 *	3177538
047	MS	QC785688	914410	1559212	103552	870873 *	197123	48720	2299207	1458284	2367462	2932892
048	MSD	QC785689	971997	1630866	103151	841856	190451	48936	2277866	1489682	2439602	3022723
049	SAMPLE	266363--001	885829	1488608	98076	793976	185306	46440	2131736	1459141	2268187	2834930
050	SAMPLE	266363--002	1015516	1688814	104811	781320	182623	48568	2328438	1507445	2484303	3038607
051	SAMPLE	266363--001	1106197	1697741 *	109539	895716 *	208323	53035	2475105	1581083	2482408	3140447
052	CCV		1001047	1617593	102995	849656	197710	49526	2299973	1489993	2364961	3093150
054	CCB		1164194 *	1767611 *	111289 *	829496	202586	53024	2528003	1618791	2551614 *	3233387
055	ICSA		582507	1159971	77925	635652	157327	40387	1718989	1148535	1800598	2493326
056	ICSAB		439738	1034557	66184	544711	139073	35608	1565749	1069308	1613295	2300290
059	SAMPLE	266087--009	1056637	1675325	112452 *	869565 *	205362	53397 *	2434154	1597696	2447323	3184070
060	SAMPLE	266087--009	1023113	1616984	99651	864259 *	207245	48828	2457068	1587281	2421530	3185467
061	CCV		952104	1608251	100182	765898	186065	48035	2342918	1528304	2356108	3153099

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 10151170522

Date : 04/28/15
 Sequence : MET26 15d28k00

Reference : 15d28k00004
 Analyzed : 04/28/15 10:16

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
063	CCB		1036498	1647155	100950	873122 *	202068	48367	2418306	1595031	2410526	3159201
064	SAMPLE	266091-002	931987	1589062	100352	820135	193689	48657	2301691	1515671	2392404	3039061
065	SAMPLE	266091-004	944282	1552830	100102	775805	192118	48788	2345669	1579861	2350457	3088286
066	SAMPLE	266091-005	1034563	1603649	108768	886957 *	208998	52777	2430082	1630477	2409849	3173467
067	SAMPLE	266091-008	1049980	1679091	105046	850514	199480	50503	2491911	1639002	2487318	3259740
068	SAMPLE	266091-009	1034639	1648544	102617	858266 *	205571	50822	2383323	1592130	2427099	3154080
069	SAMPLE	266091-010	1068140	1676942	105813	628832	172670	51556	2426110	1603845	2474782	3192127
070	SAMPLE	266091-012	1008960	1596943	105573	858474 *	202511	51019	2372741	1586551	2360073	3116976
071	CCV		851158	1464497	98079	818121	193441	47619	2200357	1459512	2204852	2962679
073	CCB		1050564	1642399	104762	848790	201210	50517	2430542	1614111	2426754	3188255
074	ICSA		571070	1141331	76462	630932	158574	40479	1736645	1155626	1809727	2512655
075	ICSAB		434435	1066079	68339	550396	141436	36602	1621240	1102632	1680431	2406628
078	MSS	266161-007	774360	1355566	89123	682696	175064	43709	2101181	1461486	2062782	2820786
081	SER	QC785681	790204	1405385	91640	688523	176169	44739	2155467	1483245	2149915	2882075
082	PDS	QC785682	856625	1456663	92524	698946	175360	44935	2147189	1454395	2184763	2892205
083	SAMPLE	266161-009	900818	1490083	95676	749880	187557	47375	2261654	1521977	2244914	3000442
084	SAMPLE	266161-020	922183	1547294	97282	760987	187369	47630	2291179	1557219	2299269	3044088
085	CCV		859507	1487140	95117	735251	183420	46037	2184066	1448222	2226321	2952235
087	CCB		907180	1533653	98077	808112	189389	47122	2335042	1557364	2296187	3062306
088	MSS	266161-007	846960	1502987	95481	730441	185129	47030	2288036	1476527	2254739	3030968
089	SER	QC785681	930897	1596866	102570	823458	196555	49951	2352497	1551764	2388797	3115357
090	PDS	QC785682	836008	1506950	99919	870685 *	199884	47968	2229619	1442023	2250121	3024344
091	SAMPLE	266161-004	930247	1604740	101175	807885	195742	49518	2358622	1521755	2356078	3155566
092	SAMPLE	266161-005	965102	1592526	103487	829244	200828	50869	2448181	1584494	2375721	3175842
093	SAMPLE	266161-006	901058	1560834	100894	836612	198953	49150	2339854	1566909	2345954	3075248
094	SAMPLE	266161-008	831525	1485109	96223	740825	188272	47135	2261504	1498899	2220799	3017606
095	SAMPLE	266161-009	904900	1534445	100246	797647	191746	48753	2350669	1572385	2308001	3098024
096	SAMPLE	266161-016	876057	1516593	97289	759329	188771	47858	2279478	1536937	2256033	3061747
097	SAMPLE	266161-017	920861	1576783	98888	784709	191841	48334	2343459	1607402	2323644	3112199
098	CCV		809477	1401083	90772	713340	179258	44927	2142590	1444876	2138203	2894422
100	CCB		964483	1589477	101437	823491	195530	49457	2412507	1616874	2371541	3183972
101	SAMPLE	266161-018	983837	1606489	102418	834234	200475	49804	2408432	1598410	2378453	3189973
102	SAMPLE	266161-019	1044040	1754844 *	103796	821538	196433	50541	2630573 *	1736464 *	2599838 *	3482905 *
103	SAMPLE	266161-020	773233	1394616	92132	821177	191823	45309	2072742	1387051	2105707	2868652
105	SAMPLE	266161-019	709073	1345419	89574	679220	174509	44299	2077377	1455376	2091158	2816745
107	SAMPLE	266161-017	777345	1413998	93216	700245	180988	46503	2220325	1538567	2185574	2931352
108	SAMPLE	266161-021	732608	1384839	93103	841959	198231	46412	2185419	1480284	2144663	2914263

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 10151170522

Date : 04/28/15
Sequence : MET26 15d28k00

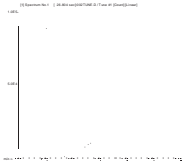
Reference : 15d28k00004
Analyzed : 04/28/15 10:16

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
109	SAMPLE	266161-023	698724	1360227	92372	692931	179479	46183	2150788	1429942	2118283	2912317
110	SAMPLE	266161-025	722710	1378683	92857	691882	180401	46345	2187592	1440377	2153170	2897974
111	SAMPLE	266161-026	768534	1415774	95690	710038	183353	46643	2246376	1495244	2215428	2971499
112	SAMPLE	266091-010	870013	1534666	97895	729030	189255	49183	2365176	1544576	2326807	3087149
113	CCV		799556	1468272	96466	765620	187453	47508	2270749	1476710	2227787	3068152
115	CCB		956380	1584561	102194	821420	197268	50186	2397233	1596114	2412599	3129272
117	SAMPLE	266161-013	898420	1555692	102170	825753	199559	50907	2421062	1582053	2362908	3144008
118	SAMPLE	266161-013	868450	1523765	91289	712796	178279	45126	2202519	1365763	2267566	2937398
120	CCV		885256	1566031	97715	733066	186036	48408	2324478	1506560	2370429	3043665
122	CCB		929541	1558106	100924	820117	197215	49929	2396627	1543447	2376255	3080526
123	ICSA		500515	1139492	76572	646894	163588	41256	1774773	1148626	1824066	2547368
124	ICSAB		400227	1059385	67233	554803	144330	36577	1690560	1110719	1716761	2453075
127	SAMPLE	266150-002	1366784 *	2133289 *	111470 *	848547	193242	53937 *	2582408 *	1317607	2900037 *	3170880
128	SAMPLE	266150-003	1431663 *	2274408 *	125548 *	1063279 *	236223 *	59770 *	2703800 *	1340604	3086943 *	3287383
129	SAMPLE	266150-004	1359775 *	2242628 *	124410 *	997596 *	230029 *	60863 *	2716443 *	1346886	3078395 *	3255257
130	SAMPLE	266150-005	1224637 *	2150595 *	125038 *	1046918 *	237900 *	61161 *	2670221 *	1305493	2999198 *	3146035
131	SAMPLE	266150-006	1124393 *	1995450 *	118674 *	1025093 *	231238 *	57807 *	2499462	1238585	2807498 *	3011666
132	SAMPLE	266150-007	1181820 *	2040351 *	112841 *	980446 *	223878 *	55734 *	2505748	1259290	2832724 *	3036494
133	SAMPLE	266150-008	1185626 *	1977044 *	110166 *	946863 *	217726 *	53585 *	2401574	1217233	2700286 *	2925175
134	SAMPLE	266150-009	1004846	1848033 *	108864	905604 *	208079	53804 *	2359842	1223066	2604428 *	2893505
135	SAMPLE	266150-010	971539	1809092 *	101804	839736	195059	49421	2338382	1234315	2562267 *	2896591
137	SAMPLE	266150-010	356152	975696	69245	547746	147760	35392	1730549	1166558	1651736	2284178
138	CCV		291690	895997	60979	451334	122580	31522	1564774	1107721	1545536	2198171
140	CCB		291674	847405	60985	454537	124376	31472	1571970	1117108	1466344	2126210
141	SAMPLE	266150-011	456761	1139491	73213	533170	138929	36433	1744117	1061809	1800424	2356538
142	SAMPLE	266150-012	1274945 *	2106407 *	114151 *	933172 *	211831	54910 *	2484029	1273040	2836139 *	3071099
143	SAMPLE	266150-013	1005924	1816722 *	106359	922141 *	207167	50519	2244678	1195456	2505323	2841932
144	SAMPLE	266150-014	981545	1825498 *	104132	895585 *	205123	49985	2298099	1217884	2577483 *	2876462
145	CCV		304971	928278	70545	574912	154381	36297	1655293	1126616	1609545	2265321
147	CCB		248212 *	789621	58210	428342	120249	30240	1509676	1073130	1410071	2031774
148	ICSA		197364 *	673815	51385	396647	108389	28415	1270741	846022	1289157	1883472
149	ICSAB		178688 *	595720	46355	360573	99812	26198	1189947	815215	1196790	1779241

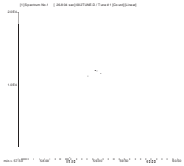
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D28k00.B\002TUNE.D
 Date Acquired: Apr 28 2015 10:07 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

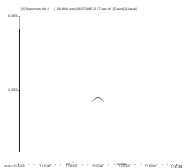
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	58267	59856	60434	60823	62305	2.48	5.00	
59 Co	67650	67633	68613	69021	68751	0.68	5.00	
115 In	1045319	1126132	1125551	1144751	1146573	3.96	5.00	
205 Tl	45164	45255	45216	45623	45469	0.41	5.00	



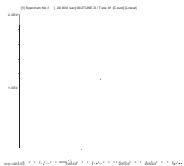
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266091 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015170522001
 Units : ug/L
 Date : 28-APR-2015 10:16
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d28k00005	1015170522005	28-APR-2015 10:21	S27043, S26751	
L2	15d28k00006	1015170522006	28-APR-2015 10:25	S27044, S26751	
L3	15d28k00007	1015170522007	28-APR-2015 10:30	S27045, S26751	
L4	15d28k00008	1015170522008	28-APR-2015 10:35	S27046, S26751	
L5	15d28k00009	1015170522009	28-APR-2015 10:39	S27041, S26751	
L6	15d28k00010	1015170522010	28-APR-2015 10:44	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0060	0.0066	0.0056	0.0054	0.0053	0.0050	BLNK	-0.9031	196.961		0.0056	0.999	0.995	
Antimony	A	0.0029	0.0031	0.0028	0.0027	0.0027	0.0029	BLNK	-0.0144	352.680		0.0028	0.999	0.995	
Barium	A	7.7E-4	8.9E-4	8.0E-4	7.5E-4	7.3E-4	7.2E-4	BLNK	-0.0115	1380.39		7.8E-4	1.000	0.995	
Beryllium	A	0.0030	0.0027	0.0027	0.0027	0.0027	0.0026	BLNK	-0.0064	382.370		0.0027	1.000	0.995	
Cadmium	A	9.2E-4	8.4E-4	7.3E-4	7.4E-4	7.3E-4	7.2E-4	BLNK	-0.0137	1378.68		7.8E-4	1.000	0.995	
Calcium	A	0.0016	4.8E-4	3.0E-4	1.9E-4	1.8E-4	1.8E-4	BLNK	-68.581	5624.58		4.9E-4	1.000	0.995	
Lead	A	0.0080	0.0061	0.0053	0.0048	0.0046	0.0047	BLNK	-0.0627	213.364		0.0056	1.000	0.995	
Magnesium	A	0.0084	0.0056	0.0048	0.0046	0.0044	0.0042	BLNK	-1.3029	236.605		0.0053	0.999	0.995	
Molybdenum	A	0.0034	0.0026	0.0021	0.0020	0.0020	0.0020	BLNK	-0.0971	508.536		0.0023	1.000	0.995	
Potassium	A	0.1021	0.0291	0.0156	0.0070	0.0059	0.0057	BLNK	-171.63	175.896		0.0276	1.000	0.995	
Silver	A	0.0045	0.0041	0.0036	0.0034	0.0033	0.0035	BLNK	-0.0408	288.749		0.0037	1.000	0.995	
Thallium	A	0.0086	0.0076	0.0069	0.0069	0.0070	0.0073	BLNK	-0.0126	138.509		0.0074	1.000	0.995	
Arsenic	E	0.0132	0.0068	0.0061	0.0055	0.0055	0.0056	BLNK	-0.1275	180.645		0.0071	1.000	0.995	
Chromium	E	0.0536	0.0289	0.0266	0.0234	0.0220	0.0228	BLNK	-0.1544	44.2842		0.0295	1.000	0.995	
Cobalt	E	0.0390	0.0357	0.0366	0.0353	0.0334	0.0343	BLNK	-0.0069	29.3333		0.0357	1.000	0.995	
Copper	E	0.1716	0.0547	0.0414	0.0269	0.0240	0.0244	BLNK	-0.5377	41.2522		0.0572	1.000	0.995	
Manganese	E	0.0151	0.0151	0.0151	0.0142	0.0138	0.0143	BLNK	-0.0091	70.5154		0.0146	1.000	0.995	
Nickel	E	0.0122	0.0104	0.0103	0.0097	0.0090	0.0092	BLNK	-0.0309	108.965		0.0101	1.000	0.995	
Sodium	E	0.0237	0.0091	0.0075	0.0055	0.0051	0.0053	BLNK	-34.902	191.109		0.0094	1.000	0.995	
Vanadium	E	0.0704	0.0288	0.0243	0.0191	0.0181	0.0190	BLNK	-0.2710	53.2429		0.0299	0.999	0.995	
Zinc	E		0.0086	0.0066	0.0046	0.0042	0.0043	BLNK	-0.3713	233.834		0.0057	1.000	0.995	
Iron	H	0.0109	0.0076	0.0076	0.0076	0.0071	0.0071	BLNK	-1.7703	140.348		0.0080	1.000	0.995	
Selenium	H	0.0014	0.0010	0.0010	0.0010	9.8E-4	9.5E-4	BLNK	-0.0273	1045.83		0.0011	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	9	50.000	27	100.00	9	1000.0	7	10000	4	20000	-1
Antimony	A	0.1000	-13	0.5000	6	1.0000	-2	10.000	-7	100.00	-5	200.00	1
Barium	A	0.1000	-6	0.5000	20	1.0000	10	10.000	3	100.00	1	200.00	0
Beryllium	A	0.1000	9	0.5000	1	1.0000	1	10.000	2	100.00	3	200.00	-1
Cadmium	A	0.1000	13	0.5000	13	1.0000	-1	10.000	2	100.00	1	200.00	0
Calcium	A	10.000	129	50.000	33	100.00	0	1000.0	0	10000	3	20000	-1
Lead	A	0.1000	7	0.5000	18	1.0000	7	10.000	2	100.00	-1	200.00	0
Magnesium	A	10.000	86	50.000	29	100.00	13	1000.0	8	10000	4	20000	-1
Molybdenum	A	0.1000	-25	0.5000	11	1.0000	-3	10.000	-2	100.00	0	200.00	0
Potassium	A	10.000	-21	50.000	69	100.00	2	1000.0	6	10000	3	20000	-1
Silver	A	0.1000	-10	0.5000	10	1.0000	-1	10.000	-3	100.00	-3	200.00	1
Thallium	A	0.0500	-6	0.2500	0	0.5000	-7	5.0000	-5	50.000	-3	100.00	1
Arsenic	E	0.1000	11	0.5000	-2	1.0000	-2	10.000	-1	100.00	-1	200.00	0
Chromium	E	0.1000	-17	0.5000	-3	1.0000	2	10.000	2	100.00	-3	200.00	1
Cobalt	E	0.1000	8	0.5000	3	1.0000	7	10.000	3	100.00	-2	200.00	0
Copper	E	0.1000	70	0.5000	18	1.0000	17	10.000	6	100.00	-1	200.00	0
Manganese	E	0.1000	-3	0.5000	5	1.0000	5	10.000	0	100.00	-3	200.00	1
Nickel	E	0.1000	2	0.5000	7	1.0000	9	10.000	5	100.00	-2	200.00	0
Sodium	E	10.000	3	50.000	4	100.00	8	1000.0	2	10000	-2	20000	1
Vanadium	E	0.1000	4	0.5000	-1	1.0000	3	10.000	-1	100.00	-4	200.00	1
Zinc	E			0.5000	27	1.0000	17	10.000	4	100.00	-2	200.00	0
Iron	H	10.000	35	50.000	3	100.00	5	1000.0	6	10000	0	20000	0
Selenium	H	0.1000	22	0.5000	1	1.0000	4	10.000	5	100.00	2	200.00	-1

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015170522001

Cal Date : 28-APR-2015

ICV 1015170522012 (15d28k00012 28-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	9944	ug/L	-1	10	
Antimony	A	100.0	95.87	ug/L	-4	10	
Barium	A	100.0	100.1	ug/L	0	10	
Beryllium	A	100.0	96.56	ug/L	-3	10	
Cadmium	A	100.0	100.0	ug/L	0	10	
Calcium	A	10000	9846	ug/L	-2	10	
Lead	A	100.0	97.09	ug/L	-3	10	
Magnesium	A	10000	9943	ug/L	-1	10	
Molybdenum	A	100.0	97.33	ug/L	-3	10	
Potassium	A	10000	9907	ug/L	-1	10	
Silver	A	100.0	95.52	ug/L	-4	10	
Thallium	A	50.00	47.19	ug/L	-6	10	
Arsenic	E	100.0	98.77	ug/L	-1	10	
Chromium	E	100.0	99.79	ug/L	0	10	
Cobalt	E	100.0	100.5	ug/L	1	10	
Copper	E	100.0	102.2	ug/L	2	10	
Manganese	E	100.0	99.00	ug/L	-1	10	
Nickel	E	100.0	101.1	ug/L	1	10	
Sodium	E	10000	10070	ug/L	1	10	
Vanadium	E	100.0	99.00	ug/L	-1	10	
Zinc	E	100.0	101.4	ug/L	1	10	
Iron	H	10000	9859	ug/L	-1	10	
Selenium	H	100.0	102.8	ug/L	3	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522015 File : 15d28k00015 Time : 28-APR-2015 11:07
 Cal : 1015170522001 Caldate : 28-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	1068839	14.57
Scandium	A	1408090	1624593	15.38
Scandium	E	91453	102819	12.43
Scandium	H	713110	841854	18.05
Germanium	H	178823	198436	10.97
Germanium	E	44424	49526	11.48
Indium	A	2120426	2333071	10.03
Bismuth	A	1443527	1525048	5.65
Yttrium	A	2111995	2351478	11.34
Terbium	A	2803913	3024568	7.87

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015170522055
 Cal : 1015170522001
 Standards: S26727, S26751
 File : 15d28k00055
 Caldate : 28-APR-2015
 IDF : 1.0
 Time : 28-APR-2015 14:14

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4853	0.1000	ug/L	
Barium	A	1.793	0.1000	ug/L	
Beryllium	A	[0.01700]	0.1000	ug/L	
Cadmium	A	2.148	0.1000	ug/L	
Lead	A	0.2252	0.1000	ug/L	
Silver	A	[0.04600]	0.1000	ug/L	
Thallium	A	[0.01220]	0.05000	ug/L	
Arsenic	E	0.7178	0.1000	ug/L	
Chromium	E	0.8964	0.1000	ug/L	
Cobalt	E	1.177	0.1000	ug/L	
Copper	E	1.267	0.1000	ug/L	
Manganese	E	7.355	0.1000	ug/L	
Nickel	E	1.228	0.1000	ug/L	
Vanadium	E	[0.002100]	0.1000	ug/L	
Zinc	E	2.704	0.5000	ug/L	
Selenium	H	[0.07160]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94740	ug/L	95
Calcium	A	300000	290000	ug/L	97
Magnesium	A	100000	92210	ug/L	92
Molybdenum	A	2000	2032	ug/L	102
Potassium	A	100000	98210	ug/L	98
Sodium	E	250000	234600	ug/L	94
Phosphorus	E	100000	95610	ug/L	96
Iron	H	250000	251900	ug/L	101

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	582507	-37.56
Scandium	A	1408090	1159971	-17.62
Scandium	E	91453	77925	-14.79
Scandium	H	713110	635652	-10.86
Germanium	H	178823	157327	-12.02
Germanium	E	44424	40387	-9.09
Indium	A	2120426	1718989	-18.93
Bismuth	A	1443527	1148535	-20.44
Yttrium	A	2111995	1800598	-14.74
Terbium	A	2803913	2493326	-11.08

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015170522056
 Cal : 1015170522001
 Standards: S26728, S26751
 File : 15d28k00056
 Caldate : 28-APR-2015
 IDF : 1.0
 Time : 28-APR-2015 14:19

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	94990	ug/L	-5		
Cadmium	A	100.0	100.8	ug/L	1	20	
Calcium	A	300000	294000	ug/L	-2		
Magnesium	A	100000	91480	ug/L	-9		
Molybdenum	A	2000	2069	ug/L	3		
Potassium	A	100000	97170	ug/L	-3		
Silver	A	50.00	46.51	ug/L	-7	20	
Arsenic	E	100.0	100.5	ug/L	1	20	
Chromium	E	200.0	206.7	ug/L	3	20	
Cobalt	E	200.0	203.8	ug/L	2	20	
Copper	E	200.0	199.5	ug/L	0	20	
Manganese	E	200.0	211.9	ug/L	6	20	
Nickel	E	200.0	198.6	ug/L	-1	20	
Sodium	E	250000	240500	ug/L	-4		
Vanadium	E	200.0	208.8	ug/L	4	20	
Zinc	E	100.0	104.4	ug/L	4	20	
Iron	H	250000	258900	ug/L	4		
Selenium	H	100.0	103.7	ug/L	4	20	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	713110	544711	-23.61
Scandium	A	1408090	1034557	-26.53
Scandium	E	91453	66184	-27.63
Germanium	H	178823	139073	-22.23
Germanium	E	44424	35608	-19.85
Indium	A	2120426	1565749	-26.16
Yttrium	A	2111995	1613295	-23.61

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522061 File : 15d28k00061 Time : 28-APR-2015 15:31
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0056	0.0050	10000	9773	ug/L	-2	10	
Antimony	A	0.0028	0.0026	100.0	92.81	ug/L	-7	10	
Barium	A	7.8E-4	7.2E-4	100.0	99.05	ug/L	-1	10	
Beryllium	A	0.0027	0.0025	100.0	95.07	ug/L	-5	10	
Cadmium	A	7.8E-4	7.0E-4	100.0	96.48	ug/L	-4	10	
Calcium	A	4.9E-4	1.7E-4	10000	9728	ug/L	-3	10	
Lead	A	0.0056	0.0044	100.0	94.75	ug/L	-5	10	
Magnesium	A	0.0053	0.0041	10000	9747	ug/L	-3	10	
Molybdenum	A	0.0023	0.0019	100.0	95.72	ug/L	-4	10	
Potassium	A	0.0276	0.0057	10000	9882	ug/L	-1	10	
Silver	A	0.0037	0.0032	100.0	92.64	ug/L	-7	10	
Thallium	A	0.0074	0.0067	50.00	46.57	ug/L	-7	10	
Arsenic	E	0.0071	0.0055	100.0	98.78	ug/L	-1	10	
Chromium	E	0.0295	0.0224	100.0	98.84	ug/L	-1	10	
Cobalt	E	0.0357	0.0334	100.0	98.03	ug/L	-2	10	
Copper	E	0.0572	0.0240	100.0	98.40	ug/L	-2	10	
Manganese	E	0.0146	0.0140	100.0	98.66	ug/L	-1	10	
Nickel	E	0.0101	0.0090	100.0	98.48	ug/L	-2	10	
Sodium	E	0.0094	0.0053	10000	10060	ug/L	1	10	
Vanadium	E	0.0299	0.0186	100.0	98.90	ug/L	-1	10	
Zinc	E	0.0057	0.0043	100.0	99.85	ug/L	0	10	
Iron	H	0.0080	0.0074	10000	10430	ug/L	4	10	
Selenium	H	0.0011	0.0010	100.0	105.5	ug/L	6	10	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	952104	2.06
Scandium	A	1408090	1608251	14.22
Scandium	E	91453	100182	9.54
Scandium	H	713110	765898	7.40
Germanium	H	178823	186065	4.05
Germanium	E	44424	48035	8.13
Indium	A	2120426	2342918	10.49
Bismuth	A	1443527	1528304	5.87
Yttrium	A	2111995	2356108	11.56
Terbium	A	2803913	3153099	12.45

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015170522063
Cal : 1015170522001

File : 15d28k00063
Caldate : 28-APR-2015

IDF : 1.0
Time : 28-APR-2015 15:41

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	0.1141	0.1000	0.2000	ug/L	CCB ***
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	i+ ***
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	1036498	11.11
Scandium	A	1408090	1647155	16.98
Scandium	E	91453	100950	10.38
Scandium	H	713110	873122	22.44 *
Germanium	H	178823	202068	13.00
Germanium	E	44424	48367	8.88
Indium	A	2120426	2418306	14.05
Bismuth	A	1443527	1595031	10.50
Yttrium	A	2111995	2410526	14.14
Terbium	A	2803913	3159201	12.67

+ = high bias CCB = instrument blank i = ISTD failure

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522071 File : 15d28k00071 Time : 28-APR-2015 16:23
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0056	0.0051	10000	10030	ug/L	0	10	
Antimony	A	0.0028	0.0027	100.0	95.90	ug/L	-4	10	
Barium	A	7.8E-4	7.4E-4	100.0	102.0	ug/L	2	10	
Beryllium	A	0.0027	0.0026	100.0	98.76	ug/L	-1	10	
Cadmium	A	7.8E-4	7.3E-4	100.0	100.2	ug/L	0	10	
Calcium	A	4.9E-4	1.8E-4	10000	10130	ug/L	1	10	
Lead	A	0.0056	0.0047	100.0	99.43	ug/L	-1	10	
Magnesium	A	0.0053	0.0042	10000	10030	ug/L	0	10	
Molybdenum	A	0.0023	0.0019	100.0	97.80	ug/L	-2	10	
Potassium	A	0.0276	0.0059	10000	10200	ug/L	2	10	
Silver	A	0.0037	0.0033	100.0	95.68	ug/L	-4	10	
Thallium	A	0.0074	0.0069	50.00	47.89	ug/L	-4	10	
Arsenic	E	0.0071	0.0055	100.0	98.88	ug/L	-1	10	
Chromium	E	0.0295	0.0225	100.0	99.54	ug/L	0	10	
Cobalt	E	0.0357	0.0340	100.0	99.67	ug/L	0	10	
Copper	E	0.0572	0.0245	100.0	100.6	ug/L	1	10	
Manganese	E	0.0146	0.0141	100.0	99.46	ug/L	-1	10	
Nickel	E	0.0101	0.0092	100.0	99.75	ug/L	0	10	
Sodium	E	0.0094	0.0052	10000	9897	ug/L	-1	10	
Vanadium	E	0.0299	0.0186	100.0	98.79	ug/L	-1	10	
Zinc	E	0.0057	0.0043	100.0	100.8	ug/L	1	10	
Iron	H	0.0080	0.0069	10000	9678	ug/L	-3	10	
Selenium	H	0.0011	9.9E-4	100.0	103.2	ug/L	3	10	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	851158	-8.76
Scandium	A	1408090	1464497	4.01
Scandium	E	91453	98079	7.25
Scandium	H	713110	818121	14.73
Germanium	H	178823	193441	8.17
Germanium	E	44424	47619	7.19
Indium	A	2120426	2200357	3.77
Bismuth	A	1443527	1459512	1.11
Yttrium	A	2111995	2204852	4.40
Terbium	A	2803913	2962679	5.66

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522073 File : 15d28k00073 Time : 28-APR-2015 16:33
 Cal : 1015170522001 Caldate : 28-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	1050564	12.61
Scandium	A	1408090	1642399	16.64
Scandium	E	91453	104762	14.55
Scandium	H	713110	848790	19.03
Germanium	H	178823	201210	12.52
Germanium	E	44424	50517	13.72
Indium	A	2120426	2430542	14.63
Bismuth	A	1443527	1614111	11.82
Yttrium	A	2111995	2426754	14.90
Terbium	A	2803913	3188255	13.71

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522074 File : 15d28k00074 Time : 28-APR-2015 16:37
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4894	0.1000	ug/L	
Barium	A	1.955	0.1000	ug/L	
Beryllium	A	[0.01080]	0.1000	ug/L	
Cadmium	A	2.200	0.1000	ug/L	
Lead	A	0.2253	0.1000	ug/L	
Silver	A	[0.04210]	0.1000	ug/L	
Thallium	A	[0.01430]	0.05000	ug/L	
Arsenic	E	0.7362	0.1000	ug/L	
Chromium	E	0.8642	0.1000	ug/L	
Cobalt	E	1.206	0.1000	ug/L	
Copper	E	1.409	0.1000	ug/L	
Manganese	E	7.544	0.1000	ug/L	
Nickel	E	1.249	0.1000	ug/L	
Vanadium	E	[-0.01270]	0.1000	ug/L	
Zinc	E	3.009	0.5000	ug/L	
Selenium	H	[0.07820]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	96290	ug/L	96
Calcium	A	300000	298100	ug/L	99
Magnesium	A	100000	93040	ug/L	93
Molybdenum	A	2000	2031	ug/L	102
Potassium	A	100000	98990	ug/L	99
Sodium	E	250000	239000	ug/L	96
Phosphorus	E	100000	97900	ug/L	98
Iron	H	250000	252100	ug/L	101

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	571070	-38.79
Scandium	A	1408090	1141331	-18.94
Scandium	E	91453	76462	-16.39
Scandium	H	713110	630932	-11.52
Germanium	H	178823	158574	-11.32
Germanium	E	44424	40479	-8.88
Indium	A	2120426	1736645	-18.10
Bismuth	A	1443527	1155626	-19.94
Yttrium	A	2111995	1809727	-14.31
Terbium	A	2803913	2512655	-10.39

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015170522075 File : 15d28k00075
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 28-APR-2015 16:42

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	92550	ug/L	-7		
Cadmium	A	100.0	100.2	ug/L	0	20	
Calcium	A	300000	291400	ug/L	-3		
Magnesium	A	100000	88480	ug/L	-12		
Molybdenum	A	2000	2041	ug/L	2		
Potassium	A	100000	97380	ug/L	-3		
Silver	A	50.00	46.62	ug/L	-7	20	
Arsenic	E	100.0	100.3	ug/L	0	20	
Chromium	E	200.0	203.9	ug/L	2	20	
Cobalt	E	200.0	199.4	ug/L	0	20	
Copper	E	200.0	195.4	ug/L	-2	20	
Manganese	E	200.0	207.8	ug/L	4	20	
Nickel	E	200.0	196.0	ug/L	-2	20	
Sodium	E	250000	238000	ug/L	-5		
Vanadium	E	200.0	205.1	ug/L	3	20	
Zinc	E	100.0	101.9	ug/L	2	20	
Iron	H	250000	255500	ug/L	2		
Selenium	H	100.0	102.2	ug/L	2	20	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	713110	550396	-22.82
Scandium	A	1408090	1066079	-24.29
Scandium	E	91453	68339	-25.27
Germanium	H	178823	141436	-20.91
Germanium	E	44424	36602	-17.61
Indium	A	2120426	1621240	-23.54
Yttrium	A	2111995	1680431	-20.43

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522098 File : 15d28k00098 Time : 28-APR-2015 18:38
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0056	0.0050	10000	9927	ug/L	-1	10	
Antimony	A	0.0028	0.0027	100.0	95.83	ug/L	-4	10	
Barium	A	7.8E-4	7.4E-4	100.0	102.6	ug/L	3	10	
Beryllium	A	0.0027	0.0025	100.0	96.47	ug/L	-4	10	
Cadmium	A	7.8E-4	7.2E-4	100.0	99.87	ug/L	0	10	
Calcium	A	4.9E-4	1.8E-4	10000	10110	ug/L	1	10	
Lead	A	0.0056	0.0047	100.0	100.7	ug/L	1	10	
Magnesium	A	0.0053	0.0042	10000	9826	ug/L	-2	10	
Molybdenum	A	0.0023	0.0019	100.0	98.29	ug/L	-2	10	
Potassium	A	0.0276	0.0059	10000	10200	ug/L	2	10	
Silver	A	0.0037	0.0033	100.0	95.08	ug/L	-5	10	
Thallium	A	0.0074	0.0069	50.00	48.08	ug/L	-4	10	
Arsenic	E	0.0071	0.0055	100.0	98.60	ug/L	-1	10	
Chromium	E	0.0295	0.0226	100.0	100.1	ug/L	0	10	
Cobalt	E	0.0357	0.0341	100.0	100.0	ug/L	0	10	
Copper	E	0.0572	0.0247	100.0	101.2	ug/L	1	10	
Manganese	E	0.0146	0.0142	100.0	100.2	ug/L	0	10	
Nickel	E	0.0101	0.0092	100.0	100.1	ug/L	0	10	
Sodium	E	0.0094	0.0053	10000	10060	ug/L	1	10	
Vanadium	E	0.0299	0.0187	100.0	99.04	ug/L	-1	10	
Zinc	E	0.0057	0.0044	100.0	101.4	ug/L	1	10	
Iron	H	0.0080	0.0074	10000	10450	ug/L	5	10	
Selenium	H	0.0011	9.9E-4	100.0	103.5	ug/L	4	10	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	809477	-13.23
Scandium	A	1408090	1401083	-0.50
Scandium	E	91453	90772	-0.74
Scandium	H	713110	713340	0.03
Germanium	H	178823	179258	0.24
Germanium	E	44424	44927	1.13
Indium	A	2120426	2142590	1.05
Bismuth	A	1443527	1444876	0.09
Yttrium	A	2111995	2138203	1.24
Terbium	A	2803913	2894422	3.23

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015170522100
Cal : 1015170522001

File : 15d28k00100
Caldate : 28-APR-2015

IDF : 1.0
Time : 28-APR-2015 18:47

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	[7.419]	10.00	5.000	ug/L	!CCB
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	[9.153]	10.00	5.000	ug/L	!CCB
Molybdenum	A	0.1915	0.1000	0.2000	ug/L	CCB ***
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	964483	3.39
Scandium	A	1408090	1589477	12.88
Scandium	E	91453	101437	10.92
Scandium	H	713110	823491	15.48
Germanium	H	178823	195530	9.34
Germanium	E	44424	49457	11.33
Indium	A	2120426	2412507	13.77
Bismuth	A	1443527	1616874	12.01
Yttrium	A	2111995	2371541	12.29
Terbium	A	2803913	3183972	13.55

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522113 File : 15d28k00113 Time : 28-APR-2015 19:53
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0056	0.0051	10000	10000	ug/L	0	10	
Antimony	A	0.0028	0.0027	100.0	96.25	ug/L	-4	10	
Barium	A	7.8E-4	7.4E-4	100.0	102.6	ug/L	3	10	
Beryllium	A	0.0027	0.0026	100.0	100.9	ug/L	1	10	
Cadmium	A	7.8E-4	7.2E-4	100.0	99.49	ug/L	-1	10	
Calcium	A	4.9E-4	1.8E-4	10000	10210	ug/L	2	10	
Lead	A	0.0056	0.0046	100.0	97.91	ug/L	-2	10	
Magnesium	A	0.0053	0.0042	10000	9912	ug/L	-1	10	
Molybdenum	A	0.0023	0.0019	100.0	98.20	ug/L	-2	10	
Potassium	A	0.0276	0.0060	10000	10320	ug/L	3	10	
Silver	A	0.0037	0.0033	100.0	94.64	ug/L	-5	10	
Thallium	A	0.0074	0.0070	50.00	48.44	ug/L	-3	10	
Arsenic	E	0.0071	0.0054	100.0	98.05	ug/L	-2	10	
Chromium	E	0.0295	0.0220	100.0	97.39	ug/L	-3	10	
Cobalt	E	0.0357	0.0337	100.0	98.72	ug/L	-1	10	
Copper	E	0.0572	0.0240	100.0	98.64	ug/L	-1	10	
Manganese	E	0.0146	0.0141	100.0	99.21	ug/L	-1	10	
Nickel	E	0.0101	0.0090	100.0	98.19	ug/L	-2	10	
Sodium	E	0.0094	0.0051	10000	9669	ug/L	-3	10	
Vanadium	E	0.0299	0.0183	100.0	97.25	ug/L	-3	10	
Zinc	E	0.0057	0.0043	100.0	100.5	ug/L	1	10	
Iron	H	0.0080	0.0072	10000	10060	ug/L	1	10	
Selenium	H	0.0011	9.8E-4	100.0	102.9	ug/L	3	10	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	799556	-14.29
Scandium	A	1408090	1468272	4.27
Scandium	E	91453	96466	5.48
Scandium	H	713110	765620	7.36
Germanium	H	178823	187453	4.83
Germanium	E	44424	47508	6.94
Indium	A	2120426	2270749	7.09
Bismuth	A	1443527	1476710	2.30
Yttrium	A	2111995	2227787	5.48
Terbium	A	2803913	3068152	9.42

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522115 File : 15d28k00115 Time : 28-APR-2015 20:02
 Cal : 1015170522001 Caldate : 28-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	956380	2.52
Scandium	A	1408090	1584561	12.53
Scandium	E	91453	102194	11.74
Scandium	H	713110	821420	15.19
Germanium	H	178823	197268	10.31
Germanium	E	44424	50186	12.97
Indium	A	2120426	2397233	13.05
Bismuth	A	1443527	1596114	10.57
Yttrium	A	2111995	2412599	14.23
Terbium	A	2803913	3129272	11.60

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015170522123
 Cal : 1015170522001
 Standards: S26727, S26751

File : 15d28k00123
 Caldate : 28-APR-2015

IDF : 1.0
 Time : 28-APR-2015 20:40

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4910	0.1000	ug/L	
Barium	A	1.970	0.1000	ug/L	
Beryllium	A	[0.01660]	0.1000	ug/L	
Cadmium	A	2.235	0.1000	ug/L	
Lead	A	0.2153	0.1000	ug/L	
Silver	A	[0.04020]	0.1000	ug/L	
Thallium	A	[0.01350]	0.05000	ug/L	
Arsenic	E	0.7272	0.1000	ug/L	
Chromium	E	0.9080	0.1000	ug/L	
Cobalt	E	1.188	0.1000	ug/L	
Copper	E	1.481	0.1000	ug/L	
Manganese	E	7.681	0.1000	ug/L	
Nickel	E	1.259	0.1000	ug/L	
Vanadium	E	[-0.01190]	0.1000	ug/L	
Zinc	E	2.878	0.5000	ug/L	
Selenium	H	[0.07630]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94420	ug/L	94
Calcium	A	300000	297200	ug/L	99
Magnesium	A	100000	90000	ug/L	90
Molybdenum	A	2000	2047	ug/L	102
Potassium	A	100000	99470	ug/L	99
Sodium	E	250000	231700	ug/L	93
Phosphorus	E	100000	95690	ug/L	96
Iron	H	250000	252500	ug/L	101

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	500515	-46.35
Scandium	A	1408090	1139492	-19.08
Scandium	E	91453	76572	-16.27
Scandium	H	713110	646894	-9.29
Germanium	H	178823	163588	-8.52
Germanium	E	44424	41256	-7.13
Indium	A	2120426	1774773	-16.30
Bismuth	A	1443527	1148626	-20.43
Yttrium	A	2111995	1824066	-13.63
Terbium	A	2803913	2547368	-9.15

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266091 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015170522124 File : 15d28k00124
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 28-APR-2015 20:45

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	93580	ug/L	-6		
Cadmium	A	100.0	100.3	ug/L	0	20	
Calcium	A	300000	297400	ug/L	-1		
Magnesium	A	100000	88900	ug/L	-11		
Molybdenum	A	2000	2036	ug/L	2		
Potassium	A	100000	99510	ug/L	0		
Silver	A	50.00	46.04	ug/L	-8	20	
Arsenic	E	100.0	102.5	ug/L	3	20	
Chromium	E	200.0	205.6	ug/L	3	20	
Cobalt	E	200.0	202.6	ug/L	1	20	
Copper	E	200.0	200.3	ug/L	0	20	
Manganese	E	200.0	210.8	ug/L	5	20	
Nickel	E	200.0	199.2	ug/L	0	20	
Sodium	E	250000	230300	ug/L	-8		
Vanadium	E	200.0	209.3	ug/L	5	20	
Zinc	E	100.0	104.7	ug/L	5	20	
Iron	H	250000	255600	ug/L	2		
Selenium	H	100.0	103.4	ug/L	3	20	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	713110	554803	-22.20
Scandium	A	1408090	1059385	-24.76
Scandium	E	91453	67233	-26.48
Germanium	H	178823	144330	-19.29
Germanium	E	44424	36577	-17.66
Indium	A	2120426	1690560	-20.27
Yttrium	A	2111995	1716761	-18.71

SAMPLE PREPARATION SUMMARY

Batch # : 222325
 Started By : RFC
 Method : METHOD
 Spike #1 ID : S26229

Prep Date : 16-APR-2015 10:20
 Spike #2 ID : S26230

Analysis : ICPMS
 Finished By : RFC
 Units : mL
 Spike #3 ID : S26912

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266068-003		Filtrate	50	50	1	1.0						6020	
266068-005		Filtrate	50	50	1	1.0						6020	
266087-001		Filtrate	50	50	1	1.0						6020	
266087-002		Filtrate	50	50	1	1.0						6020	
266087-003		Filtrate	50	50	1	1.0						6020	
266087-004		Filtrate	50	50	1	1.0						6020	
266087-006		Filtrate	50	50	1	1.0						6020	
266087-007		Filtrate	50	50	1	1.0						6020	
266087-009		Filtrate	50	50	1	1.0						6020	
266091-002		Filtrate	50	50	1	1.0						6020	
266091-004		Filtrate	50	50	1	1.0						6020	
266091-005		Filtrate	50	50	1	1.0						6020	
266091-006		Filtrate	50	50	1	1.0						6020	
266091-007		Filtrate	50	50	1	1.0						6020	
266091-008		Filtrate	50	50	1	1.0						6020	
266091-009		Filtrate	50	50	1	1.0						6020	
266091-010		Filtrate	50	50	1	1.0						6020	
266091-012		Filtrate	50	50	1	1.0						6020	
QC784570	BLANK	Filtrate	50	50	1	1.0							
QC784571	BS	Filtrate	50	50	1	1.0	.5	.5	.5				
QC784572	BSD	Filtrate	50	50	1	1.0	.5	.5	.5				
QC784573	MS	Filtrate	50	50	1	1.0	.5	.5	.5				
QC784574	MSD	Filtrate	50	50	1	1.0	.5	.5	.5				
QC784575	SER	Filtrate	50	50	1	1.0							
QC784576	PDS	Filtrate	50	50	1	1.0							

Analyst: NT

Date: 04/21/15

Reviewer: PRW

Date: 04/21/15

Water Digestion for ICP-MS

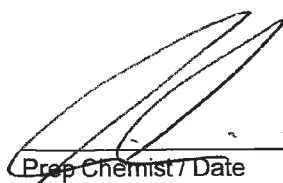
Curtis & Tompkins, Ltd.

LIMS Batch #: 222325
 Digested by: RFC
 Date Digested: 4/16/15

Digestion Method **BK3678**
 EPA 200.8 for ICP-M Page 7
 EPA 3005A for ICP-MS
 FILTRATE

Lvl.	Sample #	Container ID	Volume Sample(mL)	Final Volume (mL)	Filtered? (y/n)	ID	Comments
	BLANK		50 <input type="checkbox"/>	50 <input type="checkbox"/>	N	✓	QC784570
	BS		50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	↓ -571
	BSD		50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	↓ -572
	MS		50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	↓ -573
5	MSD		50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	↓ -574
III	266068-003	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	↓ -575 RFC 4/16/15
	↓ -005	↓	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
IV	266087-001	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	MSS
	↓ -002	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
10	↓ -003	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	↓ -004	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	↓ -006	↓	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	↓ -007	↓	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	↓ -009	↓	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
15	266091-002	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	↓ -004	↓	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	↓ -005	↓	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	↓ -006	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	↓ -007	↓	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
20	↓ -008	↓	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	↓ -009	↓	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	↓ -010	↓	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	↓ -012	↓	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			

	Reagent ID or LIMS #	Initials / Date
Digestion tubes, lot #	ACCUFLOW	RFC 4/16/15
0.50 mL of spike solution (Std1) was added to all spikes	S26229	
0.50 mL of spike solution (Std2) was added to all spikes	S26230	
0.50 mL of spike solution (Std3) was added to all spikes	S26912	
Digestion Temperature (°C), Block and Probe Location		
digestion begun at (time)	10:20	
concentrated HCl	JTB97264	
concentrated HNO3	JTB102053	
digestion ended at (time)	10:40	
<input type="checkbox"/> filtered thru' Whatman # 541		
Relinquished to ICP group	ICP-MS	↓


 Prep Chemist / Date 4/16/15

Continued from page 8
 Continued on page _____

Reviewed Online / See LIMS

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1075159406

Instrument : MET54 Begun : 04/20/15 16:46
 Method : EPA 7470A SOP Version : hg_water_rv16

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	met54	ICALBLK				04/20/15 16:46	1.0	
002	met54	ICAL	ICAL1			04/20/15 16:47	1.0	1
003	met54	ICAL	ICAL2			04/20/15 16:48	1.0	1
004	met54	ICAL	ICAL3			04/20/15 16:49	1.0	1
005	met54	ICAL	ICAL4			04/20/15 16:51	1.0	1
006	met54	ICAL	ICAL5			04/20/15 16:52	1.0	1
007	met54	ICV				04/20/15 16:53	1.0	2
008	met54	ICB				04/20/15 16:54	1.0	
009	met54	BLANK	QC784841	Filtrate	222394	04/20/15 17:00	1.0	
010	met54	BLANK	QC784842	WET Leachate	222394	04/20/15 17:02	1.0	
011	met54	BS	QC784843	Filtrate	222394	04/20/15 17:03	1.0	
012	met54	BSD	QC784844	Filtrate	222394	04/20/15 17:04	1.0	
013	met54	MSS	266087-009	Filtrate	222394	04/20/15 17:05	1.0	
014	met54	MS	QC784845	Filtrate	222394	04/20/15 17:06	1.0	
015	met54	MSD	QC784846	Filtrate	222394	04/20/15 17:07	1.0	
016	met54	SER	QC784847	Filtrate	222394	04/20/15 17:08	5.0	
017	met54	SAMPLE	266072-001	WET Leachate	222394	04/20/15 17:09	1.0	
018	met54	SAMPLE	266087-001	Filtrate	222394	04/20/15 17:11	1.0	
019	met54	XCCV				04/20/15 17:12	1.0	3
020	met54	CCV				04/20/15 17:17	1.0	3
021	met54	CCB				04/20/15 17:18	1.0	
022	met54	SAMPLE	266087-002	Filtrate	222394	04/20/15 17:20	1.0	
023	met54	SAMPLE	266087-003	Filtrate	222394	04/20/15 17:21	1.0	
024	met54	SAMPLE	266087-004	Filtrate	222394	04/20/15 17:22	1.0	
025	met54	SAMPLE	266087-006	Filtrate	222394	04/20/15 17:23	1.0	
026	met54	SAMPLE	266087-007	Filtrate	222394	04/20/15 17:24	1.0	
027	met54	SAMPLE	266091-002	Filtrate	222394	04/20/15 17:25	1.0	
028	met54	SAMPLE	266091-004	Filtrate	222394	04/20/15 17:26	1.0	
029	met54	SAMPLE	266091-005	Filtrate	222394	04/20/15 17:27	1.0	
030	met54	SAMPLE	266091-006	Filtrate	222394	04/20/15 17:28	1.0	
031	met54	SAMPLE	266091-007	Filtrate	222394	04/20/15 17:30	1.0	
032	met54	CCV				04/20/15 17:31	1.0	3
033	met54	CCB				04/20/15 17:32	1.0	
034	met54	MS	QC784845	Filtrate	222394	04/20/15 17:33	1.0	
035	met54	MSD	QC784846	Filtrate	222394	04/20/15 17:34	1.0	
036	met54	SAMPLE	266091-008	Filtrate	222394	04/20/15 17:35	1.0	
037	met54	SAMPLE	266091-009	Filtrate	222394	04/20/15 17:36	1.0	
038	met54	SAMPLE	266091-010	Filtrate	222394	04/20/15 17:37	1.0	
039	met54	SAMPLE	266091-012	Filtrate	222394	04/20/15 17:39	1.0	
040	met54	CCV				04/20/15 17:40	1.0	3
041	met54	CCB				04/20/15 17:41	1.0	

ARD 04/20/15 : Reran ccv; SnCl2 out

ARD 04/20/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 41.

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266091 METALS Filtrate: EPA 7470A

Inst : MET54
 Calnum : 1075159406001
 Units : ug/L

Date : 20-APR-2015 16:46
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	met54	1075159406002	ICAL1 20-APR-2015 16:47	S27077 (500X)
L2	met54	1075159406003	ICAL2 20-APR-2015 16:48	S27077 (200X)
L3	met54	1075159406004	ICAL3 20-APR-2015 16:49	S27077 (50X)
L4	met54	1075159406005	ICAL4 20-APR-2015 16:51	S27077 (20X)
L5	met54	1075159406006	ICAL5 20-APR-2015 16:52	S27077 (10X)

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	%RSD	Mnr^2	Flg
Mercury	0.0090	0.0098	0.0103	0.0097	0.0095	LIN0	-0.0419	105.347		0.0096	1.000	1.000	.99	

Spiked Amounts / Drifts	L1	L2	%D	L3	%D	L4	%D	L5	%D
Mercury	0.2000	0.5000	-26	2.0000	6	5.0000	1	10.000	0

Instrument amount = a0 + response * a1 + response^2 * a2; LIN0=Linear regression including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266091 METALS Filtrate
EPA 7470A

Inst : MET54
Calnum : 1075159406001

Cal Date : 20-APR-2015

ICV 1075159406007 (20-APR-2015) stds: S27079

Analyte	Spiked	Quant	Units	%D	Max	Flags
Mercury	5.000	5.225	ug/L	5	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075159406008
Cal : 1075159406001
File : met54
Caldate : 20-APR-2015
IDF : 1.0
Time : 20-APR-2015 16:54

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 7470A

Inst : MET54
 Seqnum : 1075159406020
 Cal : 1075159406001
 Standards: S27080

File : met54
 Caldate : 20-APR-2015

IDF : 1.0
 Time : 20-APR-2015 17:17

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	0.0096	0.0105	5.000	5.499	ug/L	10	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075159406021
Cal : 1075159406001
File : met54
Caldate : 20-APR-2015
IDF : 1.0
Time : 20-APR-2015 17:18

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 7470A

Inst : MET54
 Seqnum : 1075159406032
 Cal : 1075159406001
 Standards: S27080

File : met54
 Caldate : 20-APR-2015

IDF : 1.0
 Time : 20-APR-2015 17:31

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	0.0096	0.0102	5.000	5.310	ug/L	6	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075159406033
Cal : 1075159406001
File : met54
Caldate : 20-APR-2015
IDF : 1.0
Time : 20-APR-2015 17:32

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266091 METALS Filtrate
EPA 7470A

Inst : MET54
 Seqnum : 1075159406040
 Cal : 1075159406001
 Standards: S27080

IDF : 1.0
 Time : 20-APR-2015 17:40

File : met54
 Caldate : 20-APR-2015

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	0.0096	0.0101	5.000	5.278	ug/L	6	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266091 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075159406041
Cal : 1075159406001
File : met54
Caldate : 20-APR-2015
IDF : 1.0
Time : 20-APR-2015 17:41

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

SAMPLE PREPARATION SUMMARY

Batch # : 222394
 Started By : ARD
 Method : METHOD
 Spike #1 ID : S27077

Prep Date : 20-APR-2015 11:45

Analysis : HG
 Finished By : ARD
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266072-001		WET Leachate	10	50	1	5.0						T22/HG	extracted 4.16.15
266087-001		Filtrate	50	50	1	1.0						TAL/HG	
266087-002		Filtrate	50	50	1	1.0						TAL/HG	
266087-003		Filtrate	50	50	1	1.0						TAL/HG	
266087-004		Filtrate	50	50	1	1.0						TAL/HG	
266087-006		Filtrate	50	50	1	1.0						TAL/HG	
266087-007		Filtrate	50	50	1	1.0						TAL/HG	
266087-009		Filtrate	50	50	1	1.0						TAL/HG	
266091-002		Filtrate	50	50	1	1.0						TAL/HG	
266091-004		Filtrate	50	50	1	1.0						TAL/HG	
266091-005		Filtrate	50	50	1	1.0						TAL/HG	
266091-006		Filtrate	50	50	1	1.0						TAL/HG	
266091-007		Filtrate	50	50	1	1.0						TAL/HG	
266091-008		Filtrate	50	50	1	1.0						TAL/HG	
266091-009		Filtrate	50	50	1	1.0						TAL/HG	
266091-010		Filtrate	50	50	1	1.0						TAL/HG	
266091-012		Filtrate	50	50	1	1.0						TAL/HG	
QC784841	BLANK	Filtrate	50	50	1	1.0							
QC784842	BLANK	WET Leachate	10	50	1	5.0							wet blank 4.16.15
QC784843	BS	Filtrate	50	50	1	1.0		1.25					
QC784844	BSD	Filtrate	50	50	1	1.0		1.25					
QC784845	MS	Filtrate	50	50	1	1.0		1.25					
QC784846	MSD	Filtrate	50	50	1	1.0		1.25					
QC784847	SER	Filtrate	50	50	1	1.0							

Analyst: ARD

Date: 04/20/15

Reviewer: PRW

Date: 04/21/15

W.E.T (STLC) EXTRACTION LOG

Curtis & Tompkins, Ltd.

LIMS Batch #: 222269 Date/ Time ON: 4-14-15 1900
 Extraction Method: WET Temp (C) ON: 21
 Rotator #'s: 2 Date/ Time OFF: 4-16-15 1825
 Temp (C) OFF: 21-24

Page: 48
 Benchbook#: **BK 3658**
Scale Used
 Leachates
 Extractions

Sample # / Letter	Sample Mass (g)	Sieved? (y/n)*	Extract Vol (mL)	N2 purge	*Comments
BK 784341	<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 50	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> YES	
266071-001 C	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	N	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	↓	
266072-001 A	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	↓	
↓ -002 ↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	↓	
5 266079-001 C	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	↓	
266089-001 B	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	↓	<input checked="" type="checkbox"/> 500 <input type="checkbox"/> _____	↓	
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
10	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
15	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
20	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		
	<input type="checkbox"/> 50 <input type="checkbox"/> _____		<input type="checkbox"/> 500 <input type="checkbox"/> _____		

Temperature Limits: 20 - 40 C

Extraction Fluid pH Limits: 4.9 - 5.1 su

	Mfg & Lot #	Date/ Initials
Used Citric Acid	K93509242 BMD	4-14-15 MN
Used Sodium Hydroxide (NaOH)	410617 BDH	
Extraction Fluid pH, Prep Date	4.92 4-13-15	↓
Extract filtered through 0.45um cellulose fiber filter paper	MILLIPORE P4NA25845	4-16-15 MN
Metals extracts acidified with 5% HNO ₃	102053 JTB	↓

[Signature] 4-14-15
Extraction Chemist Date

Reviewed Online / See LIMS

Water Digestion for Mercury

Curtis & Tompkins, Ltd.

LIMS Batch #: 222394
 Date Digested: ~~04/10/15~~ ARD 4/20/15
4/20/15

Digestion Method BK3651
 EPA 7470A/ EPA 245.1 Page 80

Sample #	container ID	Volume Sample (mL)	Final Volume (mL)	Filtered? (y/n)	Comments
Blank		<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	N	QC 784841
Blank (wet) 4.16.15		<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		↓ 842
BS	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		↓ 843
BSD	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
5 MSS 266087-009	D	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
MS	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
MSD	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
266072-001	A	<input type="checkbox"/> 50 <input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
266087-001	D	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
10 -002	A	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-003	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-004	B	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-006	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
↓ -007	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
15 266091-002	A	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-004	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-005	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-006	D	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-007	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
20 -008	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-009	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
-010	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
↓ -012	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____	<input checked="" type="checkbox"/> 50 <input type="checkbox"/> _____		
		<input type="checkbox"/> 50 <input type="checkbox"/> _____	<input type="checkbox"/> 50 <input type="checkbox"/> _____		
		<input type="checkbox"/> 50 <input type="checkbox"/> _____	<input type="checkbox"/> 50 <input type="checkbox"/> _____		

Reagent ID/ LIMS# / Time Initials / Date

Digestion Tube Lot #	EK14178	ARD/ 4/20/15
<u>1.25</u> mL of spike solution was added to all spikes	S27077 *	
<input checked="" type="checkbox"/> CAL digested with this batch	ICAL Source LIMS S#	S27078
	ICV / CCV LIMS S#	S27079 / S27080
Digestion Temperature (°C), Block and Probe Location	95°	A32
Digestion Started at (time)	11:45	
concentrated H ₂ SO ₄	BDH - 2014090938	
concentrated HNO ₃	JTB - 102053	
5% KMnO ₄	040915	
5% K ₂ S ₂ O ₈	030215	
NaCl.hydroxylamine hydrochloride	040915	ARD 4/20/15
Stannous Chloride	040915	
Digestion Completed at (time)	14:45	
<input type="checkbox"/> filtered thru' 0.45 um syringe filter (lot #)		

ARD 4/20/15
 Prep Chemist / Date

Continued from page 0

Continued on page _____

Reviewed Online / See LIMS



ct Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266161

ANALYTICAL REPORT

Volatile Organics by GC/MS

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

Table with 2 columns: Sample ID and Lab ID. Lists 26 sample entries with their corresponding lab IDs.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: [Handwritten Signature]
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 05/01/2015

**CASE NARRATIVE
VOLATILE ORGANICS BY GC/MS (EPA 8260B)**

Laboratory number: 266161
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/17/15
Samples Received: 04/17/15

This data package contains sample and QC results for twenty water samples, requested for the above referenced project on 04/17/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Volatile Organics by GC/MS (EPA 8260B):

High responses were observed for bromomethane and vinyl acetate in the CCV analyzed 04/20/15 13:16; these analytes were not detected at or above the RL in the associated samples, and affected data was qualified with "b".

High response was observed for bromomethane in the CCV analyzed 04/23/15 07:31; this analyte was not detected at or above the RL in the associated samples, and affected data was qualified with "b".

Low response was observed for bromomethane in the CCV analyzed 04/25/15 12:31; this analyte met minimum response criteria, and affected data was qualified with "b". High responses were observed for 2,2-dichloropropane and vinyl acetate; these analytes were not detected at or above the RL in the associated samples, and affected data was qualified with "b".

Low responses were observed for 1,2-dibromo-3-chloropropane and tert-butyl alcohol (TBA) in the CCV analyzed 04/24/15 07:32; these analytes met minimum response criteria, and affected data was qualified with "b".

Low responses were observed for 1,2-dibromo-3-chloropropane and tert-butyl alcohol (TBA) in the CCV analyzed 04/24/15 11:43; these analytes met minimum response criteria.

Low response was observed for Freon 12 in the CCV analyzed 04/29/15 14:34; this analyte met minimum response criteria, and affected data was qualified with "b". High response was observed for vinyl acetate; affected data was qualified with "b".

High response was observed for tert-butyl alcohol (TBA) in the CCV analyzed 04/29/15 11:41; affected data was qualified with "b".

High recovery was observed for bromomethane in the BS for batch 222398; the associated RPD was within limits, and this analyte was not detected at or above the RL in the associated samples.

High recoveries were observed for 2-hexanone and vinyl acetate in the BS/BSD

**CASE NARRATIVE
VOLATILE ORGANICS BY GC/MS (EPA 8260B)**

Laboratory number: 266161
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/17/15
Samples Received: 04/17/15

Volatile Organics by GC/MS (EPA 8260B):

for batch 222575; the associated RPDs were within limits, and these analytes were not detected at or above the RL in the associated samples.

High recovery was observed for vinyl acetate in the BSD for batch 222678; the associated RPD was within limits, and the high recovery was not associated with any reported results.

High recoveries were observed for 2-butanone and tert-butyl alcohol (TBA) in the BS/BSA for batch 222684; the associated RPDs were within limits, and these analytes were not detected at or above the RL in the associated sample.

High surrogate recovery was observed for bromofluorobenzene in the method blank for batch 222575; no target analytes were detected in the sample.

Acetone and carbon disulfide were detected between the MDL and the RL in the method blank for batch 222398; these analytes were not detected in samples at or above the RL.

1,3-dichlorobenzene, 1,4-dichlorobenzene, and 1,2,4-trichlorobenzene were detected between the MDL and the RL in the method blank for batch 222542; these analytes were not detected in the sample at or above the RL.

Carbon disulfide was detected between the MDL and the RL in the method blank for batch 222678; this analyte was not detected in the sample at or above the RL.

No other analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266161

Chain of Custody Record No. 6878

Lab PO#: 150AK32	Lab: CTT		
TIEMI technical contact: Sara Weidley	Field samplers: Danya Aragon, Karl Hansen		
TIEMI project manager: Jason Broderson	Field samplers' signatures: Danya Aragon, Karl Hansen		
Project name: 2015 Grandwater	MS / MSD		
Project (CTO) number: 1035225323.05			
Sample ID	Date	Time	Matrix
20150415TB	4/15/15	0900	water
20150415CCCT		0915	
20150415B175W		1000	
20150415B175S		1045	
20150415B150		1155	
20150415B150D		1200	
20150415CCC2		1315	
20150415CCC3		1530	
20150415ER		1530	
20150416GEO	4-16-15	1435	water
20150417EPA	4-17-15	935	
20150417B280A			

No./Container Types	40 ml VOA	1 liter Amber	500 ml Poly	Sieve	Glass Jar
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				
	X				

Relinquished by:	Name (print)	Company Name	Date	Time
Tracy Babin	Mark Duthy	Tetra Tech	4-17-15	12:55
Tracy Babin	Tracy Babin	CTT	4-17-15	12:55
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Turnaround time/remarks:	* Metals were field filtered - Std TAT Cold & heavy			
Fed Ex #:	N/A			



Tetra Tech EM Inc.
San Francisco Office

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San Francisco, CA 94105
415-543-4880
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266161

Chain of Custody Record No. 6085

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6085

Lab PO#: 15 OAK 32
Lab: C+T
Project name: 2015 Ground water
Project (CTO) number: 1035225323.05
TEMI technical contact: Sara Woodley
TEMI project manager: Jason Broderson
Field samplers: Dupe Argen, Mark Doffy
Field samplers' signatures: [Signatures]

Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	No./Container Types					Analysis Required					
						40 ml VOA	1 liter Amber	500 ml Poly	Sleeve	Glass Jar	VOA	SVOA	Pest/PCBs	Metals	TPH Purgeables	TPH Extractables
20150416EERC		4/16/15	0950	water		3	1				X	X	X			
20150416EF P289			1040			3					X	X	X			
20150416B473			1140			3					X	X	X			
20150416FG			1245				1				X	X	X			
20150416B158			1400				1				X	X	X			
20150416ER			1430				1				X	X	X			
20150416S08			1440				1				X	X	X			
20150416FB			0900				2				X	X	X			
20150416B474		4/14/15	1025	water			1				X	X	X			
20150416P211			1020				1				X	X	X			
20150416NRLF			1235				3				X	X	X			
20150416B277			1355				3				X	X	X			

Relinquished by:	Received by:	Relinquished by:	Received by:	Relinquished by:	Received by:	Company Name	Date	Time
[Signature]	[Signature]	Mark Duffly	Tracy Burrier			Tetra Tech	4-17-15	1255
						CAT	4-17-15	1255

Turnaround time/remarks: field filtered -std. TAF Cold data



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266161

Chain of Custody Record No. 6086

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6086

Lab PO#: 150AK 32	Lab: C T I	Field samplers: Daym Aragon - Mark Duffly
TIEMI technical contact: Sara Wesley	Field samplers' signatures: <i>[Signature]</i>	MS / MSD
TIEMI project manager: Jason Brodergen	Date	Time
Sample Location (Pt. ID)	Date	Time
Sample ID	Date	Time
20150417 B480 B480	4/17/15	0910
20150417 B278	↓	1015
20150417 CTP	↓	1145
20150417 ER EPA	↓	1115

40 ml VOA	3	1	1 liter Amber	Sieve	Glass Jar
500 ml Poly	3	1	1 liter Amber	Sieve	Glass Jar
1 liter Amber	3	2	1		
500 ml Poly	3	2	1		

VOA	X				
SVOA	X				
Pest/PCBs	X				
Metals <i>Discontinued</i>	X				
TPH Purgeables					
TPH Extractables					
PAHs					

HCl	None
HNO3	None
Preservative Added	None

Analysis Required	
No./Container Types	

Relinquished by: <i>[Signature]</i>	Name (print): Mark Duffly	Company Name: Tetra Tech	Date: 4-17-15	Time: 1255
Received by: <i>[Signature]</i>	Tracy Babja	CTI	4-17-15	1255
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: Metals
* Field filtered
Celd on seal
- STD TAJ

Fed Ex #: *[Handwritten]*

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 266161 Date Received 4/17/15 Number of coolers 3
 Client Tetra Tech Project 2015 Groundwater

Date Opened 4/17 By (print) SL (sign) [Signature]
 Date Logged in 4/17 By (print) SL (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) _____ YES NO
 Shipping info _____

2A. Were custody seals present? YES (circle) on cooler on samples NO
 How many _____ Name _____ Date _____

2B. Were custody seals intact upon arrival? _____ YES NO N/A

3. Were custody papers dry and intact when received? _____ YES NO

4. Were custody papers filled out properly (ink, signed, etc)? _____ YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) _____ YES NO

6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap Foam blocks Bags None
- Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 3.5, 3.7, 3.1

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES NO
 If YES, what time were they transferred to freezer? _____

9. Did all bottles arrive unbroken/unopened? _____ YES NO

10. Are there any missing / extra samples? _____ YES NO

11. Are samples in the appropriate containers for indicated tests? _____ YES NO

12. Are sample labels present, in good condition and complete? _____ YES NO

13. Do the sample labels agree with custody papers? _____ YES NO

14. Was sufficient amount of sample sent for tests requested? _____ YES NO

15. Are the samples appropriately preserved? _____ YES NO N/A

16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A

17. Did you document your preservative check? _____ YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A

21. Was the client contacted concerning this sample delivery? _____ YES NO
 If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Curtis & Tompkins Sample Preservation for 266161

Sample	pH: <2	>9	>12	Other
-004a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-005a	X	[]	[]	[]
-006a	X	[]	[]	[]
-007a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	[]	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
g	[]	[]	[]	[]
h	[]	[]	[]	[]
i	[]	[]	[]	[]
j	X	[]	[]	[]
k	X	[]	[]	[]
l	X	[]	[]	[]
m	[]	[]	[]	[]
n	[]	[]	[]	[]
o	[]	[]	[]	[]
p	[]	[]	[]	[]
q	[]	[]	[]	[]
r	[]	[]	[]	[]

Sample	pH: <2	>9	>12	Other
-008a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-009a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
-013a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-016a	X	[]	[]	[]
-017a	X	[]	[]	[]
-018a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]

Sample	pH: <2	>9	>12	Other
-019a	X	[]	[]	[]
-020a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-021a	X	[]	[]	[]
-023a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-025a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
-026a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]

Analyst: SL
 Date: 4/17/15
 Page 1 of 1

Results & QC Summary

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415TB	Batch#:	222398
Lab ID:	266161-001	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.1
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	0.8 J	10	0.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.2
Carbon Disulfide	0.2 J	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.3
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.2
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.1
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.3
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.2
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.2
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.2
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415TB	Batch#:	222398
Lab ID:	266161-001	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.2
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.2
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.2
tert-Butyl Alcohol (TBA)	ND	10	2.2
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415CCCT	Batch#:	222398
Lab ID:	266161-002	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.1
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	0.9 J	10	0.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.2
Carbon Disulfide	0.2 J	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.3
cis-1,2-Dichloroethene	0.9	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.2
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	22	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.1
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.3
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.2
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.2
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.2
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415CCCT	Batch#:	222398
Lab ID:	266161-002	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.2
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.2
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.2
tert-Butyl Alcohol (TBA)	ND	10	2.2
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	109	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	101	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415B175W	Batch#:	222398
Lab ID:	266161-003	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.1
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	0.6 J	10	0.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.2
Carbon Disulfide	0.2 J	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.3
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.2
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	0.2 J	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.1
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.3
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	2.1	0.5	0.2
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.2
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.2
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415B175W	Batch#:	222398
Lab ID:	266161-003	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.2
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.2
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.2
tert-Butyl Alcohol (TBA)	ND	10	2.2
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	111	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415B175S	Batch#:	222398
Lab ID:	266161-004	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.1
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	0.4 J	10	0.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.2
Carbon Disulfide	0.2 J	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.3
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	0.2 J	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.2
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	7.9	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.1
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.3
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.2
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.2
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.2
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415B175S	Batch#:	222398
Lab ID:	266161-004	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.2
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.2
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.2
tert-Butyl Alcohol (TBA)	ND	10	2.2
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	113	75-139
Toluene-d8	103	80-120
Bromofluorobenzene	98	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415CCC2	Batch#:	222502
Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	1.1	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415CCC2	Batch#:	222502
Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415CCC3	Batch#:	222398
Lab ID:	266161-008	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.1
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	0.5 J	10	0.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.2
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.3
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.2
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	0.2 J	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.1
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.3
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.2
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.2
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.2
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415CCC3	Batch#:	222398
Lab ID:	266161-008	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.2
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.2
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.2
tert-Butyl Alcohol (TBA)	ND	10	2.2
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	111	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415ER	Batch#:	222398
Lab ID:	266161-009	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.1
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	1.4 J	10	0.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.2
Carbon Disulfide	0.2 J	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.3
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.2
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.1
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.3
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.2
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.2
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.2
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415ER	Batch#:	222398
Lab ID:	266161-009	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.2
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.2
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.2
tert-Butyl Alcohol (TBA)	ND	10	2.2
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	115	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	102	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416GEO	Batch#:	222502
Lab ID:	266161-010	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	0.7	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	1.0	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416GEO	Batch#:	222502
Lab ID:	266161-010	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417EPA	Batch#:	222502
Lab ID:	266161-011	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	0.2 J	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417EPA	Batch#:	222502
Lab ID:	266161-011	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	104	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417B280A	Batch#:	222502
Lab ID:	266161-012	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	0.3 J	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	1.3	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417B280A	Batch#:	222502
Lab ID:	266161-012	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	102	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416EERC	Diln Fac:	1.000
Lab ID:	266161-013	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/29/15

Analyte	Result	RL	MDL	Batch#
Freon 12	ND	1.0	0.2	222684
Chloromethane	ND	1.0	0.2	222684
Vinyl Chloride	ND	0.5	0.1	222684
Bromomethane	ND	1.0	0.1	222684
Chloroethane	ND	1.0	0.2	222684
Trichlorofluoromethane	ND	1.0	0.1	222684
Acetone	ND	10	3.3	222684
Freon 113	ND	2.0	0.3	222684
1,1-Dichloroethene	ND	0.5	0.1	222684
Methylene Chloride	ND	10	0.1	222684
Carbon Disulfide	ND	0.5	0.1	222684
MTBE	ND	0.5	0.1	222684
trans-1,2-Dichloroethene	ND	0.5	0.1	222684
Vinyl Acetate	ND	10	0.8	222684
1,1-Dichloroethane	ND	0.5	0.1	222684
2-Butanone	ND	10	0.5	222684
cis-1,2-Dichloroethene	ND	0.5	0.1	222684
2,2-Dichloropropane	ND	0.5	0.1	222684
Chloroform	ND	0.5	0.1	222684
Bromochloromethane	ND	0.5	0.1	222684
1,1,1-Trichloroethane	ND	0.5	0.1	222684
1,1-Dichloropropene	ND	0.5	0.1	222684
Carbon Tetrachloride	ND	0.5	0.1	222684
1,2-Dichloroethane	ND	0.5	0.1	222684
Benzene	ND	0.5	0.1	222684
Trichloroethene	ND	0.5	0.1	222684
1,2-Dichloropropane	ND	0.5	0.1	222684
Bromodichloromethane	ND	0.5	0.1	222684
Dibromomethane	ND	0.5	0.1	222684
4-Methyl-2-Pentanone	ND	10	0.2	222684
cis-1,3-Dichloropropene	ND	0.5	0.1	222684
Toluene	ND	0.5	0.1	222684
trans-1,3-Dichloropropene	ND	0.5	0.1	222684
1,1,2-Trichloroethane	ND	0.5	0.1	222684
2-Hexanone	ND	10	0.3	222684
1,3-Dichloropropane	ND	0.5	0.1	222684
Tetrachloroethene	ND	0.5	0.1	222684
Dibromochloromethane	ND	0.5	0.1	222684
1,2-Dibromoethane	ND	0.5	0.1	222684
Chlorobenzene	ND	0.5	0.1	222684
1,1,1,2-Tetrachloroethane	ND	0.5	0.1	222684
Ethylbenzene	ND	0.5	0.1	222684
m,p-Xylenes	ND	0.5	0.1	222684
o-Xylene	ND	0.5	0.1	222684
Styrene	ND	0.5	0.1	222684
Bromoform	ND	1.0	0.1	222684
Isopropylbenzene	ND	0.5	0.1	222684
1,1,2,2-Tetrachloroethane	ND	0.5	0.1	222684
1,2,3-Trichloropropane	ND	0.5	0.1	222684
Propylbenzene	ND	0.5	0.1	222684
Bromobenzene	ND	0.5	0.1	222684
1,3,5-Trimethylbenzene	ND	0.5	0.1	222684
2-Chlorotoluene	ND	0.5	0.1	222684
4-Chlorotoluene	ND	0.5	0.1	222684

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416EERC	Diln Fac:	1.000
Lab ID:	266161-013	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/29/15

Analyte	Result	RL	MDL	Batch#
tert-Butylbenzene	ND	0.5	0.1	222684
1,2,4-Trimethylbenzene	ND	0.5	0.1	222684
sec-Butylbenzene	ND	0.5	0.1	222684
para-Isopropyl Toluene	ND	0.5	0.1	222684
1,3-Dichlorobenzene	ND	0.5	0.1	222684
1,4-Dichlorobenzene	ND	0.5	0.1	222684
n-Butylbenzene	ND	0.5	0.1	222684
1,2-Dichlorobenzene	ND	0.5	0.1	222684
1,2-Dibromo-3-Chloropropane	ND	2.0	0.6	222684
1,2,4-Trichlorobenzene	ND	0.5	0.1	222684
Hexachlorobutadiene	ND	2.0	0.4	222684
Naphthalene	ND	2.0	0.1	222684
1,2,3-Trichlorobenzene	ND	0.5	0.1	222684
tert-Butyl Alcohol (TBA)	ND	10	2.2	222678
Isopropyl Ether (DIPE)	ND	0.5	0.1	222684
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1	222684
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1	222684

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	104	80-128	222684
1,2-Dichloroethane-d4	109	75-139	222684
Toluene-d8	104	80-120	222684
Bromofluorobenzene	104	80-120	222684

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416PZ9	Batch#:	222502
Lab ID:	266161-014	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	0.2 J	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	1.5	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	63	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	0.9	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416PZ9	Batch#:	222502
Lab ID:	266161-014	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416B473	Diln Fac:	1.000
Lab ID:	266161-015	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
Freon 12	ND	1.0	0.2	222575	04/25/15
Chloromethane	ND	1.0	0.1	222575	04/25/15
Vinyl Chloride	ND	0.5	0.2	222575	04/25/15
Bromomethane	ND	1.0	0.2	222542	04/24/15
Chloroethane	ND	1.0	0.2	222575	04/25/15
Trichlorofluoromethane	ND	1.0	0.1	222575	04/25/15
Acetone	ND	10	3.3	222575	04/25/15
Freon 113	ND	2.0	0.2	222575	04/25/15
1,1-Dichloroethene	ND	0.5	0.1	222575	04/25/15
Methylene Chloride	ND	10	0.1	222575	04/25/15
Carbon Disulfide	ND	0.5	0.1	222575	04/25/15
MTBE	ND	0.5	0.1	222575	04/25/15
trans-1,2-Dichloroethene	ND	0.5	0.1	222575	04/25/15
Vinyl Acetate	ND	10	0.2	222575	04/25/15
1,1-Dichloroethane	ND	0.5	0.1	222575	04/25/15
2-Butanone	ND	10	0.4	222575	04/25/15
cis-1,2-Dichloroethene	1.7	0.5	0.1	222575	04/25/15
2,2-Dichloropropane	ND	0.5	0.1	222575	04/25/15
Chloroform	ND	0.5	0.1	222575	04/25/15
Bromochloromethane	ND	0.5	0.1	222575	04/25/15
1,1,1-Trichloroethane	ND	0.5	0.1	222575	04/25/15
1,1-Dichloropropene	ND	0.5	0.1	222575	04/25/15
Carbon Tetrachloride	ND	0.5	0.1	222575	04/25/15
1,2-Dichloroethane	ND	0.5	0.1	222575	04/25/15
Benzene	ND	0.5	0.1	222575	04/25/15
Trichloroethene	26	0.5	0.1	222575	04/25/15
1,2-Dichloropropane	ND	0.5	0.1	222575	04/25/15
Bromodichloromethane	ND	0.5	0.1	222575	04/25/15
Dibromomethane	ND	0.5	0.1	222575	04/25/15
4-Methyl-2-Pentanone	ND	10	0.1	222575	04/25/15
cis-1,3-Dichloropropene	ND	0.5	0.1	222575	04/25/15
Toluene	ND	0.5	0.1	222575	04/25/15
trans-1,3-Dichloropropene	ND	0.5	0.1	222575	04/25/15
1,1,2-Trichloroethane	ND	0.5	0.1	222575	04/25/15
2-Hexanone	ND	10	0.2	222575	04/25/15
1,3-Dichloropropane	ND	0.5	0.1	222575	04/25/15
Tetrachloroethene	0.7	0.5	0.1	222575	04/25/15
Dibromochloromethane	ND	0.5	0.1	222575	04/25/15
1,2-Dibromoethane	ND	0.5	0.1	222575	04/25/15
Chlorobenzene	ND	0.5	0.1	222575	04/25/15
1,1,1,2-Tetrachloroethane	ND	0.5	0.1	222575	04/25/15
Ethylbenzene	ND	0.5	0.1	222575	04/25/15
m,p-Xylenes	ND	0.5	0.1	222575	04/25/15
o-Xylene	ND	0.5	0.1	222575	04/25/15
Styrene	ND	0.5	0.1	222575	04/25/15
Bromoform	ND	1.0	0.1	222575	04/25/15
Isopropylbenzene	ND	0.5	0.1	222575	04/25/15
1,1,2,2-Tetrachloroethane	ND	0.5	0.1	222575	04/25/15
1,2,3-Trichloropropane	ND	0.5	0.1	222575	04/25/15
Propylbenzene	ND	0.5	0.1	222575	04/25/15
Bromobenzene	ND	0.5	0.1	222575	04/25/15
1,3,5-Trimethylbenzene	ND	0.5	0.1	222575	04/25/15
2-Chlorotoluene	ND	0.5	0.1	222575	04/25/15
4-Chlorotoluene	ND	0.5	0.1	222575	04/25/15

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416B473	Diln Fac:	1.000
Lab ID:	266161-015	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
tert-Butylbenzene	ND	0.5	0.1	222575	04/25/15
1,2,4-Trimethylbenzene	ND	0.5	0.1	222575	04/25/15
sec-Butylbenzene	ND	0.5	0.1	222575	04/25/15
para-Isopropyl Toluene	ND	0.5	0.1	222575	04/25/15
1,3-Dichlorobenzene	ND	0.5	0.1	222575	04/25/15
1,4-Dichlorobenzene	ND	0.5	0.1	222575	04/25/15
n-Butylbenzene	ND	0.5	0.1	222575	04/25/15
1,2-Dichlorobenzene	ND	0.5	0.1	222575	04/25/15
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3	222575	04/25/15
1,2,4-Trichlorobenzene	ND	0.5	0.1	222575	04/25/15
Hexachlorobutadiene	ND	2.0	0.2	222575	04/25/15
Naphthalene	ND	2.0	0.1	222575	04/25/15
1,2,3-Trichlorobenzene	ND	0.5	0.1	222575	04/25/15
tert-Butyl Alcohol (TBA)	ND	10	1.3	222575	04/25/15
Isopropyl Ether (DIPE)	ND	0.5	0.1	222575	04/25/15
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1	222575	04/25/15
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1	222575	04/25/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	108	80-128	222575	04/25/15
1,2-Dichloroethane-d4	115	75-139	222575	04/25/15
Toluene-d8	101	80-120	222575	04/25/15
Bromofluorobenzene	119	80-120	222575	04/25/15

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416ER	Diln Fac:	1.000
Lab ID:	266161-018	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
Freon 12	ND	1.0	0.1	222502	04/23/15
Chloromethane	ND	1.0	0.1	222502	04/23/15
Vinyl Chloride	ND	0.5	0.1	222502	04/23/15
Bromomethane	ND	1.0	0.2	222502	04/23/15
Chloroethane	ND	1.0	0.3	222502	04/23/15
Trichlorofluoromethane	ND	1.0	0.2	222502	04/23/15
Acetone	ND	10	3.3	222502	04/23/15
Freon 113	ND	2.0	0.1	222502	04/23/15
1,1-Dichloroethene	ND	0.5	0.1	222502	04/23/15
Methylene Chloride	ND	10	0.4	222502	04/23/15
Carbon Disulfide	ND	0.5	0.1	222502	04/23/15
MTBE	ND	0.5	0.1	222502	04/23/15
trans-1,2-Dichloroethene	ND	0.5	0.2	222502	04/23/15
Vinyl Acetate	ND	10	1.0	222502	04/23/15
1,1-Dichloroethane	ND	0.5	0.1	222502	04/23/15
2-Butanone	ND	10	0.5	222502	04/23/15
cis-1,2-Dichloroethene	ND	0.5	0.1	222502	04/23/15
2,2-Dichloropropane	ND	0.5	0.1	222502	04/23/15
Chloroform	ND	0.5	0.1	222502	04/23/15
Bromochloromethane	ND	0.5	0.2	222502	04/23/15
1,1,1-Trichloroethane	ND	0.5	0.1	222502	04/23/15
1,1-Dichloropropene	ND	0.5	0.1	222502	04/23/15
Carbon Tetrachloride	ND	0.5	0.1	222502	04/23/15
1,2-Dichloroethane	ND	0.5	0.1	222502	04/23/15
Benzene	ND	0.5	0.1	222502	04/23/15
Trichloroethene	ND	0.5	0.1	222542	04/24/15
1,2-Dichloropropane	ND	0.5	0.1	222502	04/23/15
Bromodichloromethane	ND	0.5	0.1	222502	04/23/15
Dibromomethane	ND	0.5	0.1	222502	04/23/15
4-Methyl-2-Pentanone	ND	10	0.5	222502	04/23/15
cis-1,3-Dichloropropene	ND	0.5	0.1	222502	04/23/15
Toluene	ND	0.5	0.1	222502	04/23/15
trans-1,3-Dichloropropene	ND	0.5	0.1	222502	04/23/15
1,1,2-Trichloroethane	ND	0.5	0.1	222502	04/23/15
2-Hexanone	ND	10	0.5	222502	04/23/15
1,3-Dichloropropane	ND	0.5	0.1	222502	04/23/15
Tetrachloroethene	ND	0.5	0.1	222502	04/23/15
Dibromochloromethane	ND	0.5	0.1	222502	04/23/15
1,2-Dibromoethane	ND	0.5	0.1	222502	04/23/15
Chlorobenzene	ND	0.5	0.1	222502	04/23/15
1,1,1,2-Tetrachloroethane	ND	0.5	0.1	222502	04/23/15
Ethylbenzene	ND	0.5	0.1	222502	04/23/15
m,p-Xylenes	ND	0.5	0.1	222502	04/23/15
o-Xylene	ND	0.5	0.1	222502	04/23/15
Styrene	ND	0.5	0.1	222502	04/23/15
Bromoform	ND	1.0	0.1	222502	04/23/15
Isopropylbenzene	ND	0.5	0.1	222502	04/23/15
1,1,2,2-Tetrachloroethane	ND	0.5	0.1	222502	04/23/15
1,2,3-Trichloropropane	ND	0.5	0.1	222502	04/23/15
Propylbenzene	ND	0.5	0.1	222502	04/23/15
Bromobenzene	ND	0.5	0.1	222502	04/23/15
1,3,5-Trimethylbenzene	ND	0.5	0.1	222502	04/23/15
2-Chlorotoluene	ND	0.5	0.1	222502	04/23/15
4-Chlorotoluene	ND	0.5	0.1	222502	04/23/15

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416ER	Diln Fac:	1.000
Lab ID:	266161-018	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
tert-Butylbenzene	ND	0.5	0.1	222502	04/23/15
1,2,4-Trimethylbenzene	ND	0.5	0.1	222502	04/23/15
sec-Butylbenzene	ND	0.5	0.1	222502	04/23/15
para-Isopropyl Toluene	ND	0.5	0.1	222502	04/23/15
1,3-Dichlorobenzene	ND	0.5	0.1	222502	04/23/15
1,4-Dichlorobenzene	ND	0.5	0.1	222502	04/23/15
n-Butylbenzene	ND	0.5	0.1	222502	04/23/15
1,2-Dichlorobenzene	ND	0.5	0.1	222502	04/23/15
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5	222502	04/23/15
1,2,4-Trichlorobenzene	ND	0.5	0.1	222502	04/23/15
Hexachlorobutadiene	ND	2.0	0.4	222502	04/23/15
Naphthalene	ND	2.0	0.1	222502	04/23/15
1,2,3-Trichlorobenzene	ND	0.5	0.1	222502	04/23/15
tert-Butyl Alcohol (TBA)	ND	10	2.1	222502	04/23/15
Isopropyl Ether (DIPE)	ND	0.5	0.1	222502	04/23/15
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1	222502	04/23/15
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1	222502	04/23/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	103	80-128	222502	04/23/15
1,2-Dichloroethane-d4	98	75-139	222502	04/23/15
Toluene-d8	95	80-120	222502	04/23/15
Bromofluorobenzene	104	80-120	222502	04/23/15

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416PZ11	Diln Fac:	5.000
Lab ID:	266161-020	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
Freon 12	ND	5.0	0.5	222542	04/24/15
Chloromethane	ND	5.0	0.5	222542	04/24/15
Vinyl Chloride	17	2.5	0.5	222542	04/24/15
Bromomethane	ND	5.0	1.2	222542	04/24/15
Chloroethane	ND	5.0	1.3	222542	04/24/15
Trichlorofluoromethane	ND	5.0	1.0	222542	04/24/15
Acetone	ND	50	17	222542	04/24/15
Freon 113	ND	10	0.7	222542	04/24/15
1,1-Dichloroethene	1.6 J	2.5	0.6	222542	04/24/15
Methylene Chloride	ND	50	2.0	222542	04/24/15
Carbon Disulfide	ND	2.5	0.5	222542	04/24/15
MTBE	ND	2.5	0.5	222542	04/24/15
trans-1,2-Dichloroethene	53	2.5	0.8	222542	04/24/15
Vinyl Acetate	ND	50	5.0	222542	04/24/15
1,1-Dichloroethane	ND	2.5	0.5	222542	04/24/15
2-Butanone	ND	50	2.7	222542	04/24/15
cis-1,2-Dichloroethene	480	2.5	0.6	222542	04/24/15
2,2-Dichloropropane	ND	2.5	0.5	222542	04/24/15
Chloroform	ND	2.5	0.5	222542	04/24/15
Bromochloromethane	ND	2.5	0.8	222542	04/24/15
1,1,1-Trichloroethane	ND	2.5	0.5	222542	04/24/15
1,1-Dichloropropene	ND	2.5	0.6	222542	04/24/15
Carbon Tetrachloride	ND	2.5	0.5	222542	04/24/15
1,2-Dichloroethane	ND	2.5	0.5	222542	04/24/15
Benzene	ND	2.5	0.5	222542	04/24/15
Trichloroethene	75	2.5	0.5	222542	04/24/15
1,2-Dichloropropane	ND	2.5	0.5	222542	04/24/15
Bromodichloromethane	ND	2.5	0.5	222542	04/24/15
Dibromomethane	ND	2.5	0.6	222542	04/24/15
4-Methyl-2-Pentanone	ND	50	2.5	222542	04/24/15
cis-1,3-Dichloropropene	ND	2.5	0.5	222542	04/24/15
Toluene	ND	2.5	0.5	222542	04/24/15
trans-1,3-Dichloropropene	ND	2.5	0.5	222542	04/24/15
1,1,2-Trichloroethane	ND	2.5	0.6	222542	04/24/15
2-Hexanone	ND	50	2.5	222542	04/24/15
1,3-Dichloropropane	ND	2.5	0.6	222542	04/24/15
Tetrachloroethene	3.0	2.5	0.6	222542	04/24/15
Dibromochloromethane	ND	2.5	0.5	222542	04/24/15
1,2-Dibromoethane	ND	2.5	0.5	222542	04/24/15
Chlorobenzene	ND	2.5	0.5	222542	04/24/15
1,1,1,2-Tetrachloroethane	ND	2.5	0.7	222542	04/24/15
Ethylbenzene	ND	2.5	0.5	222542	04/24/15
m,p-Xylenes	ND	2.5	0.7	222542	04/24/15
o-Xylene	ND	2.5	0.5	222542	04/24/15
Styrene	ND	2.5	0.5	222542	04/24/15
Bromoform	ND	5.0	0.5	222542	04/24/15
Isopropylbenzene	ND	2.5	0.5	222542	04/24/15
1,1,2,2-Tetrachloroethane	ND	2.5	0.7	222542	04/24/15
1,2,3-Trichloropropane	ND	2.5	0.7	222542	04/24/15
Propylbenzene	ND	2.5	0.5	222542	04/24/15
Bromobenzene	ND	2.5	0.5	222542	04/24/15
1,3,5-Trimethylbenzene	ND	2.5	0.5	222542	04/24/15
2-Chlorotoluene	ND	2.5	0.5	222542	04/24/15

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416PZ11	Diln Fac:	5.000
Lab ID:	266161-020	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
4-Chlorotoluene	ND	2.5	0.5	222542	04/24/15
tert-Butylbenzene	ND	2.5	0.5	222542	04/24/15
1,2,4-Trimethylbenzene	ND	2.5	0.6	222542	04/24/15
sec-Butylbenzene	ND	2.5	0.5	222542	04/24/15
para-Isopropyl Toluene	ND	2.5	0.6	222542	04/24/15
1,3-Dichlorobenzene	ND	2.5	0.5	222542	04/24/15
1,4-Dichlorobenzene	ND	2.5	0.5	222542	04/24/15
n-Butylbenzene	ND	2.5	0.6	222542	04/24/15
1,2-Dichlorobenzene	ND	2.5	0.5	222542	04/24/15
1,2-Dibromo-3-Chloropropane	ND	10	1.6	222575	04/25/15
1,2,4-Trichlorobenzene	ND	2.5	0.6	222542	04/24/15
Hexachlorobutadiene	ND	10	2.2	222542	04/24/15
Naphthalene	ND	10	0.7	222542	04/24/15
1,2,3-Trichlorobenzene	ND	2.5	0.5	222542	04/24/15
tert-Butyl Alcohol (TBA)	ND	50	6.7	222575	04/25/15
Isopropyl Ether (DIPE)	ND	2.5	0.5	222542	04/24/15
Ethyl tert-Butyl Ether (ETBE)	ND	2.5	0.5	222542	04/24/15
Methyl tert-Amyl Ether (TAME)	ND	2.5	0.5	222542	04/24/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	107	80-128	222542	04/24/15
1,2-Dichloroethane-d4	96	75-139	222542	04/24/15
Toluene-d8	94	80-120	222542	04/24/15
Bromofluorobenzene	105	80-120	222542	04/24/15

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416B277	Diln Fac:	1.000
Lab ID:	266161-022	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
Freon 12	ND	1.0	0.1	222502	04/23/15
Chloromethane	ND	1.0	0.1	222502	04/23/15
Vinyl Chloride	ND	0.5	0.1	222502	04/23/15
Bromomethane	ND	1.0	0.2	222502	04/23/15
Chloroethane	ND	1.0	0.3	222502	04/23/15
Trichlorofluoromethane	ND	1.0	0.2	222502	04/23/15
Acetone	ND	10	3.3	222502	04/23/15
Freon 113	ND	2.0	0.1	222502	04/23/15
1,1-Dichloroethene	ND	0.5	0.1	222502	04/23/15
Methylene Chloride	ND	10	0.4	222502	04/23/15
Carbon Disulfide	ND	0.5	0.1	222502	04/23/15
MTBE	ND	0.5	0.1	222502	04/23/15
trans-1,2-Dichloroethene	ND	0.5	0.2	222502	04/23/15
Vinyl Acetate	ND	10	1.0	222502	04/23/15
1,1-Dichloroethane	ND	0.5	0.1	222502	04/23/15
2-Butanone	ND	10	0.5	222502	04/23/15
cis-1,2-Dichloroethene	ND	0.5	0.1	222502	04/23/15
2,2-Dichloropropane	ND	0.5	0.1	222502	04/23/15
Chloroform	0.1 J	0.5	0.1	222502	04/23/15
Bromochloromethane	ND	0.5	0.2	222502	04/23/15
1,1,1-Trichloroethane	ND	0.5	0.1	222502	04/23/15
1,1-Dichloropropene	ND	0.5	0.1	222502	04/23/15
Carbon Tetrachloride	0.4 J	0.5	0.1	222502	04/23/15
1,2-Dichloroethane	ND	0.5	0.1	222502	04/23/15
Benzene	ND	0.5	0.1	222502	04/23/15
Trichloroethene	ND	0.5	0.1	222542	04/24/15
1,2-Dichloropropane	ND	0.5	0.1	222502	04/23/15
Bromodichloromethane	ND	0.5	0.1	222502	04/23/15
Dibromomethane	ND	0.5	0.1	222502	04/23/15
4-Methyl-2-Pentanone	ND	10	0.5	222502	04/23/15
cis-1,3-Dichloropropene	ND	0.5	0.1	222502	04/23/15
Toluene	ND	0.5	0.1	222502	04/23/15
trans-1,3-Dichloropropene	ND	0.5	0.1	222502	04/23/15
1,1,2-Trichloroethane	ND	0.5	0.1	222502	04/23/15
2-Hexanone	ND	10	0.5	222502	04/23/15
1,3-Dichloropropane	ND	0.5	0.1	222502	04/23/15
Tetrachloroethene	ND	0.5	0.1	222502	04/23/15
Dibromochloromethane	ND	0.5	0.1	222502	04/23/15
1,2-Dibromoethane	ND	0.5	0.1	222502	04/23/15
Chlorobenzene	ND	0.5	0.1	222502	04/23/15
1,1,1,2-Tetrachloroethane	ND	0.5	0.1	222502	04/23/15
Ethylbenzene	ND	0.5	0.1	222502	04/23/15
m,p-Xylenes	ND	0.5	0.1	222502	04/23/15
o-Xylene	ND	0.5	0.1	222502	04/23/15
Styrene	ND	0.5	0.1	222502	04/23/15
Bromoform	ND	1.0	0.1	222502	04/23/15
Isopropylbenzene	ND	0.5	0.1	222502	04/23/15
1,1,2,2-Tetrachloroethane	ND	0.5	0.1	222502	04/23/15
1,2,3-Trichloropropane	ND	0.5	0.1	222502	04/23/15
Propylbenzene	ND	0.5	0.1	222502	04/23/15
Bromobenzene	ND	0.5	0.1	222502	04/23/15
1,3,5-Trimethylbenzene	ND	0.5	0.1	222502	04/23/15
2-Chlorotoluene	ND	0.5	0.1	222502	04/23/15

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150416B277	Diln Fac:	1.000
Lab ID:	266161-022	Sampled:	04/16/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
4-Chlorotoluene	ND	0.5	0.1	222502	04/23/15
tert-Butylbenzene	ND	0.5	0.1	222502	04/23/15
1,2,4-Trimethylbenzene	ND	0.5	0.1	222502	04/23/15
sec-Butylbenzene	ND	0.5	0.1	222502	04/23/15
para-Isopropyl Toluene	ND	0.5	0.1	222502	04/23/15
1,3-Dichlorobenzene	ND	0.5	0.1	222502	04/23/15
1,4-Dichlorobenzene	ND	0.5	0.1	222502	04/23/15
n-Butylbenzene	ND	0.5	0.1	222502	04/23/15
1,2-Dichlorobenzene	ND	0.5	0.1	222502	04/23/15
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5	222502	04/23/15
1,2,4-Trichlorobenzene	ND	0.5	0.1	222502	04/23/15
Hexachlorobutadiene	ND	2.0	0.4	222502	04/23/15
Naphthalene	ND	2.0	0.1	222502	04/23/15
1,2,3-Trichlorobenzene	ND	0.5	0.1	222502	04/23/15
tert-Butyl Alcohol (TBA)	ND	10	2.1	222502	04/23/15
Isopropyl Ether (DIPE)	ND	0.5	0.1	222502	04/23/15
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1	222502	04/23/15
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1	222502	04/23/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	101	80-128	222502	04/23/15
1,2-Dichloroethane-d4	97	75-139	222502	04/23/15
Toluene-d8	96	80-120	222502	04/23/15
Bromofluorobenzene	104	80-120	222502	04/23/15

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417B480	Batch#:	222502
Lab ID:	266161-023	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	0.3 J	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	23	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	0.5	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417B480	Batch#:	222502
Lab ID:	266161-023	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	99	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	105	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417B278	Batch#:	222502
Lab ID:	266161-024	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	0.5 J	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	8.0	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417B278	Batch#:	222502
Lab ID:	266161-024	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	104	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417CTP	Batch#:	222502
Lab ID:	266161-025	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	5.2	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	11	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	0.4 J	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417CTP	Batch#:	222502
Lab ID:	266161-025	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	105	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417ER	Diln Fac:	1.000
Lab ID:	266161-026	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
Freon 12	ND	1.0	0.2	222575	04/25/15
Chloromethane	ND	1.0	0.1	222575	04/25/15
Vinyl Chloride	ND	0.5	0.2	222575	04/25/15
Bromomethane	ND	1.0	0.2	222542	04/24/15
Chloroethane	ND	1.0	0.2	222575	04/25/15
Trichlorofluoromethane	ND	1.0	0.1	222575	04/25/15
Acetone	ND	10	3.3	222575	04/25/15
Freon 113	ND	2.0	0.2	222575	04/25/15
1,1-Dichloroethene	ND	0.5	0.1	222575	04/25/15
Methylene Chloride	ND	10	0.1	222575	04/25/15
Carbon Disulfide	ND	0.5	0.1	222575	04/25/15
MTBE	ND	0.5	0.1	222575	04/25/15
trans-1,2-Dichloroethene	ND	0.5	0.1	222575	04/25/15
Vinyl Acetate	ND	10	0.2	222575	04/25/15
1,1-Dichloroethane	ND	0.5	0.1	222575	04/25/15
2-Butanone	ND	10	0.4	222575	04/25/15
cis-1,2-Dichloroethene	ND	0.5	0.1	222575	04/25/15
2,2-Dichloropropane	ND	0.5	0.1	222575	04/25/15
Chloroform	ND	0.5	0.1	222575	04/25/15
Bromochloromethane	ND	0.5	0.1	222575	04/25/15
1,1,1-Trichloroethane	ND	0.5	0.1	222575	04/25/15
1,1-Dichloropropene	ND	0.5	0.1	222575	04/25/15
Carbon Tetrachloride	ND	0.5	0.1	222575	04/25/15
1,2-Dichloroethane	ND	0.5	0.1	222575	04/25/15
Benzene	ND	0.5	0.1	222575	04/25/15
Trichloroethene	ND	0.5	0.1	222575	04/25/15
1,2-Dichloropropane	ND	0.5	0.1	222575	04/25/15
Bromodichloromethane	ND	0.5	0.1	222575	04/25/15
Dibromomethane	ND	0.5	0.1	222575	04/25/15
4-Methyl-2-Pentanone	ND	10	0.1	222575	04/25/15
cis-1,3-Dichloropropene	ND	0.5	0.1	222575	04/25/15
Toluene	ND	0.5	0.1	222575	04/25/15
trans-1,3-Dichloropropene	ND	0.5	0.1	222575	04/25/15
1,1,2-Trichloroethane	ND	0.5	0.1	222575	04/25/15
2-Hexanone	ND	10	0.2	222575	04/25/15
1,3-Dichloropropane	ND	0.5	0.1	222575	04/25/15
Tetrachloroethene	ND	0.5	0.1	222575	04/25/15
Dibromochloromethane	ND	0.5	0.1	222575	04/25/15
1,2-Dibromoethane	ND	0.5	0.1	222575	04/25/15
Chlorobenzene	ND	0.5	0.1	222575	04/25/15
1,1,1,2-Tetrachloroethane	ND	0.5	0.1	222575	04/25/15
Ethylbenzene	ND	0.5	0.1	222575	04/25/15
m,p-Xylenes	ND	0.5	0.1	222575	04/25/15
o-Xylene	ND	0.5	0.1	222575	04/25/15
Styrene	ND	0.5	0.1	222575	04/25/15
Bromoform	ND	1.0	0.1	222575	04/25/15
Isopropylbenzene	ND	0.5	0.1	222575	04/25/15
1,1,2,2-Tetrachloroethane	ND	0.5	0.1	222575	04/25/15
1,2,3-Trichloropropane	ND	0.5	0.1	222575	04/25/15
Propylbenzene	ND	0.5	0.1	222575	04/25/15
Bromobenzene	ND	0.5	0.1	222575	04/25/15
1,3,5-Trimethylbenzene	ND	0.5	0.1	222575	04/25/15
2-Chlorotoluene	ND	0.5	0.1	222575	04/25/15
4-Chlorotoluene	ND	0.5	0.1	222575	04/25/15

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150417ER	Diln Fac:	1.000
Lab ID:	266161-026	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
tert-Butylbenzene	ND	0.5	0.1	222575	04/25/15
1,2,4-Trimethylbenzene	ND	0.5	0.1	222575	04/25/15
sec-Butylbenzene	ND	0.5	0.1	222575	04/25/15
para-Isopropyl Toluene	ND	0.5	0.1	222575	04/25/15
1,3-Dichlorobenzene	ND	0.5	0.1	222575	04/25/15
1,4-Dichlorobenzene	ND	0.5	0.1	222575	04/25/15
n-Butylbenzene	ND	0.5	0.1	222575	04/25/15
1,2-Dichlorobenzene	ND	0.5	0.1	222575	04/25/15
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3	222575	04/25/15
1,2,4-Trichlorobenzene	ND	0.5	0.1	222575	04/25/15
Hexachlorobutadiene	ND	2.0	0.2	222575	04/25/15
Naphthalene	ND	2.0	0.1	222575	04/25/15
1,2,3-Trichlorobenzene	ND	0.5	0.1	222575	04/25/15
tert-Butyl Alcohol (TBA)	ND	10	1.3	222575	04/25/15
Isopropyl Ether (DIPE)	ND	0.5	0.1	222575	04/25/15
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1	222575	04/25/15
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1	222575	04/25/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	104	80-128	222575	04/25/15
1,2-Dichloroethane-d4	113	75-139	222575	04/25/15
Toluene-d8	102	80-120	222575	04/25/15
Bromofluorobenzene	120	80-120	222575	04/25/15

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222398
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Type: BS Lab ID: QC784858

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	6.803	68	45-131
Chloromethane	10.00	6.844	68	48-133
Vinyl Chloride	10.00	8.509	85	63-132
Bromomethane	10.00	16.22 b	162 *	38-161
Chloroethane	10.00	9.020	90	62-131
Trichlorofluoromethane	10.00	9.190	92	64-137
Acetone	12.50	10.32	83	46-151
Freon 113	12.50	10.73	86	61-138
1,1-Dichloroethene	12.50	12.21	98	66-135
Methylene Chloride	12.50	12.74	102	74-131
Carbon Disulfide	12.50	12.36	99	63-150
MTBE	12.50	12.60	101	65-120
trans-1,2-Dichloroethene	12.50	12.27	98	72-134
Vinyl Acetate	12.50	21.89 b	175	60-194
1,1-Dichloroethane	12.50	12.69	102	68-127
2-Butanone	12.50	11.94	95	50-141
cis-1,2-Dichloroethene	12.50	12.07	97	73-129
2,2-Dichloropropane	12.50	14.39	115	72-146
Chloroform	12.50	12.91	103	73-126
Bromochloromethane	12.50	12.57	101	78-127
1,1,1-Trichloroethane	12.50	13.65	109	72-134
1,1-Dichloropropene	12.50	13.14	105	79-135
Carbon Tetrachloride	12.50	13.78	110	72-142
1,2-Dichloroethane	12.50	12.99	104	74-133
Benzene	12.50	13.84	111	80-123
Trichloroethene	12.50	12.99	104	80-123
1,2-Dichloropropane	12.50	12.27	98	74-120
Bromodichloromethane	12.50	13.03	104	79-121
Dibromomethane	12.50	12.69	102	80-120
4-Methyl-2-Pentanone	12.50	13.10	105	57-129
cis-1,3-Dichloropropene	12.50	13.41	107	80-130
Toluene	12.50	13.41	107	80-121
trans-1,3-Dichloropropene	12.50	12.13	97	76-122
1,1,2-Trichloroethane	12.50	12.05	96	80-120
2-Hexanone	12.50	12.67	101	49-136
1,3-Dichloropropane	12.50	12.74	102	80-120
Tetrachloroethene	12.50	14.21	114	78-130
Dibromochloromethane	12.50	12.61	101	80-123
1,2-Dibromoethane	12.50	12.79	102	80-120
Chlorobenzene	12.50	13.31	106	80-123
1,1,1,2-Tetrachloroethane	12.50	12.49	100	80-124
Ethylbenzene	12.50	13.47	108	80-123
m,p-Xylenes	25.00	27.32	109	80-126
o-Xylene	12.50	13.45	108	80-126
Styrene	12.50	13.75	110	80-122
Bromoform	12.50	12.41	99	72-132
Isopropylbenzene	12.50	13.44	108	79-130
1,1,2,2-Tetrachloroethane	12.50	12.99	104	72-129
1,2,3-Trichloropropane	12.50	12.08	97	72-124
Propylbenzene	12.50	12.92	103	79-128

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222398
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Bromobenzene	12.50	12.65	101	80-122
1,3,5-Trimethylbenzene	12.50	14.02	112	80-129
2-Chlorotoluene	12.50	12.77	102	80-130
4-Chlorotoluene	12.50	13.40	107	79-125
tert-Butylbenzene	12.50	12.87	103	79-130
1,2,4-Trimethylbenzene	12.50	13.49	108	78-124
sec-Butylbenzene	12.50	12.77	102	79-134
para-Isopropyl Toluene	12.50	13.43	107	74-125
1,3-Dichlorobenzene	12.50	12.99	104	80-124
1,4-Dichlorobenzene	12.50	13.13	105	80-121
n-Butylbenzene	12.50	13.72	110	69-135
1,2-Dichlorobenzene	12.50	12.54	100	80-123
1,2-Dibromo-3-Chloropropane	12.50	11.13	89	59-125
1,2,4-Trichlorobenzene	12.50	12.32	99	66-133
Hexachlorobutadiene	12.50	13.41	107	70-152
Naphthalene	12.50	11.60	93	53-139
1,2,3-Trichlorobenzene	12.50	12.66	101	64-134
tert-Butyl Alcohol (TBA)	62.50	79.89	128	32-155
Isopropyl Ether (DIPE)	12.50	12.96	104	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	12.09	97	62-120
Methyl tert-Amyl Ether (TAME)	12.50	12.76	102	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-128
1,2-Dichloroethane-d4	99	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-120

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222398
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC784859

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	6.966	70	45-131	2	29
Chloromethane	10.00	6.803	68	48-133	1	25
Vinyl Chloride	10.00	8.439	84	63-132	1	23
Bromomethane	10.00	15.33 b	153	38-161	6	32
Chloroethane	10.00	9.118	91	62-131	1	24
Trichlorofluoromethane	10.00	9.384	94	64-137	2	23
Acetone	12.50	11.15	89	46-151	8	29
Freon 113	12.50	11.49	92	61-138	7	25
1,1-Dichloroethene	12.50	12.19	97	66-135	0	24
Methylene Chloride	12.50	13.23	106	74-131	4	21
Carbon Disulfide	12.50	13.12	105	63-150	6	25
MTBE	12.50	13.18	105	65-120	5	22
trans-1,2-Dichloroethene	12.50	12.33	99	72-134	0	22
Vinyl Acetate	12.50	23.34 b	187	60-194	6	25
1,1-Dichloroethane	12.50	12.85	103	68-127	1	21
2-Butanone	12.50	12.84	103	50-141	7	24
cis-1,2-Dichloroethene	12.50	12.90	103	73-129	7	20
2,2-Dichloropropane	12.50	14.30	114	72-146	1	24
Chloroform	12.50	13.37	107	73-126	4	20
Bromochloromethane	12.50	12.82	103	78-127	2	20
1,1,1-Trichloroethane	12.50	13.82	111	72-134	1	22
1,1-Dichloropropene	12.50	13.05	104	79-135	1	23
Carbon Tetrachloride	12.50	12.86	103	72-142	7	22
1,2-Dichloroethane	12.50	12.37	99	74-133	5	20
Benzene	12.50	13.24	106	80-123	4	20
Trichloroethene	12.50	12.25	98	80-123	6	20
1,2-Dichloropropane	12.50	12.35	99	74-120	1	20
Bromodichloromethane	12.50	12.65	101	79-121	3	20
Dibromomethane	12.50	12.60	101	80-120	1	20
4-Methyl-2-Pentanone	12.50	12.88	103	57-129	2	23
cis-1,3-Dichloropropene	12.50	13.63	109	80-130	2	20
Toluene	12.50	13.51	108	80-121	1	20
trans-1,3-Dichloropropene	12.50	11.97	96	76-122	1	20
1,1,2-Trichloroethane	12.50	12.29	98	80-120	2	20
2-Hexanone	12.50	12.97	104	49-136	2	24
1,3-Dichloropropane	12.50	12.77	102	80-120	0	20
Tetrachloroethene	12.50	13.72	110	78-130	4	21
Dibromochloromethane	12.50	12.70	102	80-123	1	20
1,2-Dibromoethane	12.50	12.61	101	80-120	1	20
Chlorobenzene	12.50	13.49	108	80-123	1	20
1,1,1,2-Tetrachloroethane	12.50	12.59	101	80-124	1	20
Ethylbenzene	12.50	13.72	110	80-123	2	21
m,p-Xylenes	25.00	27.77	111	80-126	2	21
o-Xylene	12.50	13.77	110	80-126	2	20
Styrene	12.50	13.62	109	80-122	1	20
Bromoform	12.50	12.52	100	72-132	1	20
Isopropylbenzene	12.50	13.76	110	79-130	2	21
1,1,2,2-Tetrachloroethane	12.50	13.21	106	72-129	2	20
1,2,3-Trichloropropane	12.50	12.23	98	72-124	1	22
Propylbenzene	12.50	13.95	112	79-128	8	21

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222398
Units:	ug/L	Analyzed:	04/20/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Bromobenzene	12.50	13.18	105	80-122	4	20
1,3,5-Trimethylbenzene	12.50	14.26	114	80-129	2	20
2-Chlorotoluene	12.50	13.24	106	80-130	4	20
4-Chlorotoluene	12.50	13.75	110	79-125	3	20
tert-Butylbenzene	12.50	13.37	107	79-130	4	23
1,2,4-Trimethylbenzene	12.50	13.41	107	78-124	1	22
sec-Butylbenzene	12.50	13.33	107	79-134	4	23
para-Isopropyl Toluene	12.50	13.54	108	74-125	1	24
1,3-Dichlorobenzene	12.50	13.74	110	80-124	6	20
1,4-Dichlorobenzene	12.50	13.61	109	80-121	4	20
n-Butylbenzene	12.50	13.70	110	69-135	0	28
1,2-Dichlorobenzene	12.50	12.97	104	80-123	3	20
1,2-Dibromo-3-Chloropropane	12.50	11.77	94	59-125	6	23
1,2,4-Trichlorobenzene	12.50	12.95	104	66-133	5	24
Hexachlorobutadiene	12.50	14.78	118	70-152	10	26
Naphthalene	12.50	11.81	94	53-139	2	25
1,2,3-Trichlorobenzene	12.50	13.66	109	64-134	8	25
tert-Butyl Alcohol (TBA)	62.50	73.19	117	32-155	9	33
Isopropyl Ether (DIPE)	12.50	13.55	108	57-128	4	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.85	103	62-120	6	20
Methyl tert-Amyl Ether (TAME)	12.50	12.63	101	69-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	102	80-120

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784860	Batch#:	222398
Matrix:	Water	Analyzed:	04/20/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.1
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	0.4 J	10	0.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.2
Carbon Disulfide	0.2 J	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.3
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.2
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.1
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.3
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.2
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.2
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.2
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784860	Batch#:	222398
Matrix:	Water	Analyzed:	04/20/15
Units:	ug/L		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.2
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.2
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.2
tert-Butyl Alcohol (TBA)	ND	10	2.2
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	101	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222502
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Type: BS Lab ID: QC785228

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	7.271	73	45-131
Chloromethane	10.00	10.71	107	48-133
Vinyl Chloride	10.00	10.92	109	63-132
Bromomethane	10.00	15.12 b	151	38-161
Chloroethane	10.00	11.25	112	62-131
Trichlorofluoromethane	10.00	10.25	102	64-137
Acetone	12.50	8.511	68	46-151
Freon 113	12.50	12.60	101	61-138
1,1-Dichloroethene	12.50	13.13	105	66-135
Methylene Chloride	12.50	13.23	106	74-131
Carbon Disulfide	12.50	14.65	117	63-150
MTBE	12.50	11.85	95	65-120
trans-1,2-Dichloroethene	12.50	13.39	107	72-134
Vinyl Acetate	12.50	18.43	147	60-194
1,1-Dichloroethane	12.50	12.45	100	68-127
2-Butanone	12.50	9.512	76	50-141
cis-1,2-Dichloroethene	12.50	12.98	104	73-129
2,2-Dichloropropane	12.50	14.90	119	72-146
Chloroform	12.50	13.26	106	73-126
Bromochloromethane	12.50	13.60	109	78-127
1,1,1-Trichloroethane	12.50	13.17	105	72-134
1,1-Dichloropropene	12.50	12.27	98	79-135
Carbon Tetrachloride	12.50	13.61	109	72-142
1,2-Dichloroethane	12.50	12.44	100	74-133
Benzene	12.50	13.15	105	80-123
Trichloroethene	12.50	12.43	99	80-123
1,2-Dichloropropane	12.50	11.73	94	74-120
Bromodichloromethane	12.50	12.55	100	79-121
Dibromomethane	12.50	12.46	100	80-120
4-Methyl-2-Pentanone	12.50	9.125	73	57-129
cis-1,3-Dichloropropene	12.50	12.51	100	80-130
Toluene	12.50	12.52	100	80-121
trans-1,3-Dichloropropene	12.50	10.97	88	76-122
1,1,2-Trichloroethane	12.50	11.55	92	80-120
2-Hexanone	12.50	8.001	64	49-136
1,3-Dichloropropane	12.50	11.99	96	80-120
Tetrachloroethene	12.50	13.36	107	78-130
Dibromochloromethane	12.50	12.15	97	80-123
1,2-Dibromoethane	12.50	11.55	92	80-120
Chlorobenzene	12.50	12.54	100	80-123
1,1,1,2-Tetrachloroethane	12.50	12.41	99	80-124
Ethylbenzene	12.50	12.52	100	80-123
m,p-Xylenes	25.00	25.88	104	80-126
o-Xylene	12.50	12.54	100	80-126
Styrene	12.50	12.19	98	80-122
Bromoform	12.50	12.42	99	72-132
Isopropylbenzene	12.50	12.35	99	79-130
1,1,2,2-Tetrachloroethane	12.50	10.87	87	72-129
1,2,3-Trichloropropane	12.50	10.32	83	72-124
Propylbenzene	12.50	12.12	97	79-128
Bromobenzene	12.50	12.53	100	80-122

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222502
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
1,3,5-Trimethylbenzene	12.50	12.58	101	80-129
2-Chlorotoluene	12.50	12.05	96	80-130
4-Chlorotoluene	12.50	11.99	96	79-125
tert-Butylbenzene	12.50	12.44	100	79-130
1,2,4-Trimethylbenzene	12.50	11.50	92	78-124
sec-Butylbenzene	12.50	12.30	98	79-134
para-Isopropyl Toluene	12.50	11.85	95	74-125
1,3-Dichlorobenzene	12.50	12.70	102	80-124
1,4-Dichlorobenzene	12.50	12.48	100	80-121
n-Butylbenzene	12.50	10.69	86	69-135
1,2-Dichlorobenzene	12.50	12.27	98	80-123
1,2-Dibromo-3-Chloropropane	12.50	7.725	62	59-125
1,2,4-Trichlorobenzene	12.50	10.93	87	66-133
Hexachlorobutadiene	12.50	13.70	110	70-152
Naphthalene	12.50	9.298	74	53-139
1,2,3-Trichlorobenzene	12.50	10.79	86	64-134
tert-Butyl Alcohol (TBA)	62.50	34.55	55	32-155
Isopropyl Ether (DIPE)	12.50	12.15	97	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	12.07	97	62-120
Methyl tert-Amyl Ether (TAME)	12.50	11.26	90	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	96	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	97	80-120

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222502
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC785229

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	7.008	70	45-131	4	29
Chloromethane	10.00	9.999	100	48-133	7	25
Vinyl Chloride	10.00	10.51	105	63-132	4	23
Bromomethane	10.00	12.65 b	126	38-161	18	32
Chloroethane	10.00	10.82	108	62-131	4	24
Trichlorofluoromethane	10.00	10.02	100	64-137	2	23
Acetone	12.50	8.542	68	46-151	0	29
Freon 113	12.50	11.91	95	61-138	6	25
1,1-Dichloroethene	12.50	12.77	102	66-135	3	24
Methylene Chloride	12.50	12.82	103	74-131	3	21
Carbon Disulfide	12.50	13.42	107	63-150	9	25
MTBE	12.50	12.14	97	65-120	2	22
trans-1,2-Dichloroethene	12.50	13.04	104	72-134	3	22
Vinyl Acetate	12.50	18.30	146	60-194	1	25
1,1-Dichloroethane	12.50	12.51	100	68-127	1	21
2-Butanone	12.50	9.800	78	50-141	3	24
cis-1,2-Dichloroethene	12.50	13.12	105	73-129	1	20
2,2-Dichloropropane	12.50	14.47	116	72-146	3	24
Chloroform	12.50	13.12	105	73-126	1	20
Bromochloromethane	12.50	13.75	110	78-127	1	20
1,1,1-Trichloroethane	12.50	12.92	103	72-134	2	22
1,1-Dichloropropene	12.50	12.21	98	79-135	1	23
Carbon Tetrachloride	12.50	13.34	107	72-142	2	22
1,2-Dichloroethane	12.50	12.10	97	74-133	3	20
Benzene	12.50	12.85	103	80-123	2	20
Trichloroethene	12.50	12.24	98	80-123	2	20
1,2-Dichloropropane	12.50	12.07	97	74-120	3	20
Bromodichloromethane	12.50	12.42	99	79-121	1	20
Dibromomethane	12.50	12.21	98	80-120	2	20
4-Methyl-2-Pentanone	12.50	9.725	78	57-129	6	23
cis-1,3-Dichloropropene	12.50	12.28	98	80-130	2	20
Toluene	12.50	12.43	99	80-121	1	20
trans-1,3-Dichloropropene	12.50	11.04	88	76-122	1	20
1,1,2-Trichloroethane	12.50	11.84	95	80-120	3	20
2-Hexanone	12.50	8.761	70	49-136	9	24
1,3-Dichloropropane	12.50	12.11	97	80-120	1	20
Tetrachloroethene	12.50	12.79	102	78-130	4	21
Dibromochloromethane	12.50	12.21	98	80-123	1	20
1,2-Dibromoethane	12.50	11.69	94	80-120	1	20
Chlorobenzene	12.50	12.38	99	80-123	1	20
1,1,1,2-Tetrachloroethane	12.50	12.40	99	80-124	0	20
Ethylbenzene	12.50	12.18	97	80-123	3	21
m,p-Xylenes	25.00	24.89	100	80-126	4	21
o-Xylene	12.50	12.20	98	80-126	3	20
Styrene	12.50	11.84	95	80-122	3	20
Bromoform	12.50	12.56	100	72-132	1	20
Isopropylbenzene	12.50	11.62	93	79-130	6	21
1,1,2,2-Tetrachloroethane	12.50	11.18	89	72-129	3	20
1,2,3-Trichloropropane	12.50	11.00	88	72-124	6	22
Propylbenzene	12.50	11.35	91	79-128	7	21
Bromobenzene	12.50	12.36	99	80-122	1	20

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222502
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,3,5-Trimethylbenzene	12.50	11.58	93	80-129	8	20
2-Chlorotoluene	12.50	11.69	94	80-130	3	20
4-Chlorotoluene	12.50	11.50	92	79-125	4	20
tert-Butylbenzene	12.50	11.24	90	79-130	10	23
1,2,4-Trimethylbenzene	12.50	10.51	84	78-124	9	22
sec-Butylbenzene	12.50	10.98	88	79-134	11	23
para-Isopropyl Toluene	12.50	10.40	83	74-125	13	24
1,3-Dichlorobenzene	12.50	12.17	97	80-124	4	20
1,4-Dichlorobenzene	12.50	12.04	96	80-121	4	20
n-Butylbenzene	12.50	9.435	75	69-135	12	28
1,2-Dichlorobenzene	12.50	11.92	95	80-123	3	20
1,2-Dibromo-3-Chloropropane	12.50	8.266	66	59-125	7	23
1,2,4-Trichlorobenzene	12.50	9.800	78	66-133	11	24
Hexachlorobutadiene	12.50	11.66	93	70-152	16	26
Naphthalene	12.50	8.794	70	53-139	6	25
1,2,3-Trichlorobenzene	12.50	10.02	80	64-134	7	25
tert-Butyl Alcohol (TBA)	62.50	36.38	58	32-155	5	33
Isopropyl Ether (DIPE)	12.50	12.06	96	57-128	1	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.90	95	62-120	1	20
Methyl tert-Amyl Ether (TAME)	12.50	11.32	91	69-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	96	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	97	80-120

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC785230	Batch#:	222502
Matrix:	Water	Analyzed:	04/23/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC785230	Batch#:	222502
Matrix:	Water	Analyzed:	04/23/15
Units:	ug/L		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415CCC2	Batch#:	222502
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/24/15
Diln Fac:	1.000		

Type: MS Lab ID: QC785265

Analyte	MSS Result	Spiked	Result	%REC	Limits
Freon 12	<0.1000	10.00	5.471	55	54-126
Chloromethane	<0.1000	10.00	9.365	94	54-121
Vinyl Chloride	<0.1000	10.00	9.993	100	66-126
Bromomethane	<0.2358	10.00	11.46	115	31-152
Chloroethane	<0.2518	10.00	10.29	103	69-126
Trichlorofluoromethane	<0.1912	10.00	9.507	95	71-132
Acetone	<3.300	12.50	8.365	67	47-129
Freon 113	<0.1308	12.50	13.60	109	67-127
1,1-Dichloroethene	<0.1147	12.50	13.81	110	73-129
Methylene Chloride	<0.4000	12.50	14.23	114	80-127
Carbon Disulfide	<0.1000	12.50	14.86	119	76-138
MTBE	<0.1000	12.50	12.62	101	71-120
trans-1,2-Dichloroethene	<0.1578	12.50	14.10	113	79-127
Vinyl Acetate	<1.003	12.50	20.20	162	62-173
1,1-Dichloroethane	<0.1000	12.50	13.60	109	77-123
2-Butanone	<0.5469	12.50	10.24	82	56-134
cis-1,2-Dichloroethene	<0.1159	12.50	14.04	112	74-126
2,2-Dichloropropane	<0.1000	12.50	16.04	128	69-130
Chloroform	<0.1000	12.50	14.28	114	80-123
Bromochloromethane	<0.1609	12.50	14.94	120	80-122
1,1,1-Trichloroethane	<0.1000	12.50	13.99	112	80-130
1,1-Dichloropropene	<0.1225	12.50	13.06	105	80-128
Carbon Tetrachloride	<0.1000	12.50	14.30	114	80-138
1,2-Dichloroethane	<0.1000	12.50	12.78	102	80-130
Benzene	<0.1000	12.50	13.84	111	80-120
Trichloroethene	<0.1000	12.50	13.18	105	73-123
1,2-Dichloropropane	<0.1000	12.50	12.48	100	80-120
Bromodichloromethane	<0.1000	12.50	13.04	104	80-120
Dibromomethane	<0.1131	12.50	13.00	104	80-120
4-Methyl-2-Pentanone	<0.5044	12.50	9.746	78	67-130
cis-1,3-Dichloropropene	<0.1000	12.50	13.12	105	80-125
Toluene	<0.1000	12.50	13.26	106	80-120
trans-1,3-Dichloropropene	<0.1000	12.50	11.48	92	77-120
1,1,2-Trichloroethane	<0.1294	12.50	12.44	100	80-120
2-Hexanone	<0.5082	12.50	8.381	67	57-131
1,3-Dichloropropane	<0.1148	12.50	12.82	103	80-120
Tetrachloroethene	1.059	12.50	14.86	110	77-122
Dibromochloromethane	<0.1000	12.50	12.81	102	80-120
1,2-Dibromoethane	<0.1000	12.50	12.23	98	80-120
Chlorobenzene	<0.1000	12.50	13.12	105	80-120
1,1,1,2-Tetrachloroethane	<0.1383	12.50	12.94	104	80-120
Ethylbenzene	<0.1000	12.50	13.00	104	80-120
m,p-Xylenes	<0.1316	25.00	26.33	105	80-121
o-Xylene	<0.1000	12.50	12.74	102	80-120
Styrene	<0.1000	12.50	12.31	98	64-124
Bromoform	<0.1000	12.50	12.88	103	80-126
Isopropylbenzene	<0.1000	12.50	12.49	100	80-121
1,1,2,2-Tetrachloroethane	<0.1417	12.50	11.60	93	80-127
1,2,3-Trichloropropane	<0.1427	12.50	12.30	98	76-124

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415CCC2	Batch#:	222502
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/24/15
Diln Fac:	1.000		

Analyte	MSS Result	Spiked	Result	%REC	Limits
Propylbenzene	<0.1000	12.50	12.03	96	79-120
Bromobenzene	<0.1000	12.50	12.92	103	80-120
1,3,5-Trimethylbenzene	<0.1000	12.50	12.33	99	80-121
2-Chlorotoluene	<0.1000	12.50	12.25	98	80-124
4-Chlorotoluene	<0.1000	12.50	12.29	98	80-120
tert-Butylbenzene	<0.1000	12.50	12.02	96	80-120
1,2,4-Trimethylbenzene	<0.1164	12.50	11.14	89	77-120
sec-Butylbenzene	<0.1000	12.50	11.60	93	79-123
para-Isopropyl Toluene	<0.1164	12.50	11.21	90	74-120
1,3-Dichlorobenzene	<0.1000	12.50	12.83	103	80-120
1,4-Dichlorobenzene	<0.1040	12.50	12.74	102	80-120
n-Butylbenzene	<0.1142	12.50	10.12	81	68-121
1,2-Dichlorobenzene	<0.1000	12.50	12.51	100	80-120
1,2-Dibromo-3-Chloropropane	<0.4962	12.50	8.436 b	67	67-125
1,2,4-Trichlorobenzene	<0.1123	12.50	10.18	81	68-120
Hexachlorobutadiene	<0.4449	12.50	12.46	100	73-127
Naphthalene	<0.1487	12.50	8.922	71	62-126
1,2,3-Trichlorobenzene	<0.1000	12.50	10.27	82	68-121
tert-Butyl Alcohol (TBA)	<2.072	62.50	35.37 b	57	49-155
Isopropyl Ether (DIPE)	<0.1000	12.50	12.67	101	65-122
Ethyl tert-Butyl Ether (ETBE)	<0.1000	12.50	12.73	102	69-120
Methyl tert-Amyl Ether (TAME)	<0.1000	12.50	11.81	94	74-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	98	80-120

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415CCC2	Batch#:	222502
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/24/15
Diln Fac:	1.000		

Type: MSD Lab ID: QC785266

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	5.373	54	54-126	2	29
Chloromethane	10.00	9.118	91	54-121	3	27
Vinyl Chloride	10.00	9.741	97	66-126	3	24
Bromomethane	10.00	10.55	106	31-152	8	39
Chloroethane	10.00	10.41	104	69-126	1	29
Trichlorofluoromethane	10.00	9.391	94	71-132	1	24
Acetone	12.50	9.041	72	47-129	8	27
Freon 113	12.50	13.27	106	67-127	2	25
1,1-Dichloroethene	12.50	13.52	108	73-129	2	25
Methylene Chloride	12.50	14.00	112	80-127	2	21
Carbon Disulfide	12.50	14.57	117	76-138	2	24
MTBE	12.50	12.84	103	71-120	2	20
trans-1,2-Dichloroethene	12.50	14.21	114	79-127	1	23
Vinyl Acetate	12.50	20.16	161	62-173	0	24
1,1-Dichloroethane	12.50	13.32	107	77-123	2	22
2-Butanone	12.50	11.41	91	56-134	11	25
cis-1,2-Dichloroethene	12.50	13.94	111	74-126	1	21
2,2-Dichloropropane	12.50	15.47	124	69-130	4	29
Chloroform	12.50	14.06	112	80-123	2	22
Bromochloromethane	12.50	14.70	118	80-122	2	20
1,1,1-Trichloroethane	12.50	13.85	111	80-130	1	23
1,1-Dichloropropene	12.50	12.73	102	80-128	3	22
Carbon Tetrachloride	12.50	13.84	111	80-138	3	24
1,2-Dichloroethane	12.50	12.70	102	80-130	1	20
Benzene	12.50	13.70	110	80-120	1	20
Trichloroethene	12.50	12.96	104	73-123	2	20
1,2-Dichloropropane	12.50	12.42	99	80-120	0	20
Bromodichloromethane	12.50	12.93	103	80-120	1	20
Dibromomethane	12.50	12.95	104	80-120	0	20
4-Methyl-2-Pentanone	12.50	11.22	90	67-130	14	22
cis-1,3-Dichloropropene	12.50	13.11	105	80-125	0	20
Toluene	12.50	12.85	103	80-120	3	21
trans-1,3-Dichloropropene	12.50	11.39	91	77-120	1	20
1,1,2-Trichloroethane	12.50	12.33	99	80-120	1	20
2-Hexanone	12.50	10.12	81	57-131	19	24
1,3-Dichloropropane	12.50	12.73	102	80-120	1	20
Tetrachloroethene	12.50	14.43	107	77-122	3	22
Dibromochloromethane	12.50	12.88	103	80-120	1	20
1,2-Dibromoethane	12.50	12.31	98	80-120	1	20
Chlorobenzene	12.50	12.80	102	80-120	2	24
1,1,1,2-Tetrachloroethane	12.50	12.66	101	80-120	2	20
Ethylbenzene	12.50	12.70	102	80-120	2	25
m,p-Xylenes	25.00	26.15	105	80-121	1	23
o-Xylene	12.50	12.52	100	80-120	2	25
Styrene	12.50	11.85	95	64-124	4	22
Bromoform	12.50	13.58	109	80-126	5	20
Isopropylbenzene	12.50	12.29	98	80-121	2	27
1,1,2,2-Tetrachloroethane	12.50	12.05	96	80-127	4	20
1,2,3-Trichloropropane	12.50	11.93	95	76-124	3	22

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Field ID:	20150415CCC2	Batch#:	222502
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Analyzed:	04/24/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Propylbenzene	12.50	11.88	95	79-120	1	23
Bromobenzene	12.50	13.00	104	80-120	1	22
1,3,5-Trimethylbenzene	12.50	12.09	97	80-121	2	23
2-Chlorotoluene	12.50	12.04	96	80-124	2	23
4-Chlorotoluene	12.50	12.09	97	80-120	2	21
tert-Butylbenzene	12.50	11.86	95	80-120	1	25
1,2,4-Trimethylbenzene	12.50	10.85	87	77-120	3	23
sec-Butylbenzene	12.50	11.56	92	79-123	0	24
para-Isopropyl Toluene	12.50	10.97	88	74-120	2	22
1,3-Dichlorobenzene	12.50	12.80	102	80-120	0	20
1,4-Dichlorobenzene	12.50	12.76	102	80-120	0	20
n-Butylbenzene	12.50	9.827	79	68-121	3	22
1,2-Dichlorobenzene	12.50	12.61	101	80-120	1	20
1,2-Dibromo-3-Chloropropane	12.50	8.860 b	71	67-125	5	28
1,2,4-Trichlorobenzene	12.50	10.27	82	68-120	1	21
Hexachlorobutadiene	12.50	12.18	97	73-127	2	25
Naphthalene	12.50	9.044	72	62-126	1	25
1,2,3-Trichlorobenzene	12.50	10.11	81	68-121	1	22
tert-Butyl Alcohol (TBA)	62.50	47.01 b	75	49-155	28	33
Isopropyl Ether (DIPE)	12.50	12.52	100	65-122	1	22
Ethyl tert-Butyl Ether (ETBE)	12.50	12.57	101	69-120	1	20
Methyl tert-Amyl Ether (TAME)	12.50	11.75	94	74-120	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	99	80-120

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222542
Units:	ug/L	Analyzed:	04/24/15
Diln Fac:	1.000		

Type: BS Lab ID: QC785380

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	5.846	58	45-131
Chloromethane	10.00	9.418	94	48-133
Vinyl Chloride	10.00	10.24	102	63-132
Bromomethane	10.00	11.53	115	38-161
Chloroethane	10.00	10.80	108	62-131
Trichlorofluoromethane	10.00	10.12	101	64-137
Acetone	12.50	10.35	83	46-151
Freon 113	12.50	12.61	101	61-138
1,1-Dichloroethene	12.50	13.14	105	66-135
Methylene Chloride	12.50	13.53	108	74-131
Carbon Disulfide	12.50	14.72	118	63-150
MTBE	12.50	12.59	101	65-120
trans-1,2-Dichloroethene	12.50	13.78	110	72-134
Vinyl Acetate	12.50	20.04	160	60-194
1,1-Dichloroethane	12.50	12.81	102	68-127
2-Butanone	12.50	11.61	93	50-141
cis-1,2-Dichloroethene	12.50	13.35	107	73-129
2,2-Dichloropropane	12.50	14.92	119	72-146
Chloroform	12.50	13.50	108	73-126
Bromochloromethane	12.50	14.36	115	78-127
1,1,1-Trichloroethane	12.50	13.31	106	72-134
1,1-Dichloropropene	12.50	12.52	100	79-135
Carbon Tetrachloride	12.50	13.45	108	72-142
1,2-Dichloroethane	12.50	12.86	103	74-133
Benzene	12.50	13.43	107	80-123
Trichloroethene	12.50	12.62	101	80-123
1,2-Dichloropropane	12.50	12.08	97	74-120
Bromodichloromethane	12.50	12.78	102	79-121
Dibromomethane	12.50	12.87	103	80-120
4-Methyl-2-Pentanone	12.50	10.76	86	57-129
cis-1,3-Dichloropropene	12.50	12.65	101	80-130
Toluene	12.50	12.52	100	80-121
trans-1,3-Dichloropropene	12.50	11.37	91	76-122
1,1,2-Trichloroethane	12.50	12.12	97	80-120
2-Hexanone	12.50	9.741	78	49-136
1,3-Dichloropropane	12.50	12.35	99	80-120
Tetrachloroethene	12.50	13.42	107	78-130
Dibromochloromethane	12.50	12.37	99	80-123
1,2-Dibromoethane	12.50	11.98	96	80-120
Chlorobenzene	12.50	12.55	100	80-123
1,1,1,2-Tetrachloroethane	12.50	12.29	98	80-124
Ethylbenzene	12.50	12.56	100	80-123
m,p-Xylenes	25.00	25.78	103	80-126
o-Xylene	12.50	12.43	99	80-126
Styrene	12.50	12.16	97	80-122
Bromoform	12.50	12.91	103	72-132
Isopropylbenzene	12.50	12.21	98	79-130
1,1,2,2-Tetrachloroethane	12.50	11.89	95	72-129
1,2,3-Trichloropropane	12.50	11.61	93	72-124
Propylbenzene	12.50	12.16	97	79-128
Bromobenzene	12.50	12.56	101	80-122

 b= See narrative
 RPD= Relative Percent Difference
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Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222542
Units:	ug/L	Analyzed:	04/24/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
1,3,5-Trimethylbenzene	12.50	12.44	100	80-129
2-Chlorotoluene	12.50	12.11	97	80-130
4-Chlorotoluene	12.50	11.90	95	79-125
tert-Butylbenzene	12.50	12.39	99	79-130
1,2,4-Trimethylbenzene	12.50	11.41	91	78-124
sec-Butylbenzene	12.50	12.25	98	79-134
para-Isopropyl Toluene	12.50	12.51	100	74-125
1,3-Dichlorobenzene	12.50	12.76	102	80-124
1,4-Dichlorobenzene	12.50	12.59	101	80-121
n-Butylbenzene	12.50	10.72	86	69-135
1,2-Dichlorobenzene	12.50	12.47	100	80-123
1,2-Dibromo-3-Chloropropane	12.50	8.952 b	72	59-125
1,2,4-Trichlorobenzene	12.50	10.71	86	66-133
Hexachlorobutadiene	12.50	13.79	110	70-152
Naphthalene	12.50	9.441	76	53-139
1,2,3-Trichlorobenzene	12.50	10.82	87	64-134
tert-Butyl Alcohol (TBA)	62.50	46.76 b	75	32-155
Isopropyl Ether (DIPE)	12.50	12.24	98	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	12.15	97	62-120
Methyl tert-Amyl Ether (TAME)	12.50	11.59	93	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	98	80-120

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222542
Units:	ug/L	Analyzed:	04/24/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC785381

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	5.846	58	45-131	0	29
Chloromethane	10.00	8.808	88	48-133	7	25
Vinyl Chloride	10.00	9.686	97	63-132	6	23
Bromomethane	10.00	9.642	96	38-161	18	32
Chloroethane	10.00	10.64	106	62-131	2	24
Trichlorofluoromethane	10.00	9.758	98	64-137	4	23
Acetone	12.50	8.586	69	46-151	19	29
Freon 113	12.50	12.35	99	61-138	2	25
1,1-Dichloroethene	12.50	12.77	102	66-135	3	24
Methylene Chloride	12.50	13.37	107	74-131	1	21
Carbon Disulfide	12.50	13.80	110	63-150	6	25
MTBE	12.50	12.20	98	65-120	3	22
trans-1,2-Dichloroethene	12.50	13.39	107	72-134	3	22
Vinyl Acetate	12.50	19.43	155	60-194	3	25
1,1-Dichloroethane	12.50	12.92	103	68-127	1	21
2-Butanone	12.50	10.05	80	50-141	14	24
cis-1,2-Dichloroethene	12.50	13.36	107	73-129	0	20
2,2-Dichloropropane	12.50	14.71	118	72-146	1	24
Chloroform	12.50	13.42	107	73-126	1	20
Bromochloromethane	12.50	14.22	114	78-127	1	20
1,1,1-Trichloroethane	12.50	13.38	107	72-134	1	22
1,1-Dichloropropene	12.50	12.34	99	79-135	1	23
Carbon Tetrachloride	12.50	12.71	102	72-142	6	22
1,2-Dichloroethane	12.50	12.61	101	74-133	2	20
Benzene	12.50	13.07	105	80-123	3	20
Trichloroethene	12.50	12.01	96	80-123	5	20
1,2-Dichloropropane	12.50	12.05	96	74-120	0	20
Bromodichloromethane	12.50	12.36	99	79-121	3	20
Dibromomethane	12.50	12.48	100	80-120	3	20
4-Methyl-2-Pentanone	12.50	10.23	82	57-129	5	23
cis-1,3-Dichloropropene	12.50	12.50	100	80-130	1	20
Toluene	12.50	12.38	99	80-121	1	20
trans-1,3-Dichloropropene	12.50	10.52	84	76-122	8	20
1,1,2-Trichloroethane	12.50	11.53	92	80-120	5	20
2-Hexanone	12.50	9.106	73	49-136	7	24
1,3-Dichloropropane	12.50	11.97	96	80-120	3	20
Tetrachloroethene	12.50	12.57	101	78-130	7	21
Dibromochloromethane	12.50	12.10	97	80-123	2	20
1,2-Dibromoethane	12.50	11.37	91	80-120	5	20
Chlorobenzene	12.50	12.32	99	80-123	2	20
1,1,1,2-Tetrachloroethane	12.50	11.96	96	80-124	3	20
Ethylbenzene	12.50	12.20	98	80-123	3	21
m,p-Xylenes	25.00	24.98	100	80-126	3	21
o-Xylene	12.50	12.36	99	80-126	1	20
Styrene	12.50	11.99	96	80-122	1	20
Bromoform	12.50	12.13	97	72-132	6	20
Isopropylbenzene	12.50	11.69	94	79-130	4	21
1,1,2,2-Tetrachloroethane	12.50	11.32	91	72-129	5	20
1,2,3-Trichloropropane	12.50	11.09	89	72-124	5	22
Propylbenzene	12.50	11.35	91	79-128	7	21
Bromobenzene	12.50	12.42	99	80-122	1	20

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222542
Units:	ug/L	Analyzed:	04/24/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,3,5-Trimethylbenzene	12.50	11.76	94	80-129	6	20
2-Chlorotoluene	12.50	11.74	94	80-130	3	20
4-Chlorotoluene	12.50	11.75	94	79-125	1	20
tert-Butylbenzene	12.50	11.40	91	79-130	8	23
1,2,4-Trimethylbenzene	12.50	10.81	87	78-124	5	22
sec-Butylbenzene	12.50	11.07	89	79-134	10	23
para-Isopropyl Toluene	12.50	10.65	85	74-125	16	24
1,3-Dichlorobenzene	12.50	12.33	99	80-124	3	20
1,4-Dichlorobenzene	12.50	12.24	98	80-121	3	20
n-Butylbenzene	12.50	9.334	75	69-135	14	28
1,2-Dichlorobenzene	12.50	12.11	97	80-123	3	20
1,2-Dibromo-3-Chloropropane	12.50	8.524 b	68	59-125	5	23
1,2,4-Trichlorobenzene	12.50	9.929	79	66-133	8	24
Hexachlorobutadiene	12.50	11.44	92	70-152	19	26
Naphthalene	12.50	9.051	72	53-139	4	25
1,2,3-Trichlorobenzene	12.50	10.05	80	64-134	7	25
tert-Butyl Alcohol (TBA)	62.50	39.47 b	63	32-155	17	33
Isopropyl Ether (DIPE)	12.50	12.37	99	57-128	1	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.17	97	62-120	0	20
Methyl tert-Amyl Ether (TAME)	12.50	11.32	91	69-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	94	75-139
Toluene-d8	94	80-120
Bromofluorobenzene	99	80-120

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC785382	Batch#:	222542
Matrix:	Water	Analyzed:	04/24/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.4
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.0
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.5
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC785382	Batch#:	222542
Matrix:	Water	Analyzed:	04/24/15
Units:	ug/L		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	0.1 J	0.5	0.1
1,4-Dichlorobenzene	0.1 J	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.5
1,2,4-Trichlorobenzene	0.1 J	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	2.1
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-128
1,2-Dichloroethane-d4	88	75-139
Toluene-d8	94	80-120
Bromofluorobenzene	100	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222575
Units:	ug/L	Analyzed:	04/25/15
Diln Fac:	1.000		

Type: BS Lab ID: QC785507

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	11.76	118	45-131
Chloromethane	10.00	10.58	106	48-133
Vinyl Chloride	10.00	11.48	115	63-132
Bromomethane	10.00	6.738 b	67	38-161
Chloroethane	10.00	10.68	107	62-131
Trichlorofluoromethane	10.00	11.68	117	64-137
Acetone	12.50	11.26	90	46-151
Freon 113	12.50	13.74	110	61-138
1,1-Dichloroethene	12.50	12.75	102	66-135
Methylene Chloride	12.50	12.78	102	74-131
Carbon Disulfide	12.50	13.58	109	63-150
MTBE	12.50	13.13	105	65-120
trans-1,2-Dichloroethene	12.50	12.93	103	72-134
Vinyl Acetate	12.50	30.09 b	241 *	60-194
1,1-Dichloroethane	12.50	13.24	106	68-127
2-Butanone	12.50	14.24	114	50-141
cis-1,2-Dichloroethene	12.50	13.19	105	73-129
2,2-Dichloropropane	12.50	16.74 b	134	72-146
Chloroform	12.50	13.61	109	73-126
Bromochloromethane	12.50	12.98	104	78-127
1,1,1-Trichloroethane	12.50	15.06	120	72-134
1,1-Dichloropropene	12.50	12.98	104	79-135
Carbon Tetrachloride	12.50	14.52	116	72-142
1,2-Dichloroethane	12.50	13.72	110	74-133
Benzene	12.50	12.76	102	80-123
Trichloroethene	12.50	12.86	103	80-123
1,2-Dichloropropane	12.50	12.40	99	74-120
Bromodichloromethane	12.50	12.81	102	79-121
Dibromomethane	12.50	12.60	101	80-120
4-Methyl-2-Pentanone	12.50	14.91	119	57-129
cis-1,3-Dichloropropene	12.50	13.20	106	80-130
Toluene	12.50	12.86	103	80-121
trans-1,3-Dichloropropene	12.50	13.24	106	76-122
1,1,2-Trichloroethane	12.50	12.75	102	80-120
2-Hexanone	12.50	17.33	139 *	49-136
1,3-Dichloropropane	12.50	13.13	105	80-120
Tetrachloroethene	12.50	12.62	101	78-130
Dibromochloromethane	12.50	12.51	100	80-123
1,2-Dibromoethane	12.50	12.94	104	80-120
Chlorobenzene	12.50	12.63	101	80-123
1,1,1,2-Tetrachloroethane	12.50	12.81	102	80-124
Ethylbenzene	12.50	13.41	107	80-123
m,p-Xylenes	25.00	26.40	106	80-126
o-Xylene	12.50	13.18	105	80-126
Styrene	12.50	12.78	102	80-122
Bromoform	12.50	12.28	98	72-132
Isopropylbenzene	12.50	14.41	115	79-130
1,1,2,2-Tetrachloroethane	12.50	13.88	111	72-129
1,2,3-Trichloropropane	12.50	13.88	111	72-124
Propylbenzene	12.50	14.34	115	79-128

*= Value outside of QC limits; see narrative
 b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222575
Units:	ug/L	Analyzed:	04/25/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Bromobenzene	12.50	12.86	103	80-122
1,3,5-Trimethylbenzene	12.50	15.01	120	80-129
2-Chlorotoluene	12.50	13.88	111	80-130
4-Chlorotoluene	12.50	13.91	111	79-125
tert-Butylbenzene	12.50	13.59	109	79-130
1,2,4-Trimethylbenzene	12.50	13.96	112	78-124
sec-Butylbenzene	12.50	13.97	112	79-134
para-Isopropyl Toluene	12.50	13.27	106	74-125
1,3-Dichlorobenzene	12.50	12.79	102	80-124
1,4-Dichlorobenzene	12.50	12.63	101	80-121
n-Butylbenzene	12.50	13.62	109	69-135
1,2-Dichlorobenzene	12.50	12.79	102	80-123
1,2-Dibromo-3-Chloropropane	12.50	15.19	122	59-125
1,2,4-Trichlorobenzene	12.50	11.92	95	66-133
Hexachlorobutadiene	12.50	11.48	92	70-152
Naphthalene	12.50	11.31	91	53-139
1,2,3-Trichlorobenzene	12.50	11.53	92	64-134
tert-Butyl Alcohol (TBA)	62.50	79.94	128	32-155
Isopropyl Ether (DIPE)	12.50	12.81	102	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	13.21	106	62-120
Methyl tert-Amyl Ether (TAME)	12.50	12.14	97	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	114	75-139
Toluene-d8	103	80-120
Bromofluorobenzene	109	80-120

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222575
Units:	ug/L	Analyzed:	04/25/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC785508

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	10.66	107	45-131	10	29
Chloromethane	10.00	10.08	101	48-133	5	25
Vinyl Chloride	10.00	10.93	109	63-132	5	23
Bromomethane	10.00	6.681 b	67	38-161	1	32
Chloroethane	10.00	9.903	99	62-131	8	24
Trichlorofluoromethane	10.00	11.15	112	64-137	5	23
Acetone	12.50	10.14	81	46-151	10	29
Freon 113	12.50	12.81	103	61-138	7	25
1,1-Dichloroethene	12.50	12.25	98	66-135	4	24
Methylene Chloride	12.50	12.79	102	74-131	0	21
Carbon Disulfide	12.50	12.92	103	63-150	5	25
MTBE	12.50	12.68	101	65-120	4	22
trans-1,2-Dichloroethene	12.50	12.43	99	72-134	4	22
Vinyl Acetate	12.50	29.19 b	233 *	60-194	3	25
1,1-Dichloroethane	12.50	12.92	103	68-127	2	21
2-Butanone	12.50	12.97	104	50-141	9	24
cis-1,2-Dichloroethene	12.50	12.60	101	73-129	5	20
2,2-Dichloropropane	12.50	15.88 b	127	72-146	5	24
Chloroform	12.50	13.30	106	73-126	2	20
Bromochloromethane	12.50	12.42	99	78-127	4	20
1,1,1-Trichloroethane	12.50	14.35	115	72-134	5	22
1,1-Dichloropropene	12.50	12.53	100	79-135	4	23
Carbon Tetrachloride	12.50	13.91	111	72-142	4	22
1,2-Dichloroethane	12.50	13.74	110	74-133	0	20
Benzene	12.50	12.25	98	80-123	4	20
Trichloroethene	12.50	12.23	98	80-123	5	20
1,2-Dichloropropane	12.50	11.86	95	74-120	4	20
Bromodichloromethane	12.50	12.51	100	79-121	2	20
Dibromomethane	12.50	12.49	100	80-120	1	20
4-Methyl-2-Pentanone	12.50	14.16	113	57-129	5	23
cis-1,3-Dichloropropene	12.50	12.80	102	80-130	3	20
Toluene	12.50	12.46	100	80-121	3	20
trans-1,3-Dichloropropene	12.50	12.81	103	76-122	3	20
1,1,2-Trichloroethane	12.50	12.35	99	80-120	3	20
2-Hexanone	12.50	15.28	122	49-136	13	24
1,3-Dichloropropane	12.50	12.87	103	80-120	2	20
Tetrachloroethene	12.50	12.01	96	78-130	5	21
Dibromochloromethane	12.50	12.19	98	80-123	3	20
1,2-Dibromoethane	12.50	12.44	99	80-120	4	20
Chlorobenzene	12.50	12.25	98	80-123	3	20
1,1,1,2-Tetrachloroethane	12.50	12.45	100	80-124	3	20
Ethylbenzene	12.50	12.99	104	80-123	3	21
m,p-Xylenes	25.00	25.30	101	80-126	4	21
o-Xylene	12.50	12.56	100	80-126	5	20
Styrene	12.50	12.30	98	80-122	4	20
Bromoform	12.50	11.92	95	72-132	3	20
Isopropylbenzene	12.50	14.11	113	79-130	2	21
1,1,2,2-Tetrachloroethane	12.50	13.90	111	72-129	0	20
1,2,3-Trichloropropane	12.50	13.66	109	72-124	2	22
Propylbenzene	12.50	13.85	111	79-128	3	21

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222575
Units:	ug/L	Analyzed:	04/25/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Bromobenzene	12.50	12.64	101	80-122	2	20
1,3,5-Trimethylbenzene	12.50	14.23	114	80-129	5	20
2-Chlorotoluene	12.50	13.58	109	80-130	2	20
4-Chlorotoluene	12.50	13.56	109	79-125	3	20
tert-Butylbenzene	12.50	13.57	109	79-130	0	23
1,2,4-Trimethylbenzene	12.50	13.84	111	78-124	1	22
sec-Butylbenzene	12.50	13.92	111	79-134	0	23
para-Isopropyl Toluene	12.50	12.91	103	74-125	3	24
1,3-Dichlorobenzene	12.50	12.60	101	80-124	2	20
1,4-Dichlorobenzene	12.50	12.52	100	80-121	1	20
n-Butylbenzene	12.50	14.10	113	69-135	3	28
1,2-Dichlorobenzene	12.50	12.48	100	80-123	2	20
1,2-Dibromo-3-Chloropropane	12.50	14.54	116	59-125	4	23
1,2,4-Trichlorobenzene	12.50	11.75	94	66-133	1	24
Hexachlorobutadiene	12.50	11.52	92	70-152	0	26
Naphthalene	12.50	11.20	90	53-139	1	25
1,2,3-Trichlorobenzene	12.50	11.32	91	64-134	2	25
tert-Butyl Alcohol (TBA)	62.50	72.97	117	32-155	9	33
Isopropyl Ether (DIPE)	12.50	12.51	100	57-128	2	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.77	102	62-120	3	20
Methyl tert-Amyl Ether (TAME)	12.50	11.91	95	69-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	108	80-128
1,2-Dichloroethane-d4	114	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	111	80-120

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC785509	Batch#:	222575
Matrix:	Water	Analyzed:	04/25/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.2
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.2
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.2
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.2
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.4
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.1
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

*= Value outside of QC limits; see narrative

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC785509	Batch#:	222575
Matrix:	Water	Analyzed:	04/25/15
Units:	ug/L		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	10	1.3
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	114	75-139
Toluene-d8	104	80-120
Bromofluorobenzene	122 *	80-120

*= Value outside of QC limits; see narrative

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222678
Units:	ug/L	Analyzed:	04/29/15
Diln Fac:	1.000		

Type: BS Lab ID: QC785903

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	6.260 b	63	45-131
Chloromethane	10.00	8.321	83	48-133
Vinyl Chloride	10.00	10.45	104	63-132
Bromomethane	10.00	10.56	106	38-161
Chloroethane	10.00	10.10	101	62-131
Trichlorofluoromethane	10.00	7.773	78	64-137
Acetone	12.50	11.06	89	46-151
Freon 113	12.50	12.11	97	61-138
1,1-Dichloroethene	12.50	13.50	108	66-135
Methylene Chloride	12.50	13.32	107	74-131
Carbon Disulfide	12.50	14.00	112	63-150
MTBE	12.50	11.89	95	65-120
trans-1,2-Dichloroethene	12.50	12.90	103	72-134
Vinyl Acetate	12.50	24.20 b	194	60-194
1,1-Dichloroethane	12.50	13.15	105	68-127
2-Butanone	12.50	13.56	108	50-141
cis-1,2-Dichloroethene	12.50	13.07	105	73-129
2,2-Dichloropropane	12.50	10.98	88	72-146
Chloroform	12.50	12.31	98	73-126
Bromochloromethane	12.50	13.20	106	78-127
1,1,1-Trichloroethane	12.50	11.40	91	72-134
1,1-Dichloropropene	12.50	12.48	100	79-135
Carbon Tetrachloride	12.50	10.78	86	72-142
1,2-Dichloroethane	12.50	10.86	87	74-133
Benzene	12.50	14.28	114	80-123
Trichloroethene	12.50	12.18	97	80-123
1,2-Dichloropropane	12.50	13.24	106	74-120
Bromodichloromethane	12.50	11.53	92	79-121
Dibromomethane	12.50	12.77	102	80-120
4-Methyl-2-Pentanone	12.50	13.59	109	57-129
cis-1,3-Dichloropropene	12.50	13.02	104	80-130
Toluene	12.50	13.66	109	80-121
trans-1,3-Dichloropropene	12.50	10.85	87	76-122
1,1,2-Trichloroethane	12.50	12.36	99	80-120
2-Hexanone	12.50	12.98	104	49-136
1,3-Dichloropropane	12.50	13.09	105	80-120
Tetrachloroethene	12.50	13.36	107	78-130
Dibromochloromethane	12.50	11.73	94	80-123
1,2-Dibromoethane	12.50	12.40	99	80-120
Chlorobenzene	12.50	13.27	106	80-123
1,1,1,2-Tetrachloroethane	12.50	12.19	97	80-124
Ethylbenzene	12.50	13.78	110	80-123
m,p-Xylenes	25.00	27.03	108	80-126
o-Xylene	12.50	13.00	104	80-126
Styrene	12.50	13.02	104	80-122
Bromoform	12.50	11.88	95	72-132
Isopropylbenzene	12.50	13.38	107	79-130
1,1,2,2-Tetrachloroethane	12.50	14.22	114	72-129
1,2,3-Trichloropropane	12.50	12.34	99	72-124
Propylbenzene	12.50	13.68	109	79-128

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222678
Units:	ug/L	Analyzed:	04/29/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Bromobenzene	12.50	13.17	105	80-122
1,3,5-Trimethylbenzene	12.50	13.15	105	80-129
2-Chlorotoluene	12.50	12.47	100	80-130
4-Chlorotoluene	12.50	12.51	100	79-125
tert-Butylbenzene	12.50	12.94	104	79-130
1,2,4-Trimethylbenzene	12.50	12.64	101	78-124
sec-Butylbenzene	12.50	13.37	107	79-134
para-Isopropyl Toluene	12.50	12.61	101	74-125
1,3-Dichlorobenzene	12.50	13.19	106	80-124
1,4-Dichlorobenzene	12.50	13.03	104	80-121
n-Butylbenzene	12.50	14.02	112	69-135
1,2-Dichlorobenzene	12.50	12.75	102	80-123
1,2-Dibromo-3-Chloropropane	12.50	10.41	83	59-125
1,2,4-Trichlorobenzene	12.50	12.37	99	66-133
Hexachlorobutadiene	12.50	12.71	102	70-152
Naphthalene	12.50	11.78	94	53-139
1,2,3-Trichlorobenzene	12.50	13.12	105	64-134
tert-Butyl Alcohol (TBA)	62.50	70.98	114	32-155
Isopropyl Ether (DIPE)	12.50	13.96	112	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	12.01	96	62-120
Methyl tert-Amyl Ether (TAME)	12.50	12.32	99	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-128
1,2-Dichloroethane-d4	77	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	98	80-120

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222678
Units:	ug/L	Analyzed:	04/29/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC785904

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	6.309 b	63	45-131	1	29
Chloromethane	10.00	8.315	83	48-133	0	25
Vinyl Chloride	10.00	11.24	112	63-132	7	23
Bromomethane	10.00	9.870	99	38-161	7	32
Chloroethane	10.00	10.51	105	62-131	4	24
Trichlorofluoromethane	10.00	8.141	81	64-137	5	23
Acetone	12.50	11.63	93	46-151	5	29
Freon 113	12.50	12.91	103	61-138	6	25
1,1-Dichloroethene	12.50	14.60	117	66-135	8	24
Methylene Chloride	12.50	14.22	114	74-131	7	21
Carbon Disulfide	12.50	14.30	114	63-150	2	25
MTBE	12.50	12.27	98	65-120	3	22
trans-1,2-Dichloroethene	12.50	13.48	108	72-134	4	22
Vinyl Acetate	12.50	24.76 b	198 *	60-194	2	25
1,1-Dichloroethane	12.50	13.68	109	68-127	4	21
2-Butanone	12.50	14.20	114	50-141	5	24
cis-1,2-Dichloroethene	12.50	13.66	109	73-129	4	20
2,2-Dichloropropane	12.50	11.10	89	72-146	1	24
Chloroform	12.50	12.78	102	73-126	4	20
Bromochloromethane	12.50	13.46	108	78-127	2	20
1,1,1-Trichloroethane	12.50	11.94	96	72-134	5	22
1,1-Dichloropropene	12.50	13.50	108	79-135	8	23
Carbon Tetrachloride	12.50	11.54	92	72-142	7	22
1,2-Dichloroethane	12.50	11.07	89	74-133	2	20
Benzene	12.50	14.53	116	80-123	2	20
Trichloroethene	12.50	13.01	104	80-123	7	20
1,2-Dichloropropane	12.50	14.29	114	74-120	8	20
Bromodichloromethane	12.50	12.16	97	79-121	5	20
Dibromomethane	12.50	13.50	108	80-120	6	20
4-Methyl-2-Pentanone	12.50	14.58	117	57-129	7	23
cis-1,3-Dichloropropene	12.50	13.46	108	80-130	3	20
Toluene	12.50	13.97	112	80-121	2	20
trans-1,3-Dichloropropene	12.50	11.20	90	76-122	3	20
1,1,2-Trichloroethane	12.50	12.70	102	80-120	3	20
2-Hexanone	12.50	14.22	114	49-136	9	24
1,3-Dichloropropane	12.50	13.35	107	80-120	2	20
Tetrachloroethene	12.50	13.25	106	78-130	1	21
Dibromochloromethane	12.50	11.76	94	80-123	0	20
1,2-Dibromoethane	12.50	12.40	99	80-120	0	20
Chlorobenzene	12.50	13.12	105	80-123	1	20
1,1,1,2-Tetrachloroethane	12.50	12.48	100	80-124	2	20
Ethylbenzene	12.50	13.73	110	80-123	0	21
m,p-Xylenes	25.00	27.49	110	80-126	2	21
o-Xylene	12.50	13.26	106	80-126	2	20
Styrene	12.50	13.50	108	80-122	4	20
Bromoform	12.50	12.19	98	72-132	3	20
Isopropylbenzene	12.50	13.13	105	79-130	2	21
1,1,2,2-Tetrachloroethane	12.50	13.80	110	72-129	3	20
1,2,3-Trichloropropane	12.50	11.84	95	72-124	4	22
Propylbenzene	12.50	13.71	110	79-128	0	21

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222678
Units:	ug/L	Analyzed:	04/29/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Bromobenzene	12.50	13.23	106	80-122	0	20
1,3,5-Trimethylbenzene	12.50	12.95	104	80-129	2	20
2-Chlorotoluene	12.50	12.47	100	80-130	0	20
4-Chlorotoluene	12.50	12.96	104	79-125	4	20
tert-Butylbenzene	12.50	12.91	103	79-130	0	23
1,2,4-Trimethylbenzene	12.50	12.16	97	78-124	4	22
sec-Butylbenzene	12.50	13.51	108	79-134	1	23
para-Isopropyl Toluene	12.50	12.50	100	74-125	1	24
1,3-Dichlorobenzene	12.50	12.84	103	80-124	3	20
1,4-Dichlorobenzene	12.50	13.18	105	80-121	1	20
n-Butylbenzene	12.50	13.82	111	69-135	1	28
1,2-Dichlorobenzene	12.50	12.34	99	80-123	3	20
1,2-Dibromo-3-Chloropropane	12.50	10.26	82	59-125	2	23
1,2,4-Trichlorobenzene	12.50	12.17	97	66-133	2	24
Hexachlorobutadiene	12.50	12.68	101	70-152	0	26
Naphthalene	12.50	11.50	92	53-139	2	25
1,2,3-Trichlorobenzene	12.50	12.91	103	64-134	2	25
tert-Butyl Alcohol (TBA)	62.50	65.25	104	32-155	8	33
Isopropyl Ether (DIPE)	12.50	14.44	116	57-128	3	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.37	99	62-120	3	20
Methyl tert-Amyl Ether (TAME)	12.50	12.69	102	69-120	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-128
1,2-Dichloroethane-d4	79	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	96	80-120

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC785905	Batch#:	222678
Matrix:	Water	Analyzed:	04/29/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.1
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.1
Chloroethane	ND	1.0	0.1
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	0.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.2
Carbon Disulfide	0.2 J	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.2
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.3
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.2
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.1
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.3
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.2
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.2
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.2
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC785905	Batch#:	222678
Matrix:	Water	Analyzed:	04/29/15
Units:	ug/L		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.2
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.2
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.2
Naphthalene	ND	2.0	0.2
1,2,3-Trichlorobenzene	ND	0.5	0.2
tert-Butyl Alcohol (TBA)	ND	10	2.2
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	83	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	98	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222684
Units:	ug/L	Analyzed:	04/29/15
Diln Fac:	1.000		

Type: BS Lab ID: QC785928

Analyte	Spiked	Result	%REC	Limits
Freon 12	10.00	5.369	54	45-131
Chloromethane	10.00	7.811	78	48-133
Vinyl Chloride	10.00	8.696	87	63-132
Bromomethane	10.00	8.739	87	38-161
Chloroethane	10.00	8.730	87	62-131
Trichlorofluoromethane	10.00	7.329	73	64-137
Acetone	12.50	13.75	110	46-151
Freon 113	12.50	10.49	84	61-138
1,1-Dichloroethene	12.50	10.99	88	66-135
Methylene Chloride	12.50	12.33	99	74-131
Carbon Disulfide	12.50	12.60	101	63-150
MTBE	12.50	11.62	93	65-120
trans-1,2-Dichloroethene	12.50	11.50	92	72-134
Vinyl Acetate	12.50	19.47	156	60-194
1,1-Dichloroethane	12.50	12.89	103	68-127
2-Butanone	12.50	15.48	124	50-141
cis-1,2-Dichloroethene	12.50	11.42	91	73-129
2,2-Dichloropropane	12.50	12.75	102	72-146
Chloroform	12.50	11.48	92	73-126
Bromochloromethane	12.50	11.97	96	78-127
1,1,1-Trichloroethane	12.50	11.62	93	72-134
1,1-Dichloropropene	12.50	11.48	92	79-135
Carbon Tetrachloride	12.50	11.18	89	72-142
1,2-Dichloroethane	12.50	11.23	90	74-133
Benzene	12.50	11.59	93	80-123
Trichloroethene	12.50	11.73	94	80-123
1,2-Dichloropropane	12.50	11.78	94	74-120
Bromodichloromethane	12.50	11.50	92	79-121
Dibromomethane	12.50	12.59	101	80-120
4-Methyl-2-Pentanone	12.50	13.46	108	57-129
cis-1,3-Dichloropropene	12.50	12.10	97	80-130
Toluene	12.50	12.27	98	80-121
trans-1,3-Dichloropropene	12.50	11.62	93	76-122
1,1,2-Trichloroethane	12.50	12.80	102	80-120
2-Hexanone	12.50	15.51	124	49-136
1,3-Dichloropropane	12.50	13.27	106	80-120
Tetrachloroethene	12.50	12.00	96	78-130
Dibromochloromethane	12.50	12.47	100	80-123
1,2-Dibromoethane	12.50	12.06	96	80-120
Chlorobenzene	12.50	11.50	92	80-123
1,1,1,2-Tetrachloroethane	12.50	12.15	97	80-124
Ethylbenzene	12.50	12.53	100	80-123
m,p-Xylenes	25.00	24.33	97	80-126
o-Xylene	12.50	11.93	95	80-126
Styrene	12.50	12.02	96	80-122
Bromoform	12.50	11.39	91	72-132
Isopropylbenzene	12.50	12.22	98	79-130
1,1,2,2-Tetrachloroethane	12.50	14.13	113	72-129
1,2,3-Trichloropropane	12.50	14.41	115	72-124
Propylbenzene	12.50	12.47	100	79-128

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222684
Units:	ug/L	Analyzed:	04/29/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits
Bromobenzene	12.50	12.34	99	80-122
1,3,5-Trimethylbenzene	12.50	12.56	101	80-129
2-Chlorotoluene	12.50	12.86	103	80-130
4-Chlorotoluene	12.50	12.42	99	79-125
tert-Butylbenzene	12.50	12.00	96	79-130
1,2,4-Trimethylbenzene	12.50	11.50	92	78-124
sec-Butylbenzene	12.50	12.29	98	79-134
para-Isopropyl Toluene	12.50	12.08	97	74-125
1,3-Dichlorobenzene	12.50	12.38	99	80-124
1,4-Dichlorobenzene	12.50	12.95	104	80-121
n-Butylbenzene	12.50	13.19	106	69-135
1,2-Dichlorobenzene	12.50	12.25	98	80-123
1,2-Dibromo-3-Chloropropane	12.50	12.30	98	59-125
1,2,4-Trichlorobenzene	12.50	12.54	100	66-133
Hexachlorobutadiene	12.50	12.25	98	70-152
Naphthalene	12.50	11.82	95	53-139
1,2,3-Trichlorobenzene	12.50	12.92	103	64-134
tert-Butyl Alcohol (TBA)	62.50	118.4 b	189 *	32-155
Isopropyl Ether (DIPE)	12.50	12.21	98	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	11.57	93	62-120
Methyl tert-Amyl Ether (TAME)	12.50	10.97	88	69-120

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-128
1,2-Dichloroethane-d4	96	75-139
Toluene-d8	105	80-120
Bromofluorobenzene	102	80-120

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222684
Units:	ug/L	Analyzed:	04/29/15
Diln Fac:	1.000		

Type: BSD Lab ID: QC785929

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Freon 12	10.00	4.999	50	45-131	7	29
Chloromethane	10.00	8.372	84	48-133	7	25
Vinyl Chloride	10.00	8.919	89	63-132	3	23
Bromomethane	10.00	7.721	77	38-161	12	32
Chloroethane	10.00	9.751	98	62-131	11	24
Trichlorofluoromethane	10.00	7.707	77	64-137	5	23
Acetone	12.50	14.41	115	46-151	5	29
Freon 113	12.50	10.92	87	61-138	4	25
1,1-Dichloroethene	12.50	11.68	93	66-135	6	24
Methylene Chloride	12.50	12.62	101	74-131	2	21
Carbon Disulfide	12.50	13.38	107	63-150	6	25
MTBE	12.50	11.86	95	65-120	2	22
trans-1,2-Dichloroethene	12.50	12.28	98	72-134	7	22
Vinyl Acetate	12.50	19.59	157	60-194	1	25
1,1-Dichloroethane	12.50	12.09	97	68-127	6	21
2-Butanone	12.50	18.16	145 *	50-141	16	24
cis-1,2-Dichloroethene	12.50	11.88	95	73-129	4	20
2,2-Dichloropropane	12.50	13.62	109	72-146	7	24
Chloroform	12.50	11.90	95	73-126	4	20
Bromochloromethane	12.50	12.69	102	78-127	6	20
1,1,1-Trichloroethane	12.50	11.88	95	72-134	2	22
1,1-Dichloropropene	12.50	11.19	90	79-135	3	23
Carbon Tetrachloride	12.50	11.61	93	72-142	4	22
1,2-Dichloroethane	12.50	11.79	94	74-133	5	20
Benzene	12.50	12.65	101	80-123	9	20
Trichloroethene	12.50	11.45	92	80-123	2	20
1,2-Dichloropropane	12.50	12.40	99	74-120	5	20
Bromodichloromethane	12.50	11.80	94	79-121	3	20
Dibromomethane	12.50	12.62	101	80-120	0	20
4-Methyl-2-Pentanone	12.50	15.49	124	57-129	14	23
cis-1,3-Dichloropropene	12.50	12.27	98	80-130	1	20
Toluene	12.50	12.56	101	80-121	2	20
trans-1,3-Dichloropropene	12.50	12.02	96	76-122	3	20
1,1,2-Trichloroethane	12.50	13.39	107	80-120	5	20
2-Hexanone	12.50	16.49	132	49-136	6	24
1,3-Dichloropropane	12.50	13.67	109	80-120	3	20
Tetrachloroethene	12.50	12.33	99	78-130	3	21
Dibromochloromethane	12.50	12.51	100	80-123	0	20
1,2-Dibromoethane	12.50	12.97	104	80-120	7	20
Chlorobenzene	12.50	12.26	98	80-123	6	20
1,1,1,2-Tetrachloroethane	12.50	12.24	98	80-124	1	20
Ethylbenzene	12.50	12.48	100	80-123	0	21
m,p-Xylenes	25.00	23.69	95	80-126	3	21
o-Xylene	12.50	11.75	94	80-126	1	20
Styrene	12.50	11.81	94	80-122	2	20
Bromoform	12.50	12.29	98	72-132	8	20
Isopropylbenzene	12.50	12.43	99	79-130	2	21
1,1,2,2-Tetrachloroethane	12.50	14.12	113	72-129	0	20
1,2,3-Trichloropropane	12.50	14.74	118	72-124	2	22
Propylbenzene	12.50	12.66	101	79-128	2	21

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	222684
Units:	ug/L	Analyzed:	04/29/15
Diln Fac:	1.000		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Bromobenzene	12.50	12.52	100	80-122	1	20
1,3,5-Trimethylbenzene	12.50	12.69	102	80-129	1	20
2-Chlorotoluene	12.50	12.82	103	80-130	0	20
4-Chlorotoluene	12.50	12.42	99	79-125	0	20
tert-Butylbenzene	12.50	11.91	95	79-130	1	23
1,2,4-Trimethylbenzene	12.50	12.11	97	78-124	5	22
sec-Butylbenzene	12.50	12.19	98	79-134	1	23
para-Isopropyl Toluene	12.50	12.17	97	74-125	1	24
1,3-Dichlorobenzene	12.50	12.71	102	80-124	3	20
1,4-Dichlorobenzene	12.50	12.72	102	80-121	2	20
n-Butylbenzene	12.50	12.85	103	69-135	3	28
1,2-Dichlorobenzene	12.50	12.53	100	80-123	2	20
1,2-Dibromo-3-Chloropropane	12.50	13.84	111	59-125	12	23
1,2,4-Trichlorobenzene	12.50	12.99	104	66-133	4	24
Hexachlorobutadiene	12.50	12.45	100	70-152	2	26
Naphthalene	12.50	12.34	99	53-139	4	25
1,2,3-Trichlorobenzene	12.50	12.94	104	64-134	0	25
tert-Butyl Alcohol (TBA)	62.50	118.3 b	189 *	32-155	0	33
Isopropyl Ether (DIPE)	12.50	12.44	100	57-128	2	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.73	94	62-120	1	20
Methyl tert-Amyl Ether (TAME)	12.50	11.40	91	69-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	103	75-139
Toluene-d8	106	80-120
Bromofluorobenzene	103	80-120

*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC785930	Batch#:	222684
Matrix:	Water	Analyzed:	04/29/15
Units:	ug/L		

Analyte	Result	RL	MDL
Freon 12	ND	1.0	0.2
Chloromethane	ND	1.0	0.2
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.1
Chloroethane	ND	1.0	0.2
Trichlorofluoromethane	ND	1.0	0.1
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.3
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.8
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.1
2-Hexanone	ND	10	0.3
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 5030B
Project#:	103S225323.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC785930	Batch#:	222684
Matrix:	Water	Analyzed:	04/29/15
Units:	ug/L		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.6
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.4
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1
tert-Butyl Alcohol (TBA)	ND	20	2.3
Isopropyl Ether (DIPE)	ND	0.5	0.1
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	0.1
Methyl tert-Amyl Ether (TAME)	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	105	75-139
Toluene-d8	104	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0
Seqnum : 415092829003 File : bc503 Time : 05-MAR-2015 12:15

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	105632	27.09	
75	30% - 60% of mass 95	201768	51.75	
95		389888	100.00	
96	5% - 9% of mass 95	25758	6.61	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	297493	76.30	
175	5% - 9% of mass 174	21965	7.38	
176	> 95% and < 101% of mass 174	293909	98.80	
177	5% - 9% of mass 176	19360	6.59	

Analyst: MCT Date: 03/12/15 Reviewer: TKM Date: 03/12/15

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0
Seqnum : 415163075003 File : bdn03 Time : 23-APR-2015 07:03

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	97408	25.80	
75	30% - 60% of mass 95	192064	50.87	
95		377578	100.00	
96	5% - 9% of mass 95	25629	6.79	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	299776	79.39	
175	5% - 9% of mass 174	23280	7.77	
176	> 95% and < 101% of mass 174	295104	98.44	
177	5% - 9% of mass 176	19922	6.75	

Analyst: MCT Date: 04/23/15 Reviewer: LW Date: 04/24/15

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0
Seqnum : 415164517003 File : bdo03 Time : 24-APR-2015 07:04

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	83538	25.81	
75	30% - 60% of mass 95	162634	50.25	
95		323669	100.00	
96	5% - 9% of mass 95	22172	6.85	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	260032	80.34	
175	5% - 9% of mass 174	19885	7.65	
176	> 95% and < 101% of mass 174	254464	97.86	
177	5% - 9% of mass 176	16588	6.52	

Analyst: MCT Date: 04/24/15 Reviewer: LW Date: 04/27/15

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA02 Run Name : BFB IDF : 1.0
Seqnum : 415164517010 File : bdo10 Time : 24-APR-2015 11:16

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	103069	24.22	
75	30% - 60% of mass 95	209749	49.30	
95		425472	100.00	
96	5% - 9% of mass 95	27633	6.49	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	345493	81.20	
175	5% - 9% of mass 174	27386	7.93	
176	> 95% and < 101% of mass 174	342037	99.00	
177	5% - 9% of mass 176	22365	6.54	

Analyst: MCT Date: 04/24/15 Reviewer: LW Date: 04/27/15

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA03 Run Name : BFB IDF : 1.0
Seqnum : 425152069014 File : cdf14 Time : 15-APR-2015 18:25

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	19181	19.47	
75	30% - 60% of mass 95	41565	42.19	
95		98517	100.00	
96	5% - 9% of mass 95	6474	6.57	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	73306	74.41	
175	5% - 9% of mass 174	5476	7.47	
176	> 95% and < 101% of mass 174	70485	96.15	
177	5% - 9% of mass 176	4575	6.49	

Analyst: DAR Date: 04/16/15 Reviewer: LW Date: 04/17/15

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA03 Run Name : BFB IDF : 1.0
Seqnum : 425171890003 File : cdt03 Time : 29-APR-2015 11:20

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	20757	20.82	
75	30% - 60% of mass 95	42861	42.99	
95		99693	100.00	
96	5% - 9% of mass 95	6466	6.49	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	67165	67.37	
175	5% - 9% of mass 174	4989	7.43	
176	> 95% and < 101% of mass 174	66176	98.53	
177	5% - 9% of mass 176	4203	6.35	

Analyst: DJA Date: 04/30/15 Reviewer: LW Date: 04/30/15

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA06 Run Name : BFB IDF : 1.0
Seqnum : 455130249010 File : fcv10 Time : 31-MAR-2015 18:35

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	28749	20.48	
75	30% - 60% of mass 95	60128	42.84	
95		140352	100.00	
96	5% - 9% of mass 95	9424	6.71	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	102341	72.92	
175	5% - 9% of mass 174	7478	7.31	
176	> 95% and < 101% of mass 174	98130	95.89	
177	5% - 9% of mass 176	6503	6.63	

Analyst: DAR Date: 04/01/15 Reviewer: LW Date: 04/02/15

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA06 Run Name : BFB IDF : 1.0
Seqnum : 455131716002 File : fd102 Time : 01-APR-2015 11:45

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	30312	19.05	
75	30% - 60% of mass 95	65424	41.11	
95		159125	100.00	
96	5% - 9% of mass 95	10906	6.85	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	115973	72.88	
175	5% - 9% of mass 174	8593	7.41	
176	> 95% and < 101% of mass 174	114960	99.13	
177	5% - 9% of mass 176	7956	6.92	

Analyst: DAR Date: 04/01/15 Reviewer: LW Date: 04/02/15

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA06 Run Name : BFB IDF : 1.0
Seqnum : 455158971003 File : fdk03 Time : 20-APR-2015 12:47

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	41650	21.18	
75	30% - 60% of mass 95	84898	43.17	
95		196650	100.00	
96	5% - 9% of mass 95	12286	6.25	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	141880	72.15	
175	5% - 9% of mass 174	10245	7.22	
176	> 95% and < 101% of mass 174	138229	97.43	
177	5% - 9% of mass 176	9408	6.81	

Analyst: DJA Date: 04/21/15 Reviewer: LW Date: 04/21/15

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA06 Run Name : BFB IDF : 1.0
Seqnum : 455171722011 File : fdt11 Time : 29-APR-2015 13:20

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	21637	18.73	
75	30% - 60% of mass 95	45858	39.70	
95		115509	100.00	
96	5% - 9% of mass 95	7842	6.79	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	86026	74.48	
175	5% - 9% of mass 174	5766	6.70	
176	> 95% and < 101% of mass 174	83264	96.79	
177	5% - 9% of mass 176	5346	6.42	

Analyst: DAR Date: 04/29/15 * Reviewer: LW Date: 04/30/15

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : BFB IDF : 1.0
Seqnum : 495052755006 File : jb506 Time : 05-FEB-2015 20:36

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	51514	30.11	
75	30% - 60% of mass 95	96306	56.28	
95		171114	100.00	
96	5% - 9% of mass 95	11346	6.63	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	112648	65.83	
175	5% - 9% of mass 174	8383	7.44	
176	> 95% and < 101% of mass 174	110792	98.35	
177	5% - 9% of mass 176	7545	6.81	

Analyst: DAR Date: 02/06/15 Reviewer: LW Date: 02/09/15

CURTIS & TOMPKINS BFB TUNE FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : BFB IDF : 1.0
Seqnum : 495166227004 File : jdp04 Time : 25-APR-2015 12:06

Standards: S26000

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
50	15% - 40% of mass 95	67888	30.03	
75	30% - 60% of mass 95	126834	56.10	
95		226069	100.00	
96	5% - 9% of mass 95	14745	6.52	
173	< 2% of mass 174	0	0.00	
174	> 50% and < 100% of mass 95	136205	60.25	
175	5% - 9% of mass 174	9930	7.29	
176	> 95% and < 101% of mass 174	136696	100.36	
177	5% - 9% of mass 176	8941	6.54	

Analyst: DJA Date: 04/27/15 Reviewer: LW Date: 04/27/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 MSVOA Water: EPA 8260B

Inst : MSVOA02
 Calnum : 415092829001
 Units : ug/L
 Date : 05-MAR-2015 14:27
 X Axis : R
 Type : WATER

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	bc507	415092829007	05-MAR-2015 14:27	S25695 (2000000X), S26560 (20000000X), S26570 (20000000X), S26571 (1000000X), S26528 (1000X)
L2	bc508	415092829008	05-MAR-2015 15:03	S25695 (1000000X), S26560 (10000000X), S26570 (10000000X), S26571 (5000000X), S26528 (1000X)
L3	bc509	415092829009	05-MAR-2015 15:38	S25695 (500000X), S26560 (2500000X), S26570 (25000000X), S26571 (2500000X), S26528 (10000X)
L4	bc510	415092829010	05-MAR-2015 16:14	S25695 (200000X), S26560 (1000000X), S26570 (10000000X), S26571 (1000000X), S26528 (10000X)
L5	bc511	415092829011	05-MAR-2015 16:50	S25695 (100000X), S26560 (500000X), S26570 (5000000X), S26571 (500000X), S26528 (10000X)
L6	bc512	415092829012	05-MAR-2015 17:26	S25695 (50000X), S26560 (250000X), S26570 (2500000X), S26571 (250000X), S26528 (10000X)
L7	bc513	415092829013	05-MAR-2015 18:01	S25695 (20000X), S26560 (100000X), S26570 (1000000X), S26571 (1000000X), S26528 (10000X)
L8	bc514	415092829014	05-MAR-2015 18:37	S25695 (13330X), S26560 (6667X), S26570 (6667X), S26571 (6667X), S26528 (10000X)
L9	bc515	415092829015	05-MAR-2015 19:12	S25695 (10000X), S26560 (50000X), S26570 (50000X), S26571 (50000X), S26528 (10000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Freon 12		1.0333m	1.0540m	1.0312	1.0044	0.9900	1.0359	0.9907	0.9616	AVRG	0.98752	0.98752		1.0126	3	15	0.05	0.99	
Chloromethane	1.8552m	1.4794m	1.5393	1.4441	1.4866	1.4336	1.4275	1.3921	1.3788	AVRG	0.66981	0.66981		1.4930	10	15	0.10	0.99	
Vinyl Chloride	1.3424m	1.1834m	1.1476	1.0350	1.0901	1.0415	1.1071	1.0711	1.0693	AVRG	0.89220	0.89220		1.1208	9	15	0.05	0.99	
Bromomethane		0.4622m	0.5256	0.4908	0.5180	0.5282	0.5745	0.5821	0.6082	AVRG	1.86496	1.86496		0.5362	9	15	0.05	0.99	
Chloroethane		0.7570m	0.6754	0.6393	0.6182	0.6010	0.6136	0.5959	0.6029	AVRG	1.56764	1.56764		0.6379	9	15	0.05	0.99	
Trichlorofluoromethane		1.2559	1.2463	1.1854	1.2203	1.2012	1.2335	1.1904	1.1751	AVRG	0.82405	0.82405		1.2135	2	15	0.05	0.99	
Acetone			0.6117m	0.5073	0.4462	0.4870	0.4492	0.4914	0.4458	AVRG	2.03570	2.03570		0.4912	12	15	0.05	0.99	
Freon 113		0.6223	0.6259	0.6438	0.6088	0.5984	0.6358	0.6152	0.6068	AVRG	1.61387	1.61387		0.6196	2	15	0.05	0.99	
1,1-Dichloroethene		0.5908m	0.7244	0.6849	0.6542	0.6624	0.6697	0.6549	0.6411	AVRG	1.51452	1.51452		0.6603	6	15	0.05	0.99	
Methylene Chloride		0.9396	0.9056	0.9144	0.8991	0.8923	0.8985	0.8568	0.8588	AVRG	1.11650	1.11650		0.8957	3	15	0.05	0.99	
Carbon Disulfide		2.5130	2.6110	2.5803	2.4999	2.5284	2.5735	2.4637	2.4781	AVRG	0.39511	0.39511		2.5310	2	15	0.05	0.99	
MTBE		2.4905	2.4818	2.4597	2.4700	2.5224	2.5213	2.2645m	2.4187	AVRG	0.40756	0.40756		2.4536	3	15	0.05	0.99	
trans-1,2-Dichloroethene		0.7529m	0.7749	0.7971	0.7661	0.7634	0.7637	0.7464	0.7403	AVRG	1.31048	1.31048		0.7631	2	15	0.05	0.99	
Vinyl Acetate			1.7282	1.8508	2.1593	2.0690	2.1965	1.7384	1.7839	AVRG	0.51752	0.51752		1.9323	11	15	0.05	0.99	
1,1-Dichloroethane		1.8863	1.9080	1.7937	1.7824	1.8003	1.7812	1.7096	1.7036	AVRG	0.55691	0.55691		1.7956	4	15	0.10	0.99	
2-Butanone			0.6242	0.7164	0.6646	0.6788	0.6583	0.6788	0.6340	AVRG	1.50374	1.50374		0.6650	5	15	0.05	0.99	
2,2-Dichloropropane		1.2779	1.2306	1.1457	1.0878	1.0824	1.0590	1.0022	0.9727	AVRG	0.90311	0.90311		1.1073	10	15	0.05	0.99	
cis-1,2-Dichloroethene		0.9140	0.9351	0.9013	0.8609	0.8848	0.8759	0.8552	0.8483	AVRG	1.13067	1.13067		0.8844	3	15	0.05	0.99	
Chloroform		1.5732	1.5891	1.5619	1.5309	1.5569	1.5600	1.5097	1.4979	AVRG	0.64623	0.64623		1.5474	2	15	0.05	0.99	
Bromochloromethane		0.4237	0.4709	0.4620	0.4629	0.4710	0.4621	0.4447	0.4443	AVRG	2.19683	2.19683		0.4552	4	15	0.05	0.99	
1,1,1-Trichloroethane		1.1954	1.1857	1.1912	1.1692	1.1943	1.2069	1.1665	1.1593	AVRG	0.84490	0.84490		1.1836	1	15	0.05	0.99	
1,1-Dichloropropene		0.5952	0.5455	0.5666	0.5507	0.5459	0.5601	0.5422	0.5383	AVRG	1.79999	1.79999		0.5556	3	15	0.05	0.99	
Carbon Tetrachloride		0.4422	0.4864	0.4798	0.4712	0.4833	0.5010	0.4865	0.4822	AVRG	2.08734	2.08734		0.4791	4	15	0.05	0.99	
1,2-Dichloroethane		0.7333	0.7662	0.7300	0.7458	0.7365	0.7381	0.7142	0.7027	AVRG	1.36359	1.36359		0.7334	3	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r ² %RSD	Max %RSD	Min RF	Min r ²	FLg
Benzene		1.5615	1.5815	1.5886	1.5403	1.5580	1.5340	1.4987	1.4890	AVRG		0.64769		1.5439	2	15	0.05	0.99	
Trichloroethene		0.4284	0.4291	0.4119	0.3952	0.4215	0.4031	0.4028	0.3973	AVRG		2.43216		0.4112	3	15	0.05	0.99	
1,2-Dichloropropane		0.5277	0.5276	0.5300	0.5339	0.5355	0.5279	0.5172	0.5098	AVRG		1.90043		0.5262	2	15	0.05	0.99	
Bromodichloromethane		0.5901	0.5860	0.5972	0.5941	0.6105	0.6193	0.6018	0.5959	AVRG		1.66844		0.5994	2	15	0.05	0.99	
Dibromomethane		0.3517	0.3393	0.3380	0.3358	0.3403	0.3375	0.3292	0.3254	AVRG		2.96612		0.3371	2	15	0.05	0.99	
4-Methyl-2-Pentanone			0.6836	0.7060	0.7208	0.7130	0.7196	0.7168	0.7069	AVRG		1.40936		0.7095	2	15	0.05	0.99	
cis-1,3-Dichloropropene		0.6785	0.7213	0.7117	0.7152	0.7259	0.7310	0.7205	0.7177	AVRG		1.39814		0.7152	2	15	0.05	0.99	
Toluene		1.0032	0.9623	0.9484	0.9236	0.9296	0.9498	0.9428	0.9389	AVRG		1.05283		0.9498	3	15	0.05	0.99	
trans-1,3-Dichloropropene		0.7280	0.7018	0.7206	0.7160	0.7282	0.7442	0.7427	0.7379	AVRG		1.37474		0.7274	2	15	0.05	0.99	
1,1,2-Trichloroethane		0.2538	0.2492	0.2525	0.2471	0.2533	0.2499	0.2432	0.2416	AVRG		4.01880		0.2488	2	15	0.05	0.99	
2-Hexanone			0.5097	0.5617	0.5412	0.5622	0.5624	0.5768	0.5637	AVRG		1.80521		0.5540	4	15	0.05	0.99	
1,3-Dichloropropane		0.7662	0.7530	0.7805	0.7441	0.7575	0.7646	0.7530	0.7493	AVRG		1.31832		0.7585	2	15	0.05	0.99	
Tetrachloroethene		0.3845	0.3637	0.3544	0.3434	0.3388	0.3481	0.3486	0.3521	AVRG		2.82331		0.3542	4	15	0.05	0.99	
Dibromochloromethane		0.4438	0.4545	0.4860	0.4870	0.5079	0.5338	0.5301	0.5333	AVRG		2.01186		0.4971	7	15	0.05	0.99	
1,2-Dibromoethane		0.4586	0.4827	0.4881	0.4792	0.4884	0.4973	0.4888	0.4876	AVRG		2.06683		0.4838	2	15	0.05	0.99	
Chlorobenzene		1.0766	1.0829	1.0883	1.0535	1.0617	1.0767	1.0661	1.0674	AVRG		0.93314		1.0716	1	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.3825	0.3907	0.4049	0.3951	0.3987	0.4103	0.4083	0.4086	AVRG		2.50076		0.3999	2	15	0.05	0.99	
Ethylbenzene		1.7363	1.7412	1.7579	1.7132	1.7233	1.7606	1.7505	1.7714	AVRG		0.57329		1.7443	1	15	0.05	0.99	
m,p-Xylenes	0.5559	0.5906	0.6111	0.6089	0.5994	0.6112	0.6218	0.6125	0.6161	AVRG		1.65824		0.6030	3	15	0.05	0.99	
o-Xylene		0.5837	0.6162	0.6243	0.6220	0.6201	0.6392	0.6227	0.6240	AVRG		1.61545		0.6190	3	15	0.05	0.99	
Styrene		0.9974	1.0432	1.0784	1.0891	1.1110	1.1522	1.1266	1.1356	AVRG		0.91602		1.0917	5	15	0.05	0.99	
Bromoform		0.2566	0.2702	0.3005	0.3232	0.3397	0.3579	0.3636	0.3684	AVRG		3.110053		0.3225	13	15	0.10	0.99	
Isopropylbenzene		3.2023	3.2334	3.1919	3.1547	3.1917	3.2691	3.3068	3.3143	AVRG		0.30931		3.2330	2	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		1.2403	1.3367	1.3321	1.3496	1.3178	1.3089	1.2767	1.2822	AVRG		0.76597		1.3055	3	15	0.30	0.99	
1,2,3-Trichloropropane		1.2088	1.1508	1.1492	1.0948	1.0831	1.0799	1.0929	1.0883	AVRG		0.89408		1.1185	4	15	0.05	0.99	
Propylbenzene		3.9851	3.7872	3.7390	3.6982	3.6922	3.7797	3.8001	3.8149	AVRG		0.26406		3.7870	2	15	0.05	0.99	
Bromobenzene		1.0343	0.9674	0.9841	0.9799	0.9640	0.9647	0.9766	0.9752	AVRG		1.01961		0.9808	2	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.5626	2.4688	2.4965	2.4804	2.6102	2.5442	2.5591	2.5601	AVRG		0.39444		2.5352	2	15	0.05	0.99	
2-Chlorotoluene		2.9536	2.8507	2.8317	2.7629	2.8385	2.7480	2.7750	2.7532	AVRG		0.35534		2.8142	2	15	0.05	0.99	
4-Chlorotoluene		2.8909	2.5973	2.5738	2.4910	2.5204	2.5683	2.5802	2.5859	AVRG		0.38447		2.6010	5	15	0.05	0.99	
tert-Butylbenzene		2.2226	2.0939	2.0750	2.0584	2.0690	2.1540	2.1607	2.1775	AVRG		0.47028		2.1264	3	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.3172	2.2576	2.3840	2.3484	2.4330	2.5275	2.5728	2.5891	AVRG		0.41174		2.4287	5	15	0.05	0.99	
sec-Butylbenzene		3.0429	3.0213	3.0299	3.0096	3.0373	3.1913	3.1761	3.1952	AVRG		0.32384		3.0880	3	15	0.05	0.99	
para-Isopropyl Toluene		2.2490	2.2246	2.2409	2.3141	2.2741	2.3815	2.4034	2.4256	AVRG		0.43213		2.3141	3	15	0.05	0.99	
1,3-Dichlorobenzene		1.4962	1.5255	1.5211	1.4937	1.4570	1.4832	1.4945	1.4992	AVRG		0.66832		1.4963	1	15	0.05	0.99	
1,4-Dichlorobenzene		1.7022	1.5569	1.5169	1.5193	1.4927	1.5090	1.5228	1.5354	AVRG		0.64749		1.5444	4	15	0.05	0.99	
n-Butylbenzene		1.9251	1.7483	1.7998	1.7906	1.8544	2.0140	2.0347	2.0759	AVRG		0.52484		1.9053	7	15	0.05	0.99	
1,2-Dichlorobenzene		1.6049	1.5796	1.5678	1.5546	1.5478	1.5521	1.5547	1.5703	AVRG		0.63837		1.5665	1	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane		0.2801	0.2804	0.2617	0.2703	0.2671	0.2678	0.2726	0.2668	AVRG		3.69174		0.2709	2	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.6421	0.5671	0.6095	0.6218	0.6647	0.7046	0.7176	0.7366	AVRG		1.51972		0.6580	9	15	0.05	0.99	
Hexachlorobutadiene		0.4841	0.4253	0.4071	0.4036	0.3977	0.4210	0.4186	0.4199	AVRG		2.36880		0.4222	6	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	FLg
Naphthalene	1.5377	1.4713	1.5654	1.6770	1.8343	1.9158	1.9997	2.0211	AVRG	0.57052				1.7528	12	15	0.05	0.99	
1,2,3-Trichlorobenzene	0.5631	0.5634	0.6303	0.6547	0.6964	0.7376	0.7539	0.7683	AVRG	1.49041				0.6710	12	15	0.05	0.99	
tert-Butyl Alcohol (TEA)	0.0852	0.0787	0.0752	0.0738	0.0758	0.0738	0.0855	0.0746	AVRG	12.8509				0.0778	6	15	0.005	0.99	
Isopropyl Ether (DIPE)	4.2600	4.2918	4.2355	4.2629	4.3565	4.3699	4.2475	4.2110	AVRG	0.23368				4.2794	1	15	0.05	0.99	
Ethyl tert-Butyl Ether (ETBE)	3.1905	3.2227	3.2351	3.2261	3.2965	3.3383	3.2383	3.2291	AVRG	0.30797				3.2471	1	15	0.05	0.99	
Methyl tert-Amyl Ether (TAME)	1.3077	1.3497	1.3177	1.3265	1.3408	1.3357	1.3095	1.2949	AVRG	0.75597				1.3228	1	15	0.05	0.99	
Dibromofluoromethane	0.7952	0.8172	0.8166	0.8006	0.8225	0.8171	0.7884	0.7880	AVRG	1.23990				0.8065	2	15	0.05	0.99	
1,2-Dichloroethane-d4	0.5345	0.5373	0.5390	0.5302	0.5332	0.5344	0.5201	0.4913	AVRG	1.90542				0.5248	3	15	0.05	0.99	
Toluene-d8	1.2703	1.2944	1.2825	1.2911	1.2707	1.2784	1.2793	1.2919	AVRG	0.77894				1.2838	1	15	0.05	0.99	
Bromofluorobenzene	1.1364	1.1452	1.1328	1.1285	1.1077	1.0959	1.1144	1.1148	AVRG	0.89251				1.1204	1	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	2	2.0000	4	5.0000	2	10.000	-1	20.000	-2	50.000	2	75.000	-2	100.00	-5
Chloromethane	0.5000	24	1.0000	-1	2.0000	3	5.0000	-3	10.000	0	20.000	-4	50.000	-4	75.000	-7	100.00	-8
Vinyl Chloride	0.5000	20	1.0000	6	2.0000	2	5.0000	-8	10.000	-3	20.000	-7	50.000	-1	75.000	-4	100.00	-5
Bromomethane			1.0000	-14	2.0000	-2	5.0000	-8	10.000	-3	20.000	-2	50.000	7	75.000	9	100.00	13
Chloroethane			1.0000	19	2.0000	6	5.0000	0	10.000	-3	20.000	-6	50.000	-4	75.000	-7	100.00	-5
Trichlorofluoromethane			1.0000	3	2.0000	3	5.0000	-2	10.000	1	20.000	-1	50.000	2	75.000	-2	100.00	-3
Acetone					2.0000	25	5.0000	3	10.000	-9	20.000	-1	50.000	-9	75.000	0	100.00	-9
Freon 113			0.5000	0	2.0000	1	5.0000	4	10.000	-2	20.000	-3	50.000	3	75.000	-1	100.00	-2
1,1-Dichloroethene			0.5000	-11	2.0000	10	5.0000	4	10.000	-1	20.000	0	50.000	1	75.000	-1	100.00	-3
Methylene Chloride			0.5000	5	2.0000	1	5.0000	2	10.000	0	20.000	0	50.000	0	75.000	-4	100.00	-4
Carbon Disulfide			0.5000	-1	2.0000	3	5.0000	2	10.000	-1	20.000	0	50.000	2	75.000	-3	100.00	-2
MTBE			0.5000	2	2.0000	1	5.0000	0	10.000	1	20.000	3	50.000	3	75.000	-8	100.00	-1
trans-1,2-Dichloroethene			0.5000	-1	2.0000	2	5.0000	4	10.000	0	20.000	0	50.000	0	75.000	-2	100.00	-3
Vinyl Acetate					2.0000	-11	5.0000	-4	10.000	12	20.000	7	50.000	14	75.000	-10	100.00	-8
1,1-Dichloroethane			0.5000	5	2.0000	6	5.0000	0	10.000	-1	20.000	0	50.000	-1	75.000	-5	100.00	-5
2-Butanone					2.0000	-6	5.0000	8	10.000	0	20.000	2	50.000	-1	75.000	2	100.00	-5
2,2-Dichloropropane			0.5000	15	2.0000	11	5.0000	3	10.000	-2	20.000	-2	50.000	-4	75.000	-9	100.00	-12
cis-1,2-Dichloroethene			0.5000	3	2.0000	6	5.0000	2	10.000	-3	20.000	0	50.000	-1	75.000	-3	100.00	-4
Chloroform			0.5000	2	2.0000	3	5.0000	1	10.000	-1	20.000	1	50.000	1	75.000	-2	100.00	-3
Bromochloromethane			0.5000	-7	2.0000	3	5.0000	2	10.000	2	20.000	3	50.000	2	75.000	-2	100.00	-2
1,1,1-Trichloroethane			0.5000	1	2.0000	0	5.0000	1	10.000	-1	20.000	1	50.000	2	75.000	-1	100.00	-2
1,1-Dichloropropene			0.5000	7	2.0000	-2	5.0000	2	10.000	-1	20.000	-2	50.000	1	75.000	-2	100.00	-3
Carbon Tetrachloride			0.5000	-8	2.0000	2	5.0000	0	10.000	-2	20.000	1	50.000	5	75.000	2	100.00	1
1,2-Dichloroethane			0.5000	0	2.0000	4	5.0000	0	10.000	2	20.000	0	50.000	0	75.000	-3	100.00	-4
Benzene			0.5000	1	2.0000	2	5.0000	3	10.000	0	20.000	1	50.000	-1	75.000	-3	100.00	-4
Trichloroethene			0.5000	4	2.0000	4	5.0000	0	10.000	-4	20.000	3	50.000	-2	75.000	-2	100.00	-3
1,2-Dichloropropane			0.5000	0	2.0000	0	5.0000	1	10.000	1	20.000	2	50.000	0	75.000	-2	100.00	-3
Bromodichloromethane			0.5000	-2	2.0000	-2	5.0000	0	10.000	-1	20.000	2	50.000	3	75.000	0	100.00	-1
Dibromomethane			0.5000	4	2.0000	1	5.0000	0	10.000	0	20.000	1	50.000	0	75.000	-2	100.00	-3
4-Methyl-2-Pentanone					2.0000	-4	5.0000	0	10.000	2	20.000	0	50.000	0	75.000	1	100.00	0
cis-1,3-Dichloropropene			0.5000	-5	2.0000	1	5.0000	0	10.000	0	20.000	1	50.000	2	75.000	1	100.00	0
Toluene			0.5000	6	2.0000	1	5.0000	0	10.000	-3	20.000	-2	50.000	0	75.000	-1	100.00	-1
trans-1,3-Dichloropropene			0.5000	0	2.0000	-4	5.0000	-1	10.000	-2	20.000	0	50.000	2	75.000	2	100.00	1
1,1,2-Trichloroethane			0.5000	2	2.0000	0	5.0000	1	10.000	-1	20.000	2	50.000	0	75.000	-2	100.00	-3
2-Hexanone					2.0000	-8	5.0000	1	10.000	-2	20.000	1	50.000	2	75.000	4	100.00	2
1,3-Dichloropropane			0.5000	1	2.0000	-1	5.0000	3	10.000	-2	20.000	0	50.000	1	75.000	-1	100.00	-1
Tetrachloroethene			0.5000	9	2.0000	3	5.0000	0	10.000	-3	20.000	-4	50.000	-2	75.000	-2	100.00	-1
Dibromochloromethane			0.5000	-11	2.0000	-9	5.0000	-2	10.000	-2	20.000	2	50.000	7	75.000	7	100.00	7
1,2-Dibromoethane			0.5000	-5	2.0000	0	5.0000	1	10.000	-1	20.000	1	50.000	3	75.000	1	100.00	1
Chlorobenzene			0.5000	0	2.0000	1	5.0000	2	10.000	-2	20.000	-1	50.000	0	75.000	-1	100.00	0
1,1,1,2-Tetrachloroethane			0.5000	-4	2.0000	-2	5.0000	1	10.000	-1	20.000	0	50.000	3	75.000	2	100.00	2
Ethylbenzene			0.5000	0	2.0000	0	5.0000	1	10.000	-2	20.000	-1	50.000	1	75.000	0	100.00	2

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	-8	1.0000	-2	4.0000	1	10.000	1	20.000	-1	40.000	1	100.00	1	150.00	2	200.00	2
o-Xylene			0.5000	-6	2.0000	0	5.0000	0	10.000	0	20.000	0	50.000	0	75.000	1	100.00	1
Styrene			0.5000	-9	2.0000	-4	5.0000	-4	10.000	0	20.000	0	50.000	2	75.000	3	100.00	4
Bromoform			0.5000	-20	2.0000	-16	5.0000	-16	10.000	0	20.000	0	50.000	5	75.000	11	100.00	14
Isopropylbenzene			0.5000	-1	2.0000	0	5.0000	0	10.000	-1	20.000	-1	50.000	-1	75.000	2	100.00	3
1,1,2,2-Tetrachloroethane			0.5000	-5	2.0000	2	5.0000	2	10.000	3	20.000	3	50.000	1	75.000	-2	100.00	-2
1,2,3-Trichloropropane			0.5000	8	2.0000	3	5.0000	3	10.000	-2	20.000	-2	50.000	-3	75.000	-2	100.00	-3
Propylbenzene			0.5000	5	2.0000	0	5.0000	0	10.000	-1	20.000	-1	50.000	0	75.000	0	100.00	1
Bromobenzene			0.5000	5	2.0000	-1	5.0000	-1	10.000	0	20.000	0	50.000	-2	75.000	0	100.00	-1
1,3,5-Trimethylbenzene			0.5000	1	2.0000	-3	5.0000	-3	10.000	-2	20.000	-2	50.000	3	75.000	1	100.00	1
2-Chlorotoluene			0.5000	5	2.0000	1	5.0000	1	10.000	-2	20.000	-2	50.000	1	75.000	-1	100.00	-2
4-Chlorotoluene			0.5000	11	2.0000	0	5.0000	0	10.000	-4	20.000	-4	50.000	-3	75.000	-1	100.00	-1
tert-Butylbenzene			0.5000	5	2.0000	-2	5.0000	-2	10.000	-3	20.000	-3	50.000	-3	75.000	2	100.00	2
1,2,4-Trimethylbenzene			0.5000	-5	2.0000	-7	5.0000	-7	10.000	-2	20.000	-2	50.000	0	75.000	4	100.00	7
sec-Butylbenzene			0.5000	-1	2.0000	-2	5.0000	-2	10.000	-3	20.000	-3	50.000	-2	75.000	3	100.00	3
para-Isopropyl Toluene			0.5000	-3	2.0000	-4	5.0000	-4	10.000	0	20.000	0	50.000	-2	75.000	3	100.00	5
1,3-Dichlorobenzene			0.5000	0	2.0000	2	5.0000	2	10.000	0	20.000	0	50.000	-3	75.000	0	100.00	0
1,4-Dichlorobenzene			0.5000	10	2.0000	1	5.0000	1	10.000	-2	20.000	-2	50.000	-3	75.000	-2	100.00	-1
n-Butylbenzene			0.5000	1	2.0000	-8	5.0000	-8	10.000	-6	20.000	-6	50.000	-3	75.000	6	100.00	9
1,2-Dichlorobenzene			0.5000	2	2.0000	1	5.0000	1	10.000	-1	20.000	-1	50.000	-1	75.000	-1	100.00	0
1,2-Dibromo-3-Chloropropane			0.5000	3	2.0000	4	5.0000	4	10.000	0	20.000	0	50.000	-1	75.000	1	100.00	-1
1,2,4-Trichlorobenzene			0.5000	-2	2.0000	-14	5.0000	-14	10.000	-7	20.000	-7	50.000	1	75.000	7	100.00	12
Hexachlorobutadiene			0.5000	15	2.0000	1	5.0000	1	10.000	-4	20.000	-4	50.000	-6	75.000	0	100.00	-1
Naphthalene			0.5000	-12	2.0000	-16	5.0000	-16	10.000	-11	20.000	-11	50.000	5	75.000	14	100.00	15
1,2,3-Trichlorobenzene			0.5000	-16	2.0000	-16	5.0000	-16	10.000	-6	20.000	-6	50.000	4	75.000	12	100.00	15
tert-Butyl Alcohol (TEA)			5.0000	9	20.000	1	50.000	1	100.00	-5	200.00	-5	500.00	-3	750.00	10	1000.0	-4
Isopropyl Ether (DIPE)			0.5000	0	2.0000	0	5.0000	0	10.000	-1	20.000	-1	50.000	2	75.000	-1	100.00	-2
Ethyl tert-Butyl Ether (ETBE)			0.5000	-2	2.0000	-1	5.0000	-1	10.000	0	20.000	0	50.000	2	75.000	0	100.00	-1
Methyl tert-Amyl Ether (TAME)			0.5000	-1	2.0000	2	5.0000	2	10.000	0	20.000	0	50.000	1	75.000	-1	100.00	-2
Dibromofluoromethane	50.000	-1	50.000	1	50.000	1	50.000	1	50.000	-1	50.000	-1	50.000	2	50.000	1	50.000	-2
1,2-Dichloroethane-d4	50.000	2	50.000	2	50.000	3	50.000	3	50.000	2	50.000	2	50.000	2	50.000	-1	50.000	-6
Toluene-d8	50.000	-1	50.000	1	50.000	0	50.000	0	50.000	-1	50.000	-1	50.000	0	50.000	1	50.000	1
Bromofluorobenzene	50.000	1	50.000	2	50.000	1	50.000	1	50.000	-1	50.000	-1	50.000	-1	50.000	-2	50.000	0

MCT 03/12/15 [Freon 12]: Combined split peak in multiple levels.

MCT 03/12/15 [Chloromethane]: Corrected baseline noise or negative peak in multiple levels.

MCT 03/12/15 [Vinyl Chloride]: Combined split peak in multiple levels.

MCT 03/12/15 [Bromomethane]: Corrected baseline noise or negative peak in multiple levels.

MCT 03/12/15 [Chloroethane]: Combined split peak in multiple levels.
MCT 03/12/15 [Acetone]: Corrected baseline noise or negative peak in multiple levels.
MCT 03/12/15 [Isopropanol]: Corrected baseline noise or negative peak in multiple levels.
MCT 03/12/15 [trans-1,2-Dichloroethene]: Corrected baseline noise or negative peak in (bc508).
MCT 03/12/15 [1,1-Dichloroethene]: Corrected baseline noise or negative peak in (bc508).
MCT 03/12/15 [2-Chloroethylvinylether]: Picked or reassigned peak in multiple levels.

Analytst: MCT Date: 03/12/15 Reviewer: TKM Date: 03/12/15

m>manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA02
Calnum : 415092829001

Cal Date : 05-MAR-2015

Type : WATER

ICV 415092829016 (bc516 05-MAR-2015) stds: S26359 (10000X), S26528 (1000X)
ICV 415092829017 (bc517 05-MAR-2015) stds: S26569 (10000X), S26642 (10000X),
S26759 (10000X), S26528 (1000X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	415092829016	20.00	17.44	ug/L	-13	30	
Chloromethane	415092829016	20.00	17.29	ug/L	-14	30	
Vinyl Chloride	415092829016	20.00	19.30	ug/L	-3	20	
Bromomethane	415092829016	20.00	19.52	ug/L	-2	30	
Chloroethane	415092829016	20.00	18.73	ug/L	-6	30	
Trichlorofluoromethane	415092829016	20.00	19.19	ug/L	-4	30	
Acetone	415092829017	25.00	19.24	ug/L	-23	40	!v-
Freon 113	415092829017	25.00	21.93	ug/L	-12	30	
1,1-Dichloroethene	415092829017	25.00	23.66	ug/L	-5	20	
Methylene Chloride	415092829017	25.00	24.53	ug/L	-2	30	
Carbon Disulfide	415092829017	25.00	25.40	ug/L	2	30	
MTBE	415092829017	25.00	23.78	ug/L	-5	30	
trans-1,2-Dichloroethene	415092829017	25.00	24.07	ug/L	-4	30	
Vinyl Acetate	415092829017	25.00	31.21	ug/L	25	40	!v+
1,1-Dichloroethane	415092829017	25.00	23.58	ug/L	-6	30	
2-Butanone	415092829017	25.00	21.71	ug/L	-13	40	
2,2-Dichloropropane	415092829017	25.00	21.63	ug/L	-13	30	
cis-1,2-Dichloroethene	415092829017	25.00	24.48	ug/L	-2	30	
Chloroform	415092829017	25.00	24.53	ug/L	-2	20	
Bromochloromethane	415092829017	25.00	25.49	ug/L	2	30	
1,1,1-Trichloroethane	415092829017	25.00	24.89	ug/L	0	30	
1,1-Dichloropropene	415092829017	25.00	23.88	ug/L	-4	30	
Carbon Tetrachloride	415092829017	25.00	25.20	ug/L	1	30	
1,2-Dichloroethane	415092829017	25.00	23.92	ug/L	-4	30	
Benzene	415092829017	25.00	25.46	ug/L	2	30	
Trichloroethene	415092829017	25.00	24.65	ug/L	-1	30	
1,2-Dichloropropane	415092829017	25.00	23.59	ug/L	-6	20	
Bromodichloromethane	415092829017	25.00	24.29	ug/L	-3	30	
Dibromomethane	415092829017	25.00	24.43	ug/L	-2	30	
4-Methyl-2-Pentanone	415092829017	25.00	23.09	ug/L	-8	40	
cis-1,3-Dichloropropene	415092829017	25.00	24.32	ug/L	-3	30	
Toluene	415092829017	25.00	25.67	ug/L	3	20	
trans-1,3-Dichloropropene	415092829017	25.00	22.90	ug/L	-8	30	
1,1,2-Trichloroethane	415092829017	25.00	24.65	ug/L	-1	30	
2-Hexanone	415092829017	25.00	23.01	ug/L	-8	40	
1,3-Dichloropropane	415092829017	25.00	25.57	ug/L	2	30	
Tetrachloroethene	415092829017	25.00	25.72	ug/L	3	30	
Dibromochloromethane	415092829017	25.00	25.75	ug/L	3	30	
1,2-Dibromoethane	415092829017	25.00	25.22	ug/L	1	30	
Chlorobenzene	415092829017	25.00	25.74	ug/L	3	30	
1,1,1,2-Tetrachloroethane	415092829017	25.00	25.16	ug/L	1	30	
Ethylbenzene	415092829017	25.00	26.08	ug/L	4	20	
m,p-Xylenes	415092829017	50.00	52.57	ug/L	5	30	
o-Xylene	415092829017	25.00	26.03	ug/L	4	30	
Styrene	415092829017	25.00	26.52	ug/L	6	30	
Bromoform	415092829017	25.00	26.21	ug/L	5	30	
Isopropylbenzene	415092829017	25.00	25.77	ug/L	3	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	415092829017	25.00	24.54	ug/L	-2	30	
1,2,3-Trichloropropane	415092829017	25.00	24.20	ug/L	-3	30	
Propylbenzene	415092829017	25.00	25.35	ug/L	1	30	
Bromobenzene	415092829017	25.00	26.00	ug/L	4	30	
1,3,5-Trimethylbenzene	415092829017	25.00	26.56	ug/L	6	30	
2-Chlorotoluene	415092829017	25.00	25.26	ug/L	1	30	
4-Chlorotoluene	415092829017	25.00	25.50	ug/L	2	30	
tert-Butylbenzene	415092829017	25.00	26.03	ug/L	4	30	
1,2,4-Trimethylbenzene	415092829017	25.00	25.77	ug/L	3	30	
sec-Butylbenzene	415092829017	25.00	26.09	ug/L	4	30	
para-Isopropyl Toluene	415092829017	25.00	25.67	ug/L	3	30	
1,3-Dichlorobenzene	415092829017	25.00	25.91	ug/L	4	30	
1,4-Dichlorobenzene	415092829017	25.00	25.83	ug/L	3	30	
n-Butylbenzene	415092829017	25.00	25.56	ug/L	2	30	
1,2-Dichlorobenzene	415092829017	25.00	25.92	ug/L	4	30	
1,2-Dibromo-3-Chloropropane	415092829017	25.00	22.40	ug/L	-10	30	
1,2,4-Trichlorobenzene	415092829017	25.00	26.15	ug/L	5	30	
Hexachlorobutadiene	415092829017	25.00	24.64	ug/L	-1	30	
Naphthalene	415092829017	25.00	23.85	ug/L	-5	30	
1,2,3-Trichlorobenzene	415092829017	25.00	26.99	ug/L	8	30	
tert-Butyl Alcohol (TBA)	415092829017	125.0	96.06	ug/L	-23	30	!v-
Isopropyl Ether (DIPE)	415092829017	25.00	23.70	ug/L	-5	30	
Ethyl tert-Butyl Ether (ETBE)	415092829017	25.00	23.47	ug/L	-6	30	
Methyl tert-Amyl Ether (TAME)	415092829017	25.00	23.23	ug/L	-7	30	

415092829016: Analyst: TKM
415092829017: Analyst: TKM

Date: 03/12/15 *
Date: 03/12/15 *

Reviewer: MCT
Reviewer: MCT

Date: 03/12/15
Date: 03/12/15

!=warning +=high bias -=low bias v=ICV

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 MSVOA Water: EPA 8260B

Inst : MSVOA03 Name : 8260GX3W
 Calnum : 425152069005 Date : 15-APR-2015 21:38 Type : WATER
 Units : ug/L X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	cdf20	425152069020	.25/.5PPB 15-APR-2015 21:38	S25695 (2000000X), S26948 (2000000X), S26838 (2000000X), S25156 (1000000X), S26911 (50000X)
L2	cdf21	425152069021	.5/1PPB 15-APR-2015 22:21	S26911 (5000X), S25695 (1000000X), S26948 (1000000X), S26838 (1000000X), S25156 (5000000X)
L3	cdf22	425152069022	2PPB 15-APR-2015 22:43	S25695 (5000000X), S26948 (2500000X), S26838 (2500000X), S25156 (2500000X), S26911 (50000X)
L4	cdf23	425152069023	5PPB 15-APR-2015 23:26	S26911 (5000X), S25695 (2000000X), S26948 (1000000X), S26838 (1000000X), S25156 (1000000X)
L5	cdf24	425152069024	10PPB 15-APR-2015 23:47	S26911 (5000X), S25695 (1000000X), S26948 (500000X), S26838 (500000X), S25156 (500000X)
L6	cdf25	425152069025	20PPB 15-APR-2015 00:30	S26911 (5000X), S25695 (500000X), S26948 (250000X), S26838 (250000X), S25156 (250000X)
L7	cdf26	425152069026	50PPB 15-APR-2015 00:51	S26911 (5000X), S25695 (200000X), S26948 (100000X), S26838 (100000X), S25156 (100000X)
L8	cdf27	425152069027	75PPB 16-APR-2015 01:34	S26911 (5000X), S25695 (133300X), S26948 (6667X), S26838 (6667X), S25156 (6667X)
L9	cdf28	425152069028	100PPB 16-APR-2015 01:56	S26911 (5000X), S25695 (100000X), S26948 (5000X), S26838 (5000X), S25156 (5000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Freon 12		0.6133	0.4364	0.5109	0.4769	0.5337	0.5256	0.5172	0.6001	AVRG	1.89841			0.5268	11	15	0.05	0.99	
Chloromethane	0.9120	0.7463	0.7435	0.6938	0.6663	0.6682	0.6301	0.6601	0.7378	AVRG	1.39359			0.7176	12	15	0.10	0.99	
Vinyl Chloride	0.6567	0.6951	0.5901	0.6145	0.5861	0.6293	0.6025	0.6010	0.6317	AVRG	1.60517			0.6230	6	15	0.05	0.99	
Bromomethane		0.3702	0.3598	0.3598	0.3525	0.3475	0.3438	0.3765	0.3996	AVRG	2.74954			0.3637	5	15	0.05	0.99	
Chloroethane		0.3918	0.3834	0.3243	0.3493	0.3536	0.3499	0.3443	0.3685	AVRG	2.79225			0.3581	6	15	0.05	0.99	
Trichlorofluoromethane		0.6216	0.5256	0.5848	0.5721	0.5813	0.5863	0.5760	0.6312	AVRG	1.70982			0.5849	6	15	0.05	0.99	
Acetone				0.1436	0.1166	0.1006	0.0967	0.1041	0.1060	AVRG	8.98793			0.1113	15	15	0.05	0.99	
Freon 113		0.3324	0.4251	0.3651	0.3166	0.3694	0.4010	0.4221	0.4398	AVRG	2.60464			0.3839	12	15	0.05	0.99	
1,1-Dichloroethene		0.4783	0.4509	0.3970	0.4009	0.4026	0.4120	0.4126	0.4325	AVRG	2.36207			0.4234	7	15	0.05	0.99	
Methylene Chloride		0.6733	0.5824	0.5081	0.5326	0.5158	0.5182	0.5344	0.5555	AVRG	1.80978			0.5526	10	15	0.05	0.99	
Carbon Disulfide		1.8660	1.6317	1.4447	1.5015	1.5059	1.5004	1.5495	1.5998	AVRG	0.63494			1.5749	8	15	0.05	0.99	
MTBE		1.3588	1.2066	1.1649	1.1286	1.0383	1.0293	1.0660	1.1149	AVRG	0.87840			1.1384	9	15	0.05	0.99	
trans-1,2-Dichloroethene		0.6011	0.5204	0.4630	0.4872	0.4533	0.4724	0.4798	0.4987	AVRG	2.01205			0.4970	9	15	0.05	0.99	
Vinyl Acetate				0.6448	0.7811	0.7218	0.6204	0.6887	0.7721	AVRG	1.41878			0.7048	9	15	0.05	0.99	
1,1-Dichloroethane		1.0612	0.9340	0.8743	0.9279	0.8595	0.8771	0.8906	0.9177	AVRG	1.08960			0.9178	7	15	0.10	0.99	
2-Butanone				0.1623	0.1646	0.1429	0.1434	0.1428	0.1585	AVRG	6.56108			0.1524	7	15	0.05	0.99	
2,2-Dichloropropane		0.7725	0.6883	0.6078	0.5862	0.5808	0.5935	0.6151	0.6059	AVRG	1.58415			0.6313	10	15	0.05	0.99	
cis-1,2-Dichloroethene		0.7394	0.6054	0.5527	0.5676	0.5299	0.5513	0.5494	0.5561	AVRG	1.71975			0.5815	12	15	0.05	0.99	
Chloroform		1.0866	0.9799	0.8459	0.8954	0.8511	0.8431	0.8696	0.9196	AVRG	1.09721			0.9114	9	15	0.05	0.99	
Bromochloromethane		0.2828	0.2301	0.2362	0.2460	0.2303	0.2339	0.2349	0.2478	AVRG	4.11936			0.2428	7	15	0.05	0.99	
1,1,1-Trichloroethane		0.7688	0.6783	0.6098	0.5918	0.6253	0.6369	0.6661	0.6855	AVRG	1.52017			0.6578	8	15	0.05	0.99	
1,1-Dichloropropene		0.4203	0.4514	0.3593	0.3434	0.3794	0.3903	0.3998	0.4127	AVRG	2.53434			0.3946	9	15	0.05	0.99	
Carbon Tetrachloride		0.3482	0.3214	0.2815	0.2611	0.2922	0.3088	0.3124	0.3258	AVRG	3.26359			0.3064	9	15	0.05	0.99	
1,2-Dichloroethane		0.3811m	0.3657	0.3773	0.3834	0.3531	0.3601	0.3584	0.3780	AVRG	2.70517			0.3697	3	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	FLg
Benzene		1.3014	1.2818	1.1394	1.0897	1.0919	1.1183	1.1161	1.1511	AVRG		0.86117		1.1612	7	15	0.05	0.99	
Trichloroethene		0.3771	0.3319	0.2831	0.2696	0.2794	0.2936	0.2986	0.3015	AVRG		3.28569		0.3044	11	15	0.05	0.99	
1,2-Dichloropropane		0.3518	0.3591	0.2895	0.3070	0.3063m	0.3101	0.3125	0.3242	AVRG		3.12437		0.3201	7	15	0.05	0.99	
Bromodichloromethane		0.4285	0.4404	0.3887	0.4070	0.3960	0.3998	0.3991	0.4183	AVRG		2.44061		0.4097	4	15	0.05	0.99	
Dibromomethane		0.1619	0.1990	0.1839	0.1896	0.1820	0.1753	0.1735	0.1883	AVRG		5.50402		0.1817	6	15	0.05	0.99	
4-Methyl-2-Pentanone			0.2745	0.2396	0.2358	0.2241	0.2038	0.2093	0.2265	AVRG		4.33798		0.2305	10	15	0.05	0.99	
cis-1,3-Dichloropropene		0.5389	0.5620	0.4862	0.4878	0.4779	0.4738	0.4918	0.5096	AVRG		1.98608		0.5035	6	15	0.05	0.99	
Toluene		0.8486	0.7675	0.7282	0.6843	0.7017	0.7146	0.7380	0.7535	AVRG		1.34763		0.7420	7	15	0.05	0.99	
trans-1,3-Dichloropropene		0.5170	0.4498	0.4573	0.4563	0.4176	0.4372	0.4359	0.4503	AVRG		2.20904		0.4527	6	15	0.05	0.99	
1,1,2-Trichloroethane		0.1436	0.1481	0.1535	0.1396	0.1363	0.1369	0.1342	0.1419	AVRG		7.05474		0.1417	5	15	0.05	0.99	
2-Hexanone			0.1705	0.1853	0.1719	0.1605	0.1450	0.1532	0.1659	AVRG		6.07486		0.1646	8	15	0.05	0.99	
1,3-Dichloropropane		0.5669	0.4692	0.4543	0.4568	0.4205	0.4199	0.4302	0.4517	AVRG		2.18018		0.4587	10	15	0.05	0.99	
Tetrachloroethene		0.2754	0.3207	0.2838	0.2381	0.2615	0.2817	0.2856	0.2897	AVRG		3.57697		0.2796	8	15	0.05	0.99	
Dibromochloromethane		0.2895	0.2851	0.2900	0.2964	0.2682	0.2908	0.2884	0.3013	AVRG		3.46349		0.2887	3	15	0.05	0.99	
1,2-Dibromoethane		0.2853	0.2553	0.2703	0.2806	0.2624	0.2568	0.2616	0.2725	AVRG		3.72995		0.2681	4	15	0.05	0.99	
Chlorobenzene		0.8694	0.8595	0.8118	0.7465	0.7380	0.7737	0.7804	0.8175	AVRG		1.25061		0.7996	6	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.2814	0.2894	0.2969	0.2607	0.2551	0.2678	0.2731	0.2774	AVRG		3.63358		0.2752	5	15	0.05	0.99	
Ethylbenzene		1.6554	1.4418	1.4050	1.2186	1.2914	1.3403	1.4006	1.4494	AVRG		0.71412		1.4003	9	15	0.05	0.99	
m,p-Xylenes	0.5281	0.5916	0.5311	0.5184	0.4509	0.4666	0.4935	0.5018	0.5203	AVRG		1.95551		0.5114	8	15	0.05	0.99	
o-Xylene		0.5765	0.5356	0.5275	0.4521	0.4660	0.4850	0.4992	0.5212	AVRG		1.96898		0.5079	8	15	0.05	0.99	
Styrene		1.0279	0.9512	0.9457	0.8483	0.8700	0.8848	0.8936	0.9231	AVRG		1.08922		0.9181	6	15	0.05	0.99	
Bromoform		0.1585	0.1838	0.1905	0.1849	0.1799	0.1700	0.1804	0.1905	AVRG		5.56203		0.1798	6	15	0.10	0.99	
Isopropylbenzene		3.1045	2.6557	2.5602	2.0276	2.2385	2.5041	2.5449	2.5719	AVRG		0.39589		2.5259	12	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		0.7837	0.6483	0.6625	0.5739	0.5660	0.5764	0.5919	0.6105	AVRG		1.59577		0.6267	12	15	0.30	0.99	
1,2,3-Trichloropropane		0.8184	0.5699	0.5389	0.4968	0.4673	0.4985	0.5076	0.5171	QUAD	-0.3257	2.11415	-0.00342	0.5518	1.000	15	0.05	0.99	
Propylbenzene		3.8015	3.3787	3.2321	2.6064	2.8346	3.1200	3.1505	3.2273	AVRG		0.31557		3.1689	11	15	0.05	0.99	
Bromobenzene		0.6892	0.7103	0.6962	0.6050	0.6114	0.6413	0.6385	0.6447	AVRG		1.52769		0.6546	6	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.6126	2.2925	2.0416	1.6899	1.8434	2.0608	2.0510	2.0852	AVRG		0.47970		2.0846	13	15	0.05	0.99	
2-Chlorotoluene		2.4828	2.2188	2.0922	1.8298	1.9671	2.1093	2.0867	2.1198	AVRG		0.47319		2.1133	9	15	0.05	0.99	
4-Chlorotoluene		2.5480	2.1198	2.0545	1.7776	1.8566	2.0004	1.9669	2.0455	AVRG		0.48872		2.0462	11	15	0.05	0.99	
tert-Butylbenzene		1.9450	1.8220	1.6180	1.3324	1.3884	1.5998	1.6355	1.6780	AVRG		0.61448		1.6274	12	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.7162	2.3843	2.1818	1.8501	1.9499	2.0756	2.1587	2.2209	AVRG		0.45617		2.1922	12	15	0.05	0.99	
sec-Butylbenzene		3.2350	2.9458	2.6182	1.9784	2.3424	2.6681	2.7472	2.7936	AVRG		0.37508		2.6661	14	15	0.05	0.99	
para-Isopropyl Toluene		2.4382	2.2681	2.1240	1.6036	1.7787	2.0456	2.1010	2.0825	AVRG		0.48657		2.0552	13	15	0.05	0.99	
1,3-Dichlorobenzene		1.3345	1.2070	1.2009	0.9941	1.0567	1.1384	1.1636	1.1743	AVRG		0.86305		1.1587	9	15	0.05	0.99	
1,4-Dichlorobenzene		1.3066	1.2262	1.1784	1.0353	1.0714	1.1351	1.1754	1.1908	AVRG		0.85843		1.1649	7	15	0.05	0.99	
n-Butylbenzene		2.4726	2.1884	2.0390	1.6423	1.8053	2.0862	2.1089	2.1997	AVRG		0.48361		2.0678	12	15	0.05	0.99	
1,2-Dichlorobenzene		1.1968	1.1965	1.1206	0.9818	1.0016	1.0468	1.0807	1.1027	AVRG		0.91664		1.0909	7	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane			0.1207	0.1030	0.0904	0.0852	0.0844	0.0904	0.0960	AVRG		10.4462		0.0957	13	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.8302	0.7985	0.7574	0.6362	0.6680	0.7370	0.7464	0.7587	AVRG		1.34852		0.7416	9	15	0.05	0.99	
Hexachlorobutadiene		0.3099	0.3397	0.3103	0.2274	0.2641	0.3161	0.3231	0.3266	AVRG		3.30971		0.3021	12	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2 %RSD	Max %RSD	Min RF	Min r^2	FLg
Naphthalene		1.7722	1.5931	1.6027	1.3850	1.3808	1.4322	1.4592	1.4953	AVRG		0.66004		1.5151	9	15	0.05	0.99	
1,2,3-Trichlorobenzene		0.6905	0.6935	0.6769	0.5708	0.5770	0.6376	0.6508	0.6645	AVRG		1.54986		0.6452	7	15	0.05	0.99	
tert-Butyl Alcohol (TEA)			0.0156	0.0191	0.0190	0.0160	0.0176	0.0178	0.0190	AVRG		56.4110		0.0177	8	15	0.005	0.99	
Isopropyl Ether (DIPE)		2.3581	1.8133	1.8762	1.7724	1.7309	1.7036	1.8091	1.8380	AVRG		0.53685		1.8627	11	15	0.05	0.99	
Ethyl tert-Butyl Ether (ETBE)		1.8777	1.5665	1.5317	1.5492	1.5030	1.5241	1.5849	1.6010	AVRG		0.62803		1.5923	8	15	0.05	0.99	
Methyl tert-Amyl Ether (TAME)		1.0072	0.8665	0.8237	0.7798	0.7639	0.7663	0.7844	0.8135	AVRG		1.21116		0.8257	10	15	0.05	0.99	
Dibromofluoromethane	0.5910	0.5991	0.6032	0.6078	0.6149	0.6109	0.6033	0.6074	0.6241	AVRG		1.64783		0.6069	2	15	0.05	0.99	
1,2-Dichloroethane-d4	0.3781	0.3804	0.3828	0.3803	0.3724	0.3834	0.3626	0.3539	0.3723	AVRG		2.67372		0.3740	3	15	0.05	0.99	
Toluene-d8	1.3249	1.2939	1.2973	1.3481	1.3357	1.3195	1.3254	1.3234	1.3455	AVRG		0.75543		1.3238	1	15	0.05	0.99	
Bromofluorobenzene	1.0512	1.0581	1.0864	1.0919	1.0467	1.0511	1.1143	1.0661	1.0752	AVRG		0.93352		1.0712	2	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	16	2.0000	-17	5.0000	-3	10.000	-9	20.000	1	50.000	0	75.000	-2	100.00	14
Chloromethane	0.5000	27	1.0000	4	2.0000	4	5.0000	-3	10.000	-7	20.000	-7	50.000	-12	75.000	-8	100.00	3
Vinyl Chloride	0.5000	5	1.0000	12	2.0000	-5	5.0000	-1	10.000	-6	20.000	1	50.000	-3	75.000	-4	100.00	1
Bromomethane			1.0000	2	2.0000	-1	5.0000	-1	10.000	-3	20.000	-4	50.000	-5	75.000	4	100.00	10
Chloroethane			1.0000	9	2.0000	7	5.0000	-9	10.000	-2	20.000	-1	50.000	-2	75.000	-4	100.00	3
Trichlorofluoromethane			1.0000	6	2.0000	-10	5.0000	0	10.000	-2	20.000	-1	50.000	0	75.000	-2	100.00	8
Acetone							5.0000	29	10.000	5	20.000	-10	50.000	-13	75.000	-6	100.00	-5
Freon 113			0.5000	-13	2.0000	11	5.0000	-5	10.000	-18	20.000	-4	50.000	4	75.000	10	100.00	15
1,1-Dichloroethene			0.5000	13	2.0000	7	5.0000	-6	10.000	-5	20.000	-5	50.000	-3	75.000	-3	100.00	2
Methylene Chloride			0.5000	22	2.0000	5	5.0000	-8	10.000	-4	20.000	-7	50.000	-6	75.000	-3	100.00	1
Carbon Disulfide			0.5000	18	2.0000	4	5.0000	-8	10.000	-5	20.000	-4	50.000	-5	75.000	-2	100.00	2
MTBE			0.5000	19	2.0000	6	5.0000	2	10.000	-1	20.000	-9	50.000	-10	75.000	-6	100.00	-2
trans-1,2-Dichloroethene			0.5000	21	2.0000	5	5.0000	-7	10.000	-2	20.000	-9	50.000	-5	75.000	-3	100.00	0
Vinyl Acetate							5.0000	-9	10.000	11	20.000	2	50.000	-12	75.000	-2	100.00	10
1,1-Dichloroethane			0.5000	16	2.0000	2	5.0000	-5	10.000	1	20.000	-6	50.000	-4	75.000	-3	100.00	0
2-Butanone							5.0000	6	10.000	8	20.000	-6	50.000	-6	75.000	-6	100.00	4
2,2-Dichloropropane			0.5000	22	2.0000	9	5.0000	-4	10.000	-7	20.000	-8	50.000	-6	75.000	-3	100.00	-4
cis-1,2-Dichloroethene			0.5000	27	2.0000	4	5.0000	-5	10.000	-2	20.000	-9	50.000	-5	75.000	-6	100.00	-4
Chloroform			0.5000	19	2.0000	8	5.0000	-7	10.000	-2	20.000	-7	50.000	-7	75.000	-5	100.00	1
Bromochloromethane			0.5000	16	2.0000	-5	5.0000	-3	10.000	1	20.000	-5	50.000	-4	75.000	-3	100.00	2
1,1,1-Trichloroethane			0.5000	17	2.0000	3	5.0000	-7	10.000	-10	20.000	-5	50.000	-3	75.000	1	100.00	4
1,1-Dichloropropene			0.5000	7	2.0000	14	5.0000	-9	10.000	-13	20.000	-4	50.000	-1	75.000	1	100.00	5
Carbon Tetrachloride			0.5000	14	2.0000	5	5.0000	-8	10.000	-15	20.000	-5	50.000	1	75.000	2	100.00	6
1,2-Dichloroethane			0.5000	3	2.0000	-1	5.0000	2	10.000	4	20.000	-4	50.000	-3	75.000	-3	100.00	2
Benzene			0.5000	12	2.0000	10	5.0000	-2	10.000	-6	20.000	-6	50.000	-4	75.000	-4	100.00	-1
Trichloroethene			0.5000	24	2.0000	9	5.0000	-7	10.000	-11	20.000	-8	50.000	-4	75.000	-2	100.00	-1
1,2-Dichloropropane			0.5000	10	2.0000	12	5.0000	-10	10.000	-4	20.000	-4	50.000	-3	75.000	-2	100.00	1
Bromodichloromethane			0.5000	5	2.0000	7	5.0000	-5	10.000	-1	20.000	-3	50.000	-2	75.000	-3	100.00	2
Dibromomethane			0.5000	-11	2.0000	10	5.0000	1	10.000	4	20.000	0	50.000	-4	75.000	-4	100.00	4
4-Methyl-2-Pentanone							5.0000	19	10.000	2	20.000	-3	50.000	-12	75.000	-9	100.00	-2
cis-1,3-Dichloropropene			0.5000	7	2.0000	12	5.0000	-3	10.000	-3	20.000	-5	50.000	-6	75.000	-2	100.00	1
Toluene			0.5000	14	2.0000	3	5.0000	-2	10.000	-8	20.000	-5	50.000	-4	75.000	-1	100.00	2
trans-1,3-Dichloropropene			0.5000	14	2.0000	-1	5.0000	1	10.000	1	20.000	-8	50.000	-3	75.000	-4	100.00	-1
1,1,2-Trichloroethane			0.5000	1	2.0000	5	5.0000	8	10.000	-2	20.000	-4	50.000	-3	75.000	-5	100.00	0
2-Hexanone							5.0000	13	10.000	4	20.000	-3	50.000	-12	75.000	-7	100.00	1
1,3-Dichloropropane			0.5000	24	2.0000	2	5.0000	-1	10.000	0	20.000	-8	50.000	-8	75.000	-6	100.00	-2
Tetrachloroethene			0.5000	-1	2.0000	15	5.0000	2	10.000	-15	20.000	-6	50.000	1	75.000	2	100.00	4
Dibromochloromethane			0.5000	0	2.0000	-1	5.0000	0	10.000	3	20.000	-7	50.000	1	75.000	0	100.00	4
1,2-Dibromoethane			0.5000	6	2.0000	-5	5.0000	1	10.000	5	20.000	-2	50.000	-4	75.000	-2	100.00	2
Chlorobenzene			0.5000	9	2.0000	7	5.0000	2	10.000	-7	20.000	-8	50.000	-3	75.000	-2	100.00	2
1,1,1,2-Tetrachloroethane			0.5000	2	2.0000	5	5.0000	8	10.000	-5	20.000	-7	50.000	-3	75.000	-1	100.00	1
Ethylbenzene			0.5000	18	2.0000	3	5.0000	0	10.000	-13	20.000	-8	50.000	-4	75.000	0	100.00	4

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	3	1.0000	16	4.0000	4	10.000	1	20.000	-12	40.000	-9	100.00	-3	150.00	-2	200.00	2
o-Xylene			0.5000	14	2.0000	5	5.0000	4	10.000	-11	20.000	-8	50.000	-5	75.000	-2	100.00	3
Styrene			0.5000	12	2.0000	4	5.0000	3	10.000	-8	20.000	-5	50.000	-4	75.000	-3	100.00	1
Bromoform			0.5000	-12	2.0000	2	5.0000	6	10.000	3	20.000	0	50.000	-5	75.000	0	100.00	6
Isopropylbenzene			0.5000	23	2.0000	5	5.0000	1	10.000	-20	20.000	-11	50.000	-1	75.000	1	100.00	2
1,1,2,2-Tetrachloroethane			0.5000	25	2.0000	3	5.0000	6	10.000	-8	20.000	-10	50.000	-8	75.000	-6	100.00	-3
1,2,3-Trichloropropane			0.5000	8	2.0000	4	5.0000	7	10.000	1	20.000	-4	50.000	0	75.000	0	100.00	0
Propylbenzene			0.5000	20	2.0000	7	5.0000	2	10.000	-18	20.000	-11	50.000	-2	75.000	-1	100.00	2
Bromobenzene			0.5000	5	2.0000	9	5.0000	6	10.000	-8	20.000	-7	50.000	-2	75.000	-2	100.00	-2
1,3,5-Trimethylbenzene			0.5000	25	2.0000	10	5.0000	-2	10.000	-19	20.000	-12	50.000	-1	75.000	-2	100.00	0
2-Chlorotoluene			0.5000	17	2.0000	5	5.0000	-1	10.000	-13	20.000	-7	50.000	0	75.000	-1	100.00	0
4-Chlorotoluene			0.5000	25	2.0000	4	5.0000	0	10.000	-13	20.000	-9	50.000	-2	75.000	-4	100.00	0
tert-Butylbenzene			0.5000	20	2.0000	12	5.0000	-1	10.000	-18	20.000	-15	50.000	-2	75.000	1	100.00	3
1,2,4-Trimethylbenzene			0.5000	24	2.0000	9	5.0000	0	10.000	-16	20.000	-11	50.000	-5	75.000	-2	100.00	1
sec-Butylbenzene			0.5000	21	2.0000	10	5.0000	-2	10.000	-26	20.000	-12	50.000	0	75.000	3	100.00	5
para-Isopropyl Toluene			0.5000	19	2.0000	10	5.0000	3	10.000	-22	20.000	-13	50.000	0	75.000	2	100.00	1
1,3-Dichlorobenzene			0.5000	15	2.0000	4	5.0000	4	10.000	-14	20.000	-9	50.000	-2	75.000	0	100.00	1
1,4-Dichlorobenzene			0.5000	12	2.0000	5	5.0000	1	10.000	-11	20.000	-8	50.000	-3	75.000	1	100.00	2
n-Butylbenzene			0.5000	20	2.0000	6	5.0000	-1	10.000	-21	20.000	-13	50.000	1	75.000	2	100.00	6
1,2-Dichlorobenzene			0.5000	10	2.0000	10	5.0000	3	10.000	-10	20.000	-8	50.000	-4	75.000	-1	100.00	1
1,2-Dibromo-3-Chloropropane					2.0000	26	5.0000	8	10.000	-6	20.000	-11	50.000	-12	75.000	-6	100.00	0
1,2,4-Trichlorobenzene			0.5000	12	2.0000	8	5.0000	2	10.000	-14	20.000	-10	50.000	-1	75.000	1	100.00	2
Hexachlorobutadiene			0.5000	3	2.0000	12	5.0000	3	10.000	-25	20.000	-13	50.000	5	75.000	7	100.00	8
Naphthalene			0.5000	17	2.0000	5	5.0000	6	10.000	-9	20.000	-9	50.000	-5	75.000	-4	100.00	-1
1,2,3-Trichlorobenzene			0.5000	7	2.0000	7	5.0000	5	10.000	-12	20.000	-11	50.000	-1	75.000	1	100.00	3
tert-Butyl Alcohol (TBA)					20.000	-12	50.000	8	100.00	7	200.00	-10	500.00	-1	750.00	1	1000.0	7
Isopropyl Ether (DIPE)			0.5000	27	2.0000	-3	5.0000	1	10.000	-5	20.000	-7	50.000	-9	75.000	-3	100.00	-1
Ethyl tert-Butyl Ether (ETBE)			0.5000	18	2.0000	-2	5.0000	-4	10.000	-3	20.000	-6	50.000	-4	75.000	0	100.00	1
Methyl tert-Amyl Ether (TAME)			0.5000	22	2.0000	5	5.0000	0	10.000	-6	20.000	-7	50.000	-7	75.000	-5	100.00	-1
Dibromofluoromethane	50.000	-3	50.000	-1	50.000	-1	50.000	0	50.000	1	50.000	1	50.000	1	50.000	0	50.000	3
1,2-Dichloroethane-d4	50.000	1	50.000	2	50.000	2	50.000	2	50.000	0	50.000	3	50.000	-3	50.000	-5	50.000	0
Toluene-d8	50.000	0	50.000	-2	50.000	-2	50.000	2	50.000	1	50.000	0	50.000	0	50.000	0	50.000	2
Bromofluorobenzene	50.000	-2	50.000	-1	50.000	1	50.000	2	50.000	-2	50.000	-2	50.000	4	50.000	0	50.000	0

DAR 04/16/15 [1,2-Dichloroethane]: Combined split peak1PPB (cdf21).

DAR 04/16/15 [1,3-Dichloropropane]: Combined split peak in 20PPB (cdf25).

DAR 04/16/15 [tert-Butyl Alcohol (TBA)]: insufficient secondary ion in the lowpoint, RI raised to 20ppb.

Analyst: DAR

m>manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor; QUAD=Quadratic regression

Page 6 of 6

Date: 04/16/15

Reviewer: IW

Date: 04/17/15

425152069005

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA03
Calnum : 425152069005

Name : 8260GX3W
Cal Date : 15-APR-2015

Type : WATER

ICV 425152069029 (cdf29 16-APR-2015) stds: S24978 (10000X), S26911 (5000X)
ICV 425152069030 (cdf30 16-APR-2015) stds: S26876 (10000X), S27022 (10000X),
S26759 (10000X), S26911 (5000X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	425152069029	20.00	17.25	ug/L	-14	30	
Chloromethane	425152069029	20.00	18.57	ug/L	-7	30	
Vinyl Chloride	425152069029	20.00	18.70	ug/L	-6	20	
Bromomethane	425152069029	20.00	15.49	ug/L	-23	30	!v-
Chloroethane	425152069029	20.00	17.71	ug/L	-11	30	
Trichlorofluoromethane	425152069029	20.00	18.61	ug/L	-7	30	
Acetone	425152069030	25.00	22.86	ug/L	-9	40	
Freon 113	425152069030	25.00	23.54	ug/L	-6	30	
1,1-Dichloroethene	425152069030	25.00	23.91	ug/L	-4	20	
Methylene Chloride	425152069030	25.00	22.93	ug/L	-8	30	
Carbon Disulfide	425152069030	25.00	24.87	ug/L	-1	30	
MTBE	425152069030	25.00	23.95	ug/L	-4	30	
trans-1,2-Dichloroethene	425152069030	25.00	23.49	ug/L	-6	30	
Vinyl Acetate	425152069030	25.00	25.35	ug/L	1	40	
1,1-Dichloroethane	425152069030	25.00	23.37	ug/L	-7	30	
2-Butanone	425152069030	25.00	24.29	ug/L	-3	40	
2,2-Dichloropropane	425152069030	25.00	22.78	ug/L	-9	30	
cis-1,2-Dichloroethene	425152069030	25.00	23.59	ug/L	-6	30	
Chloroform	425152069030	25.00	23.72	ug/L	-5	20	
Bromochloromethane	425152069030	25.00	24.79	ug/L	-1	30	
1,1,1-Trichloroethane	425152069030	25.00	24.82	ug/L	-1	30	
1,1-Dichloropropene	425152069030	25.00	23.79	ug/L	-5	30	
Carbon Tetrachloride	425152069030	25.00	24.22	ug/L	-3	30	
1,2-Dichloroethane	425152069030	25.00	24.05	ug/L	-4	30	
Benzene	425152069030	25.00	24.21	ug/L	-3	30	
Trichloroethene	425152069030	25.00	24.07	ug/L	-4	30	
1,2-Dichloropropane	425152069030	25.00	22.19	ug/L	-11	20	
Bromodichloromethane	425152069030	25.00	23.19	ug/L	-7	30	
Dibromomethane	425152069030	25.00	24.90	ug/L	0	30	
4-Methyl-2-Pentanone	425152069030	25.00	23.01	ug/L	-8	40	
cis-1,3-Dichloropropene	425152069030	25.00	23.62	ug/L	-6	30	
Toluene	425152069030	25.00	25.55	ug/L	2	20	
trans-1,3-Dichloropropene	425152069030	25.00	22.43	ug/L	-10	30	
1,1,2-Trichloroethane	425152069030	25.00	23.74	ug/L	-5	30	
2-Hexanone	425152069030	25.00	24.40	ug/L	-2	40	
1,3-Dichloropropane	425152069030	25.00	24.33	ug/L	-3	30	
Tetrachloroethene	425152069030	25.00	25.35	ug/L	1	30	
Dibromochloromethane	425152069030	25.00	24.67	ug/L	-1	30	
1,2-Dibromoethane	425152069030	25.00	24.82	ug/L	-1	30	
Chlorobenzene	425152069030	25.00	24.38	ug/L	-2	30	
1,1,1,2-Tetrachloroethane	425152069030	25.00	23.50	ug/L	-6	30	
Ethylbenzene	425152069030	25.00	24.68	ug/L	-1	20	
m,p-Xylenes	425152069030	50.00	48.99	ug/L	-2	30	
o-Xylene	425152069030	25.00	23.81	ug/L	-5	30	
Styrene	425152069030	25.00	24.21	ug/L	-3	30	
Bromoform	425152069030	25.00	23.89	ug/L	-4	30	
Isopropylbenzene	425152069030	25.00	23.91	ug/L	-4	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	425152069030	25.00	23.23	ug/L	-7	30	
1,2,3-Trichloropropane	425152069030	25.00	26.39	ug/L	6	30	
Propylbenzene	425152069030	25.00	24.66	ug/L	-1	30	
Bromobenzene	425152069030	25.00	24.61	ug/L	-2	30	
1,3,5-Trimethylbenzene	425152069030	25.00	25.28	ug/L	1	30	
2-Chlorotoluene	425152069030	25.00	24.56	ug/L	-2	30	
4-Chlorotoluene	425152069030	25.00	23.76	ug/L	-5	30	
tert-Butylbenzene	425152069030	25.00	24.53	ug/L	-2	30	
1,2,4-Trimethylbenzene	425152069030	25.00	23.82	ug/L	-5	30	
sec-Butylbenzene	425152069030	25.00	24.73	ug/L	-1	30	
para-Isopropyl Toluene	425152069030	25.00	24.53	ug/L	-2	30	
1,3-Dichlorobenzene	425152069030	25.00	24.96	ug/L	0	30	
1,4-Dichlorobenzene	425152069030	25.00	24.94	ug/L	0	30	
n-Butylbenzene	425152069030	25.00	24.53	ug/L	-2	30	
1,2-Dichlorobenzene	425152069030	25.00	24.21	ug/L	-3	30	
1,2-Dibromo-3-Chloropropane	425152069030	25.00	22.71	ug/L	-9	30	
1,2,4-Trichlorobenzene	425152069030	25.00	24.24	ug/L	-3	30	
Hexachlorobutadiene	425152069030	25.00	25.52	ug/L	2	30	
Naphthalene	425152069030	25.00	22.70	ug/L	-9	30	
1,2,3-Trichlorobenzene	425152069030	25.00	25.07	ug/L	0	30	
tert-Butyl Alcohol (TBA)	425152069030	125.0	108.9	ug/L	-13	30	
Isopropyl Ether (DIPE)	425152069030	25.00	22.71	ug/L	-9	30	
Ethyl tert-Butyl Ether (ETBE)	425152069030	25.00	23.76	ug/L	-5	30	
Methyl tert-Amyl Ether (TAME)	425152069030	25.00	22.21	ug/L	-11	30	

425152069029: Analyst: DAR
425152069030: Analyst: DAR

Date: 04/16/15
Date: 04/16/15

Reviewer: LW
Reviewer: LW

Date: 04/17/15
Date: 04/17/15

!=warning --low bias v=ICV

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 MSVOA Water: EPA 8260B

Inst : MSVOA06 Name : 826GOX6W
 Calnum : 455130249001 Date : 31-MAR-2015 21:12 Type : WATER
 Units : ug/L X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	fcv15	455130249015	.25/.5PPB 31-MAR-2015 21:12	S26360 (2000000X), S26948 (2000000X), S26838 (2000000X), S25156 (1000000X), S26911 (50000X)
L2	fcv16	455130249016	.5/1PPB 31-MAR-2015 21:45	S26360 (1000000X), S26948 (1000000X), S26838 (1000000X), S25156 (500000X), S26911 (50000X)
L3	fcv17	455130249017	2PPB 31-MAR-2015 22:19	S26360 (500000X), S26948 (250000X), S26838 (250000X), S25156 (250000X), S26911 (50000X)
L4	fcv18	455130249018	5PPB 31-MAR-2015 22:51	S26911 (5000X), S26360 (2000000X), S26948 (1000000X), S26838 (1000000X), S25156 (1000000X)
L5	fcv19	455130249019	10PPB 31-MAR-2015 23:24	S26911 (5000X), S26360 (1000000X), S26948 (500000X), S26838 (500000X), S25156 (500000X)
L6	fcv20	455130249020	20PPB 31-MAR-2015 23:56	S26911 (5000X), S26360 (500000X), S26948 (250000X), S26838 (250000X), S25156 (250000X)
L7	fcv21	455130249021	50PPB 01-APR-2015 00:29	S26911 (5000X), S26360 (200000X), S26948 (100000X), S26838 (100000X), S25156 (100000X)
L8	fcv22	455130249022	75PPB 01-APR-2015 01:03	S26911 (5000X), S26360 (13330X), S26948 (6667X), S26838 (6667X), S25156 (6667X)
L9	fcv23	455130249023	100PPB 01-APR-2015 01:35	S26911 (5000X), S26360 (100000X), S26948 (5000X), S26838 (5000X), S25156 (5000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Freon 12		1.4114m	1.3163m	1.5004m	1.1467	1.2463	1.4490	1.3862	1.3167	AVRG	0.74259	0.74259		1.3466	9	15	0.05	0.99	
Chloromethane	1.8744m	1.3963	1.6266m	1.6018m	1.4825m	1.4219m	1.4090m	1.3316m	1.2666m	AVRG	0.67110	0.67110		1.4901	12	15	0.10	0.99	
Vinyl Chloride	0.7986m	1.0630m	1.1001m	1.0910m	0.9984	1.0298	1.0412	1.0483	1.0301	AVRG	0.97822	0.97822		1.0223	9	15	0.05	0.99	
Bromomethane		0.4027	0.3962m	0.4211	0.4037	0.4048	0.4787	0.5415	0.5306	AVRG	2.23513	2.23513		0.4474	14	15	0.05	0.99	
Chloroethane		0.7782m	0.7567m	0.8060m	0.7619	0.7511	0.7484	0.7672	0.7013	AVRG	1.31774	1.31774		0.7589	4	15	0.05	0.99	
Trichlorofluoromethane		1.3756m	1.4084m	1.5673	1.3782	1.3903	1.4983	1.4799	1.3834	AVRG	0.69678	0.69678		1.4352	5	15	0.05	0.99	
Acetone				0.7982	0.7972	0.6665	0.6803	0.5874	0.6452	AVRG	1.43720	1.43720		0.6958	12	15	0.05	0.99	
Freon 113		0.5751	0.6950	0.8141	0.6711	0.7413	0.8732	0.8518	0.8067	AVRG	1.32708	1.32708		0.7535	14	15	0.05	0.99	
1,1-Dichloroethene		0.6763	0.7464	0.7220	0.6853	0.7289	0.7501	0.7848	0.7358	AVRG	1.37231	1.37231		0.7287	5	15	0.05	0.99	
Methylene Chloride		0.8488m	0.9625	0.9408	0.9856	0.9191	0.9231	0.9602	0.8943	AVRG	1.07608	1.07608		0.9293	5	15	0.05	0.99	
Carbon Disulfide		3.4285m	2.7055	2.7060	2.5083	2.5134	2.5861	2.6436	2.4868	AVRG	0.37074	0.37074		2.6973	11	15	0.05	0.99	
MTBE		2.1862	2.2616	2.4159	2.4587	2.3437	2.5169	2.4198	2.2773	AVRG	0.42373	0.42373		2.3600	5	15	0.05	0.99	
trans-1,2-Dichloroethene		1.0429	0.8304	0.7713	0.8623	0.7799	0.8339	0.8439	0.7851	AVRG	1.18524	1.18524		0.8437	10	15	0.05	0.99	
Vinyl Acetate		1.5784	1.5784	1.5278	1.5600	1.4718	1.5367	1.4168	1.3970	AVRG	0.66739	0.66739		1.4984	5	15	0.05	0.99	
1,1-Dichloroethane		1.7291	1.7551	1.7385	1.7938	1.6470	1.6717	1.6949	1.6092	AVRG	0.58654	0.58654		1.7049	4	15	0.10	0.99	
2-Butanone			0.9036	0.9279	1.0214	0.9545	0.9770	0.8385	0.9429	AVRG	1.06612	1.06612		0.9380	6	15	0.05	0.99	
2,2-Dichloropropane		1.1706	1.2000	1.2124	1.1170	1.0921	1.1394	1.1089	1.0480	AVRG	0.88024	0.88024		1.1361	5	15	0.05	0.99	
cis-1,2-Dichloroethene		1.1651	0.9710	0.9008	0.9316	0.9075	0.9045	0.9339	0.8641	AVRG	1.05561	1.05561		0.9473	10	15	0.05	0.99	
Chloroform		1.5937	1.5406	1.6245	1.5987	1.5099	1.5549	1.5281	1.4399	AVRG	0.64567	0.64567		1.5488	4	15	0.05	0.99	
Bromochloromethane		0.3959	0.3996m	0.4212	0.4070	0.3844	0.3872	0.3865	0.3550	AVRG	2.55029	2.55029		0.3921	5	15	0.05	0.99	
1,1,1-Trichloroethane		1.2114	1.1636	1.2784	1.1922	1.1554	1.2218	1.2081	1.1367	AVRG	0.83616	0.83616		1.1959	4	15	0.05	0.99	
1,1-Dichloropropene		0.6451	0.6578	0.6549	0.6194	0.6564	0.7037	0.6777	0.6224	AVRG	1.52750	1.52750		0.6547	4	15	0.05	0.99	
Carbon Tetrachloride		0.4851	0.5518	0.5977	0.5223	0.5616	0.6166	0.5838	0.5356	AVRG	1.79598	1.79598		0.5568	8	15	0.05	0.99	
1,2-Dichloroethane		0.7379	0.7200	0.6684	0.6766	0.6782	0.6623	0.6464	0.5866	AVRG	1.48798	1.48798		0.6721	7	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Benzene	1.8777	1.7935	1.7891	1.7817	1.8041	1.7544	1.7870	1.6072	AVRG		0.56359			1.7743	4	15	0.05	0.99	
Trichloroethene	0.5088	0.5027	0.4773	0.4738	0.5028	0.5199	0.5093	0.4676	AVRG		2.01904			0.4953	4	15	0.05	0.99	
1,2-Dichloropropane	0.5789	0.5904	0.5567	0.5519	0.5536	0.5671	0.5302	0.4816	AVRG		1.81387			0.5513	6	15	0.05	0.99	
Bromodichloromethane	0.6606	0.7108	0.6538	0.6721	0.6812	0.6652	0.6529	0.5992	AVRG		1.51060			0.6620	5	15	0.05	0.99	
Dibromomethane	0.3597	0.3626	0.3402	0.3481	0.3522	0.3554	0.3391	0.3150	AVRG		2.88565			0.3465	4	15	0.05	0.99	
4-Methyl-2-Pentanone	0.7059	0.7478	0.8573	0.9388	0.9171	0.9213	0.7999	0.8540	AVRG		1.12660			0.8876	6	15	0.05	0.99	
cis-1,3-Dichloropropene	1.1898	1.1644	1.2108	1.1076	1.1354	1.1725	1.1310	1.1468	AVRG		1.31901			0.7581	4	15	0.05	0.99	
Toluene	0.8350	0.7632	0.8470	0.8325	0.8676	0.8573	0.8259	0.7905	AVRG		0.86410			1.1573	3	15	0.05	0.99	
trans-1,3-Dichloropropene	0.3385	0.2745	0.2920	0.2810	0.2865	0.2964	0.2803	0.2707	AVRG		1.20865			0.8274	4	15	0.05	0.99	
1,1,2-Trichloroethane	0.8311	0.8997	0.9134	0.8878	0.9171	0.8802	0.7384	0.8040	AVRG		3.44821			0.2900	7	15	0.05	0.99	
2-Hexanone	0.8482	0.8348	0.9011	0.8548	0.8833	0.9014	0.8448	0.8003	AVRG		1.17555			0.8507	7	15	0.05	0.99	
1,3-Dichloropropane	0.3859	0.4153	0.4739	0.4105	0.4415	0.4883	0.4869	0.4647	AVRG		1.16469			0.8586	4	15	0.05	0.99	
Tetrachloroethene	0.4311	0.5422	0.5422	0.5604	0.5793	0.5979	0.5936	0.5727	AVRG		2.24279			0.4459	9	15	0.05	0.99	
Dibromochloromethane	0.5004	0.5395	0.5649	0.5906	0.5918	0.5985	0.5775	0.5599	AVRG		1.81020			0.5524	10	15	0.05	0.99	
1,2-Dibromoethane	1.2859	1.1971	1.2739	1.2420	1.2211	1.2442	1.2730	1.1919	AVRG		1.76865			0.5654	6	15	0.05	0.99	
Chlorobenzene	0.4358	0.4208	0.4425	0.4433	0.4413	0.4610	0.4624	0.4314	AVRG		0.80571			1.2411	3	15	0.30	0.99	
1,1,1,2-Tetrachloroethane	2.3967	2.2059	2.3485	2.1740	2.1222	2.2957	2.2404	2.0294	AVRG		2.26074			0.4423	3	15	0.05	0.99	
Ethylbenzene	0.7659	0.7546	0.8323	0.7595	0.7486	0.8278	0.7608	0.7198	AVRG		0.44911			2.2266	5	15	0.05	0.99	
m,p-Xylenes	0.7719	0.7453	0.8031	0.7494	0.7838	0.7977	0.7987	0.7694	AVRG		1.27148			0.7865	7	15	0.05	0.99	
o-Xylene	1.1808	1.3264	1.3988	1.3438	1.3427	1.4236	1.3992	1.3144	AVRG		1.28631			0.7774	3	15	0.05	0.99	
Styrene	0.3675	0.3730	0.4069	0.4047	0.4185	0.4534	0.4284	0.4306	AVRG		0.74560			1.3412	6	15	0.05	0.99	
Bromoform	3.6709	3.8564	3.7686	3.3596	3.5148	4.0706	3.7576	3.6729	AVRG		2.43677			0.4104	7	15	0.10	0.99	
Isopropylbenzene	1.5263	1.4410	1.5032	1.4628	1.3823	1.5183	1.3462	1.4037	AVRG		0.26962			3.7089	6	15	0.05	0.99	
1,1,2,2-Tetrachloroethane	1.4428	1.3073	1.2832	1.2995	1.2043	1.3119	1.1259	1.2337	AVRG		0.69062			1.4480	5	15	0.30	0.99	
1,2,3-Trichloropropane	4.9341	4.7646	5.0554	4.5857	4.4808	5.2837	4.7880	4.6518	AVRG		0.78366			1.2761	7	15	0.05	0.99	
Propylbenzene	0.9410	0.9733	1.0051	0.9545	0.9252	1.0519	1.0004	0.9841	AVRG		0.20755			4.8180	5	15	0.05	0.99	
Bromobenzene	2.9472	3.1280	3.3546	2.9228	2.9446	3.3158	3.2223	3.0405	AVRG		1.02100			0.9794	4	15	0.05	0.99	
1,3,5-Trimethylbenzene	3.6325	3.3363	3.5010	3.2843	3.1581	3.5070	3.3530	3.1174	AVRG		0.32160			3.1095	6	15	0.05	0.99	
2-Chlorotoluene	3.3559	3.0778	3.3423	2.9910	2.9255	3.3429	3.0937	3.0306	AVRG		0.29751			3.3612	5	15	0.05	0.99	
4-Chlorotoluene	2.5328	2.3545	2.5318	2.2171	2.2139	2.6422	2.6316	2.4995	AVRG		0.31797			3.1450	6	15	0.05	0.99	
tert-Butylbenzene	3.2432	3.2262	3.3899	2.9952	3.1064	3.5165	3.3941	3.1626	AVRG		0.40768			2.4529	7	15	0.05	0.99	
1,2,4-Trimethylbenzene	3.6262	3.5971	4.0872	3.5017	3.5954	4.2325	4.1368	3.8915	AVRG		0.30729			3.2542	5	15	0.05	0.99	
sec-Butylbenzene	2.9922	3.0858	3.0708	2.7534	2.8235	3.4423	3.2231	3.1919	AVRG		0.26086			3.8335	8	15	0.05	0.99	
para-Isopropyl Toluene	1.6802	1.7804	1.8221	1.6966	1.6157	1.8625	1.7183	1.7262	AVRG		0.32543			3.0729	7	15	0.05	0.99	
1,3-Dichlorobenzene	1.7255	1.7469	1.7610	1.7277	1.6145	1.8409	1.8437	1.7691	AVRG		0.57545			1.7378	5	15	0.05	0.99	
1,4-Dichlorobenzene	3.2074	2.6456	3.3760	2.9043	2.9659	3.4326	3.2866	3.2038	AVRG		0.57024			1.7537	4	15	0.05	0.99	
n-Butylbenzene	1.7007	1.6339	1.7320	1.6761	1.5450	1.7602	1.7546	1.7214	AVRG		0.31972			3.1278	9	15	0.05	0.99	
1,2-Dichlorobenzene	0.4336	0.4388	0.4388	0.3979	0.3897	0.4275	0.3502	0.3937	AVRG		0.59155			1.6905	4	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane	0.9845	0.9639	0.9951	0.9424	0.9274	1.0810	1.0670	1.0013	AVRG		2.47218			0.4045	8	15	0.05	0.99	
1,2,4-Trichlorobenzene	0.3755	0.3744	0.3861	0.3264	0.3556	0.4671	0.4521	0.4383	AVRG		1.00470			0.9953	6	15	0.05	0.99	
Hexachlorobutadiene									AVRG		2.51924			0.3969	13	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max	Min	Min	FLg
															%RSD	%RSD	RF	r^2	
Naphthalene	3.1997	3.2432	3.4415	3.3398	3.2574	3.7232	3.4131	3.3051	AVRG	0.29714	3.3654	5	15	0.05	0.99				
1,2,3-Trichlorobenzene	0.7998	0.7957	0.9234	0.8395	0.8631	0.9711	0.9465	0.8781	AVRG	1.14007	0.8771	7	15	0.05	0.99				
tert-Butyl Alcohol (TEA)	0.1888m	0.1696m	0.1953	0.2048	0.1958	0.2009	0.1702	0.1981	AVRG	5.25143	0.1904	7	15	0.005	0.99				
Isopropyl Ether (DIPE)	3.5029	3.5342	3.5475	3.7329	3.6171	3.6548	3.6800	3.4387	AVRG	0.27867	3.5885	3	15	0.05	0.99				
Ethyl tert-Butyl Ether (ETBE)	2.6205	2.6988	2.8770	2.9312	2.8319	2.8937	2.9914	2.8057	AVRG	0.35320	2.8313	4	15	0.05	0.99				
Methyl tert-Amyl Ether (TAME)	1.2411	1.2480	1.2605	1.3826	1.3449	1.3954	1.3441	1.2748	AVRG	0.76252	1.3114	5	15	0.05	0.99				
Dibromofluoromethane	0.7323	0.7130	0.7085	0.7331	0.7020	0.6759	0.6894	0.6594	AVRG	1.42024	0.7041	4	15	0.05	0.99				
1,2-Dichloroethane-d4	0.4881	0.4770	0.4935	0.4798	0.4664	0.4261	0.4122	0.3820	AVRG	2.20138	0.4543	8	15	0.05	0.99				
Toluene-d8	1.3769	1.3650	1.3273	1.3677	1.3986	1.3413	1.2687	1.3084	AVRG	0.74500	1.3423	3	15	0.05	0.99				
Bromofluorobenzene	1.0576	1.1051	1.1074	1.0898	1.0367	1.1199	1.0507	1.0539	AVRG	0.92600	1.0799	3	15	0.05	0.99				

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	5	2.0000	-2	5.0000	11	10.000	-15	20.000	-7	50.000	8	75.000	3	100.00	-2
Chloromethane	0.5000	26	1.0000	-6	2.0000	9	5.0000	7	10.000	-1	20.000	-5	50.000	-5	75.000	-11	100.00	-15
Vinyl Chloride	0.5000	-22	1.0000	4	2.0000	8	5.0000	7	10.000	-2	20.000	1	50.000	2	75.000	3	100.00	1
Bromomethane			1.0000	-10	2.0000	-11	5.0000	-6	10.000	-10	20.000	-10	50.000	7	75.000	21	100.00	19
Chloroethane			1.0000	3	2.0000	0	5.0000	6	10.000	0	20.000	-1	50.000	-1	75.000	1	100.00	-8
Trichlorofluoromethane			1.0000	-4	2.0000	-2	5.0000	9	10.000	-4	20.000	-3	50.000	4	75.000	3	100.00	-4
Acetone							5.0000	15	10.000	15	20.000	-4	50.000	-4	75.000	-16	100.00	-7
Freon 113			0.5000	-24	2.0000	-8	5.0000	8	10.000	-11	20.000	-2	50.000	16	75.000	13	100.00	7
1,1-Dichloroethene			0.5000	-7	2.0000	2	5.0000	-1	10.000	-6	20.000	0	50.000	3	75.000	8	100.00	1
Methylene Chloride			0.5000	-9	2.0000	4	5.0000	1	10.000	6	20.000	-1	50.000	-1	75.000	3	100.00	-4
Carbon Disulfide			0.5000	27	2.0000	0	5.0000	0	10.000	-7	20.000	-7	50.000	-4	75.000	-2	100.00	-8
MTBE			0.5000	-7	2.0000	-4	5.0000	2	10.000	4	20.000	-1	50.000	7	75.000	3	100.00	-4
trans-1,2-Dichloroethene			0.5000	24	2.0000	-2	5.0000	-9	10.000	2	20.000	-8	50.000	-1	75.000	0	100.00	-7
Vinyl Acetate							5.0000	2	10.000	4	20.000	-2	50.000	3	75.000	-5	100.00	-7
1,1-Dichloroethane			0.5000	1	2.0000	3	5.0000	2	10.000	5	20.000	-3	50.000	-2	75.000	-1	100.00	-6
2-Butanone							5.0000	-1	10.000	9	20.000	2	50.000	4	75.000	-11	100.00	1
2,2-Dichloropropane			0.5000	3	2.0000	6	5.0000	7	10.000	-2	20.000	-4	50.000	0	75.000	-2	100.00	-8
cis-1,2-Dichloroethene			0.5000	23	2.0000	2	5.0000	-5	10.000	-2	20.000	-4	50.000	-4	75.000	-1	100.00	-9
Chloroform			0.5000	3	2.0000	-1	5.0000	5	10.000	3	20.000	-3	50.000	0	75.000	-1	100.00	-7
Bromochloromethane			0.5000	1	2.0000	2	5.0000	7	10.000	4	20.000	-2	50.000	-1	75.000	-1	100.00	-9
1,1,1-Trichloroethane			0.5000	1	2.0000	-3	5.0000	7	10.000	0	20.000	-3	50.000	2	75.000	1	100.00	-5
1,1-Dichloropropene			0.5000	-1	2.0000	0	5.0000	0	10.000	-5	20.000	0	50.000	7	75.000	4	100.00	-5
Carbon Tetrachloride			0.5000	-13	2.0000	-1	5.0000	7	10.000	-6	20.000	1	50.000	11	75.000	5	100.00	-4
1,2-Dichloroethane			0.5000	10	2.0000	7	5.0000	-1	10.000	1	20.000	1	50.000	-1	75.000	-4	100.00	-13
Benzene			0.5000	6	2.0000	1	5.0000	1	10.000	0	20.000	2	50.000	2	75.000	1	100.00	-9
Trichloroethene			0.5000	3	2.0000	1	5.0000	-4	10.000	-4	20.000	2	50.000	5	75.000	3	100.00	-6
1,2-Dichloropropane			0.5000	5	2.0000	7	5.0000	1	10.000	0	20.000	0	50.000	3	75.000	-4	100.00	-13
Bromodichloromethane			0.5000	0	2.0000	7	5.0000	-1	10.000	2	20.000	3	50.000	0	75.000	-1	100.00	-9
Dibromomethane			0.5000	4	2.0000	5	5.0000	-2	10.000	0	20.000	2	50.000	3	75.000	-2	100.00	-9
4-Methyl-2-Pentanone							5.0000	-3	10.000	6	20.000	3	50.000	4	75.000	-10	100.00	-4
cis-1,3-Dichloropropene			0.5000	-7	2.0000	-1	5.0000	0	10.000	1	20.000	2	50.000	6	75.000	3	100.00	-4
Toluene			0.5000	3	2.0000	1	5.0000	5	10.000	-4	20.000	-2	50.000	1	75.000	-2	100.00	-1
trans-1,3-Dichloropropene			0.5000	1	2.0000	-8	5.0000	2	10.000	1	20.000	5	50.000	4	75.000	0	100.00	-4
1,1,2-Trichloroethane			0.5000	17	2.0000	-5	5.0000	1	10.000	-3	20.000	-1	50.000	2	75.000	-3	100.00	-7
2-Hexanone							5.0000	6	10.000	7	20.000	4	50.000	3	75.000	-13	100.00	-5
1,3-Dichloropropene			0.5000	-1	2.0000	-3	5.0000	5	10.000	0	20.000	3	50.000	5	75.000	-2	100.00	-7
Tetrachloroethene			0.5000	-13	2.0000	-7	5.0000	6	10.000	-8	20.000	-1	50.000	10	75.000	9	100.00	4
Dibromochloromethane			0.5000	-22	2.0000	-2	5.0000	-2	10.000	1	20.000	5	50.000	8	75.000	7	100.00	4
1,2-Dibromoethane			0.5000	-11	2.0000	-5	5.0000	0	10.000	4	20.000	5	50.000	6	75.000	2	100.00	-1
Chlorobenzene			0.5000	4	2.0000	-4	5.0000	3	10.000	0	20.000	-2	50.000	0	75.000	3	100.00	-4
1,1,1,2-Tetrachloroethane			0.5000	-1	2.0000	-5	5.0000	0	10.000	0	20.000	0	50.000	4	75.000	5	100.00	-2
Ethylbenzene			0.5000	8	2.0000	-1	5.0000	5	10.000	-2	20.000	-5	50.000	3	75.000	1	100.00	-9

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	16	1.0000	-3	4.0000	-4	10.0000	6	20.0000	-3	40.0000	-5	100.00	5	150.00	-3	200.00	-8
o-Xylene			0.5000	-1	2.0000	-4	5.0000	3	10.0000	-4	20.0000	1	50.0000	3	75.0000	3	100.00	-1
Styrene			0.5000	-12	2.0000	-1	5.0000	4	10.0000	0	20.0000	0	50.0000	6	75.0000	4	100.00	-2
Bromoform			0.5000	-10	2.0000	-9	5.0000	-1	10.0000	-1	20.0000	2	50.0000	10	75.0000	4	100.00	5
Isopropylbenzene			0.5000	-1	2.0000	4	5.0000	2	10.0000	-9	20.0000	-5	50.0000	10	75.0000	1	100.00	-1
1,1,2,2-Tetrachloroethane			0.5000	5	2.0000	0	5.0000	4	10.0000	1	20.0000	-5	50.0000	5	75.0000	-7	100.00	-3
1,2,3-Trichloropropane			0.5000	13	2.0000	2	5.0000	1	10.0000	2	20.0000	-6	50.0000	3	75.0000	-12	100.00	-3
Propylbenzene			0.5000	2	2.0000	-1	5.0000	5	10.0000	-5	20.0000	-7	50.0000	10	75.0000	-1	100.00	-3
Bromobenzene			0.5000	-4	2.0000	-1	5.0000	3	10.0000	-3	20.0000	-6	50.0000	7	75.0000	2	100.00	0
1,3,5-Trimethylbenzene			0.5000	-5	2.0000	1	5.0000	8	10.0000	-6	20.0000	-5	50.0000	7	75.0000	4	100.00	-2
2-Chlorotoluene			0.5000	8	2.0000	-1	5.0000	4	10.0000	-2	20.0000	-6	50.0000	4	75.0000	0	100.00	-7
4-Chlorotoluene			0.5000	7	2.0000	-2	5.0000	6	10.0000	-5	20.0000	-7	50.0000	6	75.0000	-2	100.00	-4
tert-Butylbenzene			0.5000	3	2.0000	-4	5.0000	3	10.0000	-10	20.0000	-10	50.0000	8	75.0000	7	100.00	2
1,2,4-Trimethylbenzene			0.5000	0	2.0000	-1	5.0000	4	10.0000	-8	20.0000	-5	50.0000	8	75.0000	4	100.00	-3
sec-Butylbenzene			0.5000	-5	2.0000	-6	5.0000	7	10.0000	-9	20.0000	-6	50.0000	10	75.0000	8	100.00	2
para-Isopropyl Toluene			0.5000	-3	2.0000	0	5.0000	0	10.0000	-10	20.0000	-8	50.0000	12	75.0000	5	100.00	4
1,3-Dichlorobenzene			0.5000	-3	2.0000	2	5.0000	5	10.0000	-2	20.0000	-7	50.0000	7	75.0000	-1	100.00	-1
1,4-Dichlorobenzene			0.5000	-2	2.0000	0	5.0000	0	10.0000	-1	20.0000	-8	50.0000	5	75.0000	5	100.00	1
n-Butylbenzene			0.5000	3	2.0000	-15	5.0000	8	10.0000	-7	20.0000	-5	50.0000	10	75.0000	5	100.00	2
1,2-Dichlorobenzene			0.5000	1	2.0000	-3	5.0000	2	10.0000	-1	20.0000	-9	50.0000	4	75.0000	4	100.00	2
1,2-Dibromo-3-Chloropropane					2.0000	7	5.0000	8	10.0000	-2	20.0000	-4	50.0000	6	75.0000	-13	100.00	-3
1,2,4-Trichlorobenzene			0.5000	-1	2.0000	-3	5.0000	0	10.0000	-5	20.0000	-7	50.0000	9	75.0000	7	100.00	1
Hexachlorobutadiene			0.5000	-5	2.0000	-6	5.0000	-3	10.0000	-18	20.0000	-10	50.0000	18	75.0000	14	100.00	10
Naphthalene			0.5000	-5	2.0000	-4	5.0000	2	10.0000	-1	20.0000	-3	50.0000	11	75.0000	1	100.00	-2
1,2,3-Trichlorobenzene			0.5000	-9	2.0000	-9	5.0000	5	10.0000	-4	20.0000	-2	50.0000	11	75.0000	8	100.00	0
tert-Butyl Alcohol (TEA)			5.0000	-1	20.0000	-11	50.0000	3	100.00	8	200.00	3	500.00	6	750.00	-11	1000.0	4
Isopropyl Ether (DIPE)			0.5000	-2	2.0000	-2	5.0000	-1	10.0000	4	20.0000	1	50.0000	2	75.0000	3	100.00	-4
Ethyl tert-Butyl Ether (ETBE)			0.5000	-7	2.0000	-5	5.0000	2	10.0000	4	20.0000	0	50.0000	2	75.0000	6	100.00	-1
Methyl tert-Amyl Ether (TAME)			0.5000	-5	2.0000	-5	5.0000	-4	10.0000	5	20.0000	3	50.0000	6	75.0000	2	100.00	-3
Dibromofluoromethane	50.0000	4	50.0000	1	50.0000	1	50.0000	4	50.0000	3	50.0000	0	50.0000	-4	50.0000	-2	50.0000	-6
1,2-Dichloroethane-d4	50.0000	7	50.0000	5	50.0000	9	50.0000	6	50.0000	3	50.0000	2	50.0000	-6	50.0000	-9	50.0000	-16
Toluene-d8	50.0000	3	50.0000	2	50.0000	-1	50.0000	2	50.0000	4	50.0000	0	50.0000	-5	50.0000	-1	50.0000	-3
Bromofluorobenzene	50.0000	-2	50.0000	2	50.0000	3	50.0000	1	50.0000	2	50.0000	-4	50.0000	4	50.0000	-3	50.0000	-2

DAR 04/01/15 [Freon 12]: Combined split peak in multiple levels.
DAR 04/01/15 [Chloromethane]: Combined split peak in all levels.
DAR 04/01/15 [Vinyl Chloride]: Combined split peak in multiple levels.
DAR 04/01/15 [Chloroethane]: Combined split peak in multiple levels.

DAR 04/01/15 [Trichlorofluoromethane]: Combined split peak in multiple levels.
DAR 04/01/15 [Ethanol]: Combined split peak in 2PPB (fcv17).
DAR 04/01/15 [Bromomethane]: Combined split peak in 2PPB (fcv17).
DAR 04/01/15 [Carbon Disulfide]: Combined split peak1PPB (fcv16).
DAR 04/01/15 [Methylene Chloride]: Combined split peak1PPB (fcv16).
DAR 04/01/15 [tert-Butyl Alcohol (TBA)]: Combined split peak in multiple levels.
DAR 04/01/15 [Bromochloromethane]: Combined split peak in 2PPB (fcv17).
DAR 04/01/15 [n-Hexane]: fails ICV 45% high, rerun all hits
DAR 04/01/15 : opened a new ampule for third gas ICV run

Analyst: DAR

Date: 04/02/15

Reviewer: IW

Date: 04/02/15

m>manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor

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455130249001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA06
Calnum : 455130249001

Name : 826GOX6W
Cal Date : 31-MAR-2015

Type : WATER

ICV 455130249025 (fcv25 01-APR-2015) stds: S26759 (10000X), S26569 (10000X), S26642 (10000X), S26911 (5000X)

ICV 455131716004 (fd104 01-APR-2015) stds: S26672 (10000X), S26911 (5000X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	455131716004	20.00	21.46	ug/L	7	30	m
Chloromethane	455131716004	20.00	15.95	ug/L	-20	30	m
Vinyl Chloride	455131716004	20.00	20.75	ug/L	4	20	
Bromomethane	455131716004	20.00	23.96	ug/L	20	30	
Chloroethane	455131716004	20.00	19.30	ug/L	-3	30	
Trichlorofluoromethane	455131716004	20.00	21.37	ug/L	7	30	
Acetone	455130249025	25.00	20.91	ug/L	-16	40	
Freon 113	455130249025	25.00	25.16	ug/L	1	30	
1,1-Dichloroethene	455130249025	25.00	25.88	ug/L	4	20	
Methylene Chloride	455130249025	25.00	24.77	ug/L	-1	30	
Carbon Disulfide	455130249025	25.00	24.91	ug/L	0	30	
MTBE	455130249025	25.00	22.36	ug/L	-11	30	
trans-1,2-Dichloroethene	455130249025	25.00	23.62	ug/L	-6	30	
Vinyl Acetate	455130249025	25.00	28.28	ug/L	13	40	
1,1-Dichloroethane	455130249025	25.00	24.46	ug/L	-2	30	
2-Butanone	455130249025	25.00	23.16	ug/L	-7	40	
2,2-Dichloropropane	455130249025	25.00	23.39	ug/L	-6	30	
cis-1,2-Dichloroethene	455130249025	25.00	23.92	ug/L	-4	30	
Chloroform	455130249025	25.00	23.65	ug/L	-5	20	
Bromochloromethane	455130249025	25.00	25.00	ug/L	0	30	
1,1,1-Trichloroethane	455130249025	25.00	24.84	ug/L	-1	30	
1,1-Dichloropropene	455130249025	25.00	26.14	ug/L	5	30	
Carbon Tetrachloride	455130249025	25.00	26.66	ug/L	7	30	
1,2-Dichloroethane	455130249025	25.00	23.57	ug/L	-6	30	
Benzene	455130249025	25.00	25.48	ug/L	2	30	
Trichloroethene	455130249025	25.00	25.81	ug/L	3	30	
1,2-Dichloropropane	455130249025	25.00	24.22	ug/L	-3	20	
Bromodichloromethane	455130249025	25.00	24.22	ug/L	-3	30	
Dibromomethane	455130249025	25.00	25.13	ug/L	1	30	
4-Methyl-2-Pentanone	455130249025	25.00	24.45	ug/L	-2	40	
cis-1,3-Dichloropropene	455130249025	25.00	25.53	ug/L	2	30	
Toluene	455130249025	25.00	26.54	ug/L	6	20	
trans-1,3-Dichloropropene	455130249025	25.00	22.29	ug/L	-11	30	
1,1,2-Trichloroethane	455130249025	25.00	23.27	ug/L	-7	30	
2-Hexanone	455130249025	25.00	23.97	ug/L	-4	40	
1,3-Dichloropropane	455130249025	25.00	24.67	ug/L	-1	30	
Tetrachloroethene	455130249025	25.00	27.79	ug/L	11	30	
Dibromochloromethane	455130249025	25.00	25.42	ug/L	2	30	
1,2-Dibromoethane	455130249025	25.00	25.27	ug/L	1	30	
Chlorobenzene	455130249025	25.00	25.43	ug/L	2	30	
1,1,1,2-Tetrachloroethane	455130249025	25.00	24.31	ug/L	-3	30	
Ethylbenzene	455130249025	25.00	25.66	ug/L	3	20	
m,p-Xylenes	455130249025	50.00	53.84	ug/L	8	30	
o-Xylene	455130249025	25.00	26.55	ug/L	6	30	
Styrene	455130249025	25.00	26.80	ug/L	7	30	
Bromoform	455130249025	25.00	25.29	ug/L	1	30	
Isopropylbenzene	455130249025	25.00	27.32	ug/L	9	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	455130249025	25.00	24.74	ug/L	-1	30	
1,2,3-Trichloropropane	455130249025	25.00	24.00	ug/L	-4	30	
Propylbenzene	455130249025	25.00	26.21	ug/L	5	30	
Bromobenzene	455130249025	25.00	26.13	ug/L	5	30	
1,3,5-Trimethylbenzene	455130249025	25.00	28.33	ug/L	13	30	
2-Chlorotoluene	455130249025	25.00	26.04	ug/L	4	30	
4-Chlorotoluene	455130249025	25.00	25.64	ug/L	3	30	
tert-Butylbenzene	455130249025	25.00	27.61	ug/L	10	30	
1,2,4-Trimethylbenzene	455130249025	25.00	26.67	ug/L	7	30	
sec-Butylbenzene	455130249025	25.00	27.51	ug/L	10	30	
para-Isopropyl Toluene	455130249025	25.00	27.76	ug/L	11	30	
1,3-Dichlorobenzene	455130249025	25.00	26.87	ug/L	7	30	
1,4-Dichlorobenzene	455130249025	25.00	27.36	ug/L	9	30	
n-Butylbenzene	455130249025	25.00	27.48	ug/L	10	30	
1,2-Dichlorobenzene	455130249025	25.00	26.46	ug/L	6	30	
1,2-Dibromo-3-Chloropropane	455130249025	25.00	22.48	ug/L	-10	30	
1,2,4-Trichlorobenzene	455130249025	25.00	26.65	ug/L	7	30	
Hexachlorobutadiene	455130249025	25.00	29.43	ug/L	18	30	
Naphthalene	455130249025	25.00	24.38	ug/L	-2	30	
1,2,3-Trichlorobenzene	455130249025	25.00	27.25	ug/L	9	30	
tert-Butyl Alcohol (TBA)	455130249025	125.0	115.8	ug/L	-7	30	
Isopropyl Ether (DIPE)	455130249025	25.00	22.06	ug/L	-12	30	
Ethyl tert-Butyl Ether (ETBE)	455130249025	25.00	22.38	ug/L	-10	30	
Methyl tert-Amyl Ether (TAME)	455130249025	25.00	22.84	ug/L	-9	30	

455130249025: Analyst: DAR
455131716004: Analyst: DAR

Date: 04/02/15
Date: 04/02/15

Reviewer: LW
Reviewer: LW

Date: 04/02/15
Date: 04/02/15

m=manual integration

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 MSVOA Water: EPA 8260B

Inst : MSVOA10 Name : 826GOX10
 Calnum : 495052755001 Date : 05-FEB-2015 23:42 Type : WATER
 Units : ug/L X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Std
L1	j512	495052755012	05-FEB-2015 23:42	S26396 (2000000X), S24979 (10000000X), S26526 (25000X)
L2	j513	495052755013	06-FEB-2015 00:13	S24977 (10000000X), S26560 (10000000X), S26396 (10000000X), S24979 (5000000X), S26526 (25000X)
L3	j514	495052755014	06-FEB-2015 00:44	S24977 (5000000X), S26560 (2500000X), S26396 (2500000X), S24979 (2500000X), S26526 (25000X)
L4	j515	495052755015	06-FEB-2015 01:14	S24977 (2000000X), S26560 (1000000X), S26396 (1000000X), S24979 (1000000X), S26526 (25000X)
L5	j516	495052755016	06-FEB-2015 01:45	S24977 (1000000X), S26560 (500000X), S26396 (500000X), S24979 (500000X), S26526 (25000X)
L6	j517	495052755017	06-FEB-2015 02:16	S24977 (500000X), S26560 (250000X), S26396 (250000X), S24979 (250000X), S26526 (25000X)
L7	j518	495052755018	06-FEB-2015 02:47	S24977 (200000X), S26560 (100000X), S26396 (100000X), S24979 (100000X), S26526 (25000X)
L8	j519	495052755019	06-FEB-2015 03:18	S24977 (13330X), S26560 (6667X), S26396 (6667X), S24979 (6667X), S26526 (25000X)
L9	j520	495052755020	06-FEB-2015 03:49	S24977 (100000X), S26560 (50000X), S26396 (50000X), S24979 (50000X), S26526 (25000X)

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r ²	Max %RSD	Min RF	Min r ²	Flg
Freon 12		0.7200	0.7451m	0.8762	0.7208	0.6960	0.6389	0.6668	0.6609	AVRG	1.39743			0.7156	10	15	0.05	0.99	
Chloromethane	1.1933	1.2818	1.1197	1.2258	1.1109	1.0486	0.9426	0.9730	0.9073	AVRG		0.91809		1.0892	12	15	0.10	0.99	
Vinyl Chloride	0.7817	0.9720m	0.9155	0.9942m	0.8852	0.8307	0.7593	0.7691	0.7363	AVRG		1.17739		0.8493	11	15	0.05	0.99	
Bromomethane		0.5414	0.5647	0.5824	0.5280	0.5145	0.4859	0.5045	0.4923	AVRG		1.89857		0.5267	7	15	0.05	0.99	
Chloroethane		0.5721	0.5790	0.5959	0.5419	0.5287	0.4890	0.4966	0.4727	AVRG		1.87092		0.5345	9	15	0.05	0.99	
Trichlorofluoromethane		1.0020	1.0131	1.1562	1.0019	0.9429	0.8883	0.9107	0.8904	AVRG		1.02490		0.9757	9	15	0.05	0.99	
Acetone			0.5128	0.4662	0.3925	0.4166	0.3674	0.3615	0.3758	AVRG		2.41983		0.4133	14	15	0.05	0.99	
Freon 113			0.5620	0.5767	0.5236	0.5341	0.5023	0.4860	0.4818	AVRG		1.90918		0.5238	7	15	0.05	0.99	
1,1-Dichloroethene		0.4993	0.5135	0.5326	0.4759	0.5052	0.4701	0.4779	0.4626	AVRG		2.03197		0.4921	5	15	0.05	0.99	
Methylene Chloride		0.6928	0.6848	0.7158	0.6763	0.6506	0.6552	0.6657	0.6522	AVRG		1.48330		0.6742	3	15	0.05	0.99	
Carbon Disulfide		2.1802	2.1319	2.1963	2.0551	2.0269	1.8866	1.8940	1.8560	AVRG		0.49300		2.0284	7	15	0.05	0.99	
MTBE		2.0578	2.0223	2.1270	1.9500	1.9035	1.8303	1.8291	1.7568	AVRG		0.51690		1.9346	7	15	0.05	0.99	
trans-1,2-Dichloroethene		0.5917	0.6014	0.6057	0.5815	0.5828	0.5553	0.5657	0.5500	AVRG		1.72633		0.5793	4	15	0.05	0.99	
Vinyl Acetate			0.9843	0.9843	0.9642	0.8943	0.9551	1.0593	0.9550	AVRG		1.03230		0.9687	6	15	0.05	0.99	
1,1-Dichloroethane		1.4531	1.3966	1.4640	1.3806	1.3453	1.2564	1.2484	1.1707	AVRG		0.74661		1.3394	8	15	0.10	0.99	
2-Butanone				0.5369	0.4890	0.4919	0.4547	0.4471	0.4530	AVRG		2.08881		0.4787	7	15	0.05	0.99	
2,2-Dichloropropane		1.0050	0.9369	0.9579	0.8991	0.8855	0.8104	0.7842	0.7384	AVRG		1.14004		0.8772	10	15	0.05	0.99	
cis-1,2-Dichloroethene		0.6240	0.6904	0.6785	0.6445	0.6364	0.6263	0.6313	0.6154	AVRG		1.55436		0.6434	4	15	0.05	0.99	
Chloroform		1.3821	1.2397	1.3161	1.2331	1.2004	1.1243	1.1062	1.0572	AVRG		0.82822		1.2074	9	15	0.05	0.99	
Bromochloromethane		0.2969	0.3233	0.3388	0.3260	0.3207	0.3293	0.3379	0.3312	AVRG		3.07196		0.3255	4	15	0.05	0.99	
1,1,1-Trichloroethane		0.9230	0.9601	0.9344	0.9385	0.9308	0.8579	0.8415	0.8022	AVRG		1.11291		0.8985	6	15	0.05	0.99	
1,1-Dichloropropene		0.6346	0.6106	0.5925	0.5617	0.5771	0.5451	0.5334	0.4940	AVRG		1.75865		0.5686	8	15	0.05	0.99	
Carbon Tetrachloride		0.5027	0.4792	0.4774	0.4647	0.4858	0.4506	0.4425	0.4118	AVRG		2.15365		0.4643	6	15	0.05	0.99	
1,2-Dichloroethane		0.7522	0.7258	0.7686	0.6972	0.6987	0.6515	0.6269	0.5945	AVRG		1.45048		0.6894	9	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
Benzene		1.5955	1.5498	1.5987	1.4798	1.4985	1.4439	1.4355	1.3590	AVRG	0.66886			1.4951	6	15	0.05	0.99	
Trichloroethene		0.4183	0.4091	0.4142	0.3913	0.4097	0.3867	0.3905	0.3830	AVRG	2.49782			0.4003	3	15	0.05	0.99	
1,2-Dichloropropane		0.5200	0.5002	0.5217m	0.4687	0.4896	0.4649	0.4658	0.4440	AVRG	2.06457			0.4844	6	15	0.05	0.99	
Bromodichloromethane		0.5727	0.5832	0.6325	0.5890	0.5967	0.5784	0.5842	0.5568	AVRG	1.70445			0.5867	4	15	0.05	0.99	
Dibromomethane		0.3044	0.3106	0.3088	0.3004	0.2988	0.2949	0.2972	0.2894	AVRG	3.32702			0.3006	2	15	0.05	0.99	
4-Methyl-2-Pentanone				0.5905	0.5533	0.5623	0.5691	0.5590	0.5772	AVRG	1.75887			0.5685	2	15	0.05	0.99	
cis-1,3-Dichloropropene		0.6562	0.6577	0.6951	0.6677	0.6842	0.6684	0.6731	0.6429	AVRG	1.49665			0.6682	2	15	0.05	0.99	
Toluene		1.0720	1.0784	1.0924	1.0502	1.0513	1.0110	1.0183	0.9900	AVRG	0.95652			1.0455	3	15	0.05	0.99	
trans-1,3-Dichloropropene		0.7118	0.6669	0.7483	0.6914	0.7069	0.6968	0.6916	0.6828	AVRG	1.42949			0.6996	3	15	0.05	0.99	
1,1,2-Trichloroethane		0.2157	0.2475	0.2527	0.2465	0.2362	0.2368	0.2402	0.2358	AVRG	4.18505			0.2389	5	15	0.05	0.99	
2-Hexanone				0.3721	0.3744	0.3847	0.4284	0.4177	0.4596	AVRG	2.46219			0.4061	9	15	0.05	0.99	
1,3-Dichloropropane		0.7704	0.7965	0.8339	0.7816	0.7746	0.7614	0.7373	0.7344	AVRG	1.29239			0.7738	4	15	0.05	0.99	
Tetrachloroethene		0.4103	0.4076	0.4114	0.4001	0.4113	0.4061	0.4037	0.4074	AVRG	2.45558			0.4072	1	15	0.05	0.99	
Dibromochloromethane		0.4356	0.4572	0.4972	0.4843	0.4782	0.4920	0.5065	0.4988	AVRG	2.07800			0.4812	5	15	0.05	0.99	
1,2-Dibromoethane		0.3744	0.4435	0.4571	0.4376	0.4388	0.4442	0.4514	0.4552	AVRG	2.28423			0.4378	6	15	0.05	0.99	
Chlorobenzene		1.1235	1.1661	1.1597	1.1019	1.1030	1.0896	1.0841	1.0648	AVRG	0.89963			1.1116	3	15	0.30	0.99	
1,1,1,2-Tetrachloroethane		0.3591	0.4004	0.4183	0.4126	0.4086	0.4106	0.4107	0.4107	AVRG	2.47586			0.4039	5	15	0.05	0.99	
Ethylbenzene		2.0799	2.1015	2.0978	2.0228	2.0023	1.8702	1.7861	1.7335	AVRG	0.50975			1.9618	7	15	0.05	0.99	
m,p-Xylenes	0.7071	0.6294	0.6895	0.6940	0.6778	0.6830	0.6715	0.6620	0.6462	AVRG	1.48502			0.6734	4	15	0.05	0.99	
o-Xylene		0.5943	0.6283	0.6658	0.6521	0.6704	0.6792	0.6783	0.6662	AVRG	1.52828			0.6543	4	15	0.05	0.99	
Styrene		1.0119	1.0540	1.1558	1.1576	1.2079	1.2371	1.2408	1.1911	AVRG	0.86429			1.1570	7	15	0.05	0.99	
Bromoform		0.2094	0.2757	0.3074	0.3150	0.3230	0.3430	0.3541	0.3475	AVRG	3.23212			0.3094	15	15	0.10	0.99	
Isopropylbenzene		4.0805	3.8570	3.9751	3.6328	3.6697	3.4409	3.2053	3.0739	AVRG	0.27648			3.6169	10	15	0.05	0.99	
1,1,2,2-Tetrachloroethane		1.2852	1.2136	1.2701	1.1512	1.1111	1.0564	1.0467	1.0399	AVRG	0.87201			1.1468	9	15	0.30	0.99	
1,2,3-Trichloropropane		1.4019	1.2382	1.3190	1.0960	1.0800	0.9962	0.9628	0.9457	AVRG	0.88499			1.1300	15	15	0.05	0.99	
Propylbenzene		4.6469	4.3546	4.7909	4.4771	4.4759	4.1443	3.8595	3.6983	AVRG	0.23224			4.3060	9	15	0.05	0.99	
Bromobenzene		1.1197	0.9459	1.0758	0.9840	0.9911	0.9608	0.9637	0.9591	AVRG	0.99999			1.0000	6	15	0.05	0.99	
1,3,5-Trimethylbenzene		2.7964	2.8019	2.8336	2.8206	2.8874	2.7151	2.5826	2.5288	AVRG	0.36419			2.7458	5	15	0.05	0.99	
2-Chlorotoluene		3.7702	3.4710	3.5555	3.2554	3.1988	2.8756	2.7201	2.5787	AVRG	0.31465			3.1782	13	15	0.05	0.99	
4-Chlorotoluene		3.3585	3.0137	3.1933	2.8930	2.8492	2.6993	2.5674	2.5238	AVRG	0.34635			2.8873	10	15	0.05	0.99	
tert-Butylbenzene		2.3736	2.2773	2.4316	2.3282	2.3894	2.3481	2.2056	2.2390	AVRG	0.43028			2.3241	3	15	0.05	0.99	
1,2,4-Trimethylbenzene		2.6441	2.4735	2.5929	2.5615	2.6183	2.6631	2.5504	2.5599	AVRG	0.38716			2.5829	2	15	0.05	0.99	
sec-Butylbenzene		3.3514	3.4433	3.6630	3.5277	3.6279	3.6391	3.3886	3.3609	AVRG	0.28569			3.5002	4	15	0.05	0.99	
para-Isopropyl Toluene		2.3776	2.4086	2.5805	2.5510	2.6590	2.7715	2.6488	2.7277	AVRG	0.38602			2.5906	5	15	0.05	0.99	
1,3-Dichlorobenzene		1.8227	1.6950	1.8321	1.6981	1.7086	1.6837	1.7444	1.6544	AVRG	0.57808			1.7299	4	15	0.05	0.99	
1,4-Dichlorobenzene		1.8639	1.7326	1.8446	1.6865	1.6853	1.6716	1.6618	1.6619	AVRG	0.57936			1.7260	5	15	0.05	0.99	
n-Butylbenzene		3.0117	2.3175	2.3703	2.2201	2.3418	2.4260	2.3264	2.4226	AVRG	0.41160			2.4296	10	15	0.05	0.99	
1,2-Dichlorobenzene		1.6828	1.6233	1.6917	1.6331	1.6417	1.6194	1.6176	1.5972	AVRG	0.61036			1.6384	2	15	0.05	0.99	
1,2-Dibromo-3-Chloropropane			0.1978	0.1800	0.1735	0.1761	0.1810	0.1744	0.1802	AVRG	5.54231			0.1804	5	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.8896	0.8408	0.8444	0.7605	0.7734	0.7979	0.7924	0.8406	AVRG	1.20491			0.8299	9	15	0.05	0.99	
Hexachlorobutadiene		0.3478	0.3840	0.4367	0.4108	0.4406	0.4551	0.4319	0.4509	AVRG	2.38247			0.4197	9	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	FLg
Naphthalene		2.4361	1.9481	1.9968	1.8420	1.7589	1.7477	1.7264	1.7987	AVRG		0.52443		1.9068	12	15	0.05	0.99	
1,2,3-Trichlorobenzene		0.9061	0.7404	0.7739	0.6986	0.6977	0.7415	0.7343	0.7857	AVRG		1.31617		0.7598	9	15	0.05	0.99	
tert-Butyl Alcohol (TEA)		0.0600	0.0698	0.0649	0.0598	0.0608	0.0604	0.0590	0.0626	AVRG		16.0851		0.0622	6	15	0.005	0.99	
Isopropyl Ether (DIPE)		3.9327	3.5967	3.8340	3.5476	3.4042	3.1792	3.0775	2.8466	AVRG		0.29177		3.4273	11	15	0.05	0.99	
Ethyl tert-Butyl Ether (ETBE)		2.7326	2.7101	2.7549	2.6089	2.5286	2.3767	2.3497	2.2096	AVRG		0.39465		2.5339	8	15	0.05	0.99	
Methyl tert-Amyl Ether (TAME)		1.2757	1.3360	1.3884	1.2849	1.2961	1.2341	1.2223	1.1729	AVRG		0.78351		1.2763	5	15	0.05	0.99	
Dibromofluoromethane	0.5993	0.6291	0.6044	0.6057	0.6330	0.6055	0.5949	0.5974	0.5851	AVRG		1.65001		0.6061	3	15	0.05	0.99	
1,2-Dichloroethane-d4	0.5398	0.5422	0.5347	0.5343	0.5169	0.5031	0.4564	0.4318	0.3982	AVRG		2.01902		0.4953	11	15	0.05	0.99	
Toluene-d8	1.3617	1.3871	1.3766	1.3745	1.3766	1.3634	1.3069	1.3411	1.3332	AVRG		0.73643		1.3579	2	15	0.05	0.99	
Bromofluorobenzene	1.2724	1.2981	1.2201	1.2356	1.1561	1.1360	1.0830	1.0708	1.0535	AVRG		0.85506		1.1695	8	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Freon 12			1.0000	1	2.0000	4	5.0000	22	10.000	1	20.000	-3	50.000	-11	75.000	-7	100.00	-8
Chloromethane	0.5000	10	1.0000	18	2.0000	3	5.0000	13	10.000	2	20.000	-4	50.000	-13	75.000	-11	100.00	-17
Vinyl Chloride	0.5000	-8	1.0000	14	2.0000	8	5.0000	17	10.000	4	20.000	-2	50.000	-11	75.000	-9	100.00	-13
Bromomethane			1.0000	3	2.0000	7	5.0000	11	10.000	0	20.000	-2	50.000	-8	75.000	-4	100.00	-7
Chloroethane			1.0000	7	2.0000	8	5.0000	11	10.000	1	20.000	-1	50.000	-9	75.000	-7	100.00	-12
Trichlorofluoromethane			1.0000	3	2.0000	4	5.0000	18	10.000	3	20.000	-3	50.000	-9	75.000	-7	100.00	-9
Acetone					2.0000	24	5.0000	13	10.000	-5	20.000	1	50.000	-11	75.000	-13	100.00	-9
Freon 113					2.0000	7	5.0000	10	10.000	0	20.000	2	50.000	-4	75.000	-7	100.00	-8
1,1-Dichloroethene	0.5000	1	0.5000	1	2.0000	4	5.0000	8	10.000	-3	20.000	3	50.000	-4	75.000	-3	100.00	-6
Methylene Chloride	0.5000	3	0.5000	3	2.0000	2	5.0000	6	10.000	0	20.000	-4	50.000	-3	75.000	-1	100.00	-3
Carbon Disulfide	0.5000	7	0.5000	7	2.0000	5	5.0000	8	10.000	1	20.000	0	50.000	-7	75.000	-7	100.00	-8
MTBE	0.5000	6	0.5000	6	2.0000	5	5.0000	10	10.000	1	20.000	-2	50.000	-5	75.000	-5	100.00	-9
trans-1,2-Dichloroethene	0.5000	2	0.5000	2	2.0000	4	5.0000	5	10.000	0	20.000	1	50.000	-4	75.000	-2	100.00	-5
Vinyl Acetate							5.0000	2	10.000	0	20.000	-8	50.000	-1	75.000	9	100.00	-1
1,1-Dichloroethane	0.5000	8	0.5000	8	2.0000	4	5.0000	9	10.000	3	20.000	0	50.000	-6	75.000	-7	100.00	-13
2-Butanone							5.0000	12	10.000	2	20.000	3	50.000	-5	75.000	-7	100.00	-5
2,2-Dichloropropane	0.5000	15	0.5000	15	2.0000	7	5.0000	9	10.000	3	20.000	1	50.000	-8	75.000	-11	100.00	-16
cis-1,2-Dichloroethene	0.5000	-3	0.5000	-3	2.0000	7	5.0000	5	10.000	0	20.000	-1	50.000	-3	75.000	-2	100.00	-4
Chloroform	0.5000	14	0.5000	14	2.0000	3	5.0000	9	10.000	2	20.000	-1	50.000	-7	75.000	-8	100.00	-12
Bromochloromethane	0.5000	-9	0.5000	-9	2.0000	-1	5.0000	4	10.000	0	20.000	-1	50.000	1	75.000	4	100.00	2
1,1,1-Trichloroethane	0.5000	3	0.5000	3	2.0000	7	5.0000	4	10.000	4	20.000	4	50.000	-5	75.000	-6	100.00	-11
1,1-Dichloropropene	0.5000	12	0.5000	12	2.0000	7	5.0000	4	10.000	-1	20.000	1	50.000	-4	75.000	-6	100.00	-13
Carbon Tetrachloride	0.5000	8	0.5000	8	2.0000	3	5.0000	3	10.000	0	20.000	5	50.000	-3	75.000	-5	100.00	-11
1,2-Dichloroethane	0.5000	9	0.5000	9	2.0000	5	5.0000	11	10.000	1	20.000	1	50.000	-6	75.000	-9	100.00	-14
Benzene	0.5000	7	0.5000	7	2.0000	4	5.0000	7	10.000	-1	20.000	0	50.000	-3	75.000	-4	100.00	-9
Trichloroethene	0.5000	4	0.5000	4	2.0000	2	5.0000	3	10.000	-2	20.000	2	50.000	-3	75.000	-2	100.00	-4
1,2-Dichloropropane	0.5000	7	0.5000	7	2.0000	3	5.0000	8	10.000	-3	20.000	1	50.000	-4	75.000	-4	100.00	-8
Bromodichloromethane	0.5000	-2	0.5000	-2	2.0000	-1	5.0000	8	10.000	0	20.000	2	50.000	-1	75.000	0	100.00	-5
Dibromomethane	0.5000	1	0.5000	1	2.0000	3	5.0000	3	10.000	0	20.000	-1	50.000	-2	75.000	-1	100.00	-4
4-Methyl-2-Pentanone							5.0000	4	10.000	-3	20.000	-1	50.000	0	75.000	-2	100.00	2
cis-1,3-Dichloropropene	0.5000	-2	0.5000	-2	2.0000	-2	5.0000	4	10.000	0	20.000	2	50.000	0	75.000	1	100.00	-4
Toluene	0.5000	3	0.5000	3	2.0000	3	5.0000	4	10.000	0	20.000	1	50.000	-3	75.000	-3	100.00	-5
trans-1,3-Dichloropropene	0.5000	2	0.5000	2	2.0000	-5	5.0000	7	10.000	-1	20.000	1	50.000	0	75.000	-1	100.00	-2
1,1,2-Trichloroethane	0.5000	-10	0.5000	-10	2.0000	4	5.0000	6	10.000	3	20.000	-1	50.000	-1	75.000	1	100.00	-1
2-Hexanone							5.0000	-8	10.000	-8	20.000	-5	50.000	5	75.000	3	100.00	13
1,3-Dichloropropane	0.5000	0	0.5000	0	2.0000	3	5.0000	8	10.000	1	20.000	0	50.000	-2	75.000	-5	100.00	-5
Tetrachloroethene	0.5000	1	0.5000	1	2.0000	0	5.0000	1	10.000	-2	20.000	1	50.000	0	75.000	-1	100.00	0
Dibromochloromethane	0.5000	-9	0.5000	-9	2.0000	-5	5.0000	3	10.000	1	20.000	-1	50.000	2	75.000	5	100.00	4
1,2-Dibromoethane	0.5000	-14	0.5000	-14	2.0000	1	5.0000	4	10.000	0	20.000	0	50.000	1	75.000	3	100.00	4
Chlorobenzene	0.5000	1	0.5000	1	2.0000	5	5.0000	4	10.000	-1	20.000	-1	50.000	-2	75.000	-2	100.00	-4
1,1,1,2-Tetrachloroethane	0.5000	-11	0.5000	-11	2.0000	-1	5.0000	4	10.000	2	20.000	1	50.000	2	75.000	2	100.00	2
Ethylbenzene	0.5000	6	0.5000	6	2.0000	7	5.0000	7	10.000	3	20.000	2	50.000	-5	75.000	-9	100.00	-12

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
m,p-Xylenes	0.5000	5	1.0000	-7	4.0000	2	10.000	3	20.000	1	40.000	1	100.00	0	150.00	-2	200.00	-4
o-Xylene			0.5000	-9	2.0000	-4	5.0000	2	10.000	0	20.000	2	50.000	4	75.000	4	100.00	2
Styrene			0.5000	-13	2.0000	-9	5.0000	0	10.000	0	20.000	4	50.000	7	75.000	7	100.00	3
Bromoform			0.5000	-32	2.0000	-11	5.0000	-1	10.000	2	20.000	4	50.000	11	75.000	14	100.00	12
Isopropylbenzene			0.5000	13	2.0000	7	5.0000	10	10.000	0	20.000	1	50.000	-5	75.000	-11	100.00	-15
1,1,2,2-Tetrachloroethane			0.5000	12	2.0000	6	5.0000	11	10.000	0	20.000	-3	50.000	-8	75.000	-9	100.00	-9
1,2,3-Trichloropropane			0.5000	24	2.0000	10	5.0000	17	10.000	-3	20.000	-4	50.000	-12	75.000	-15	100.00	-16
Propylbenzene			0.5000	8	2.0000	1	5.0000	11	10.000	4	20.000	4	50.000	-4	75.000	-10	100.00	-14
Bromobenzene			0.5000	12	2.0000	-5	5.0000	8	10.000	-2	20.000	-1	50.000	-4	75.000	-4	100.00	-4
1,3,5-Trimethylbenzene			0.5000	2	2.0000	2	5.0000	3	10.000	3	20.000	5	50.000	-1	75.000	-6	100.00	-8
2-Chlorotoluene			0.5000	19	2.0000	9	5.0000	12	10.000	2	20.000	1	50.000	-10	75.000	-14	100.00	-19
4-Chlorotoluene			0.5000	16	2.0000	4	5.0000	11	10.000	0	20.000	-1	50.000	-7	75.000	-11	100.00	-13
tert-Butylbenzene			0.5000	2	2.0000	-2	5.0000	5	10.000	0	20.000	3	50.000	1	75.000	-5	100.00	-4
1,2,4-Trimethylbenzene			0.5000	2	2.0000	-4	5.0000	0	10.000	-1	20.000	1	50.000	3	75.000	-1	100.00	-1
sec-Butylbenzene			0.5000	-4	2.0000	-2	5.0000	5	10.000	1	20.000	4	50.000	4	75.000	-3	100.00	-4
para-Isopropyl Toluene			0.5000	-8	2.0000	-7	5.0000	0	10.000	-2	20.000	3	50.000	7	75.000	2	100.00	5
1,3-Dichlorobenzene			0.5000	5	2.0000	-2	5.0000	6	10.000	-2	20.000	-1	50.000	-3	75.000	1	100.00	-4
1,4-Dichlorobenzene			0.5000	8	2.0000	0	5.0000	7	10.000	-2	20.000	-2	50.000	-3	75.000	-4	100.00	-4
n-Butylbenzene			0.5000	24	2.0000	-5	5.0000	-2	10.000	-9	20.000	-4	50.000	0	75.000	-4	100.00	0
1,2-Dichlorobenzene			0.5000	3	2.0000	-1	5.0000	3	10.000	0	20.000	0	50.000	-1	75.000	-1	100.00	-3
1,2-Dibromo-3-Chloropropane					2.0000	10	5.0000	0	10.000	-4	20.000	-2	50.000	0	75.000	-3	100.00	0
1,2,4-Trichlorobenzene			0.5000	19	2.0000	1	5.0000	2	10.000	-8	20.000	-7	50.000	-4	75.000	-5	100.00	1
Hexachlorobutadiene			0.5000	-17	2.0000	-9	5.0000	4	10.000	-2	20.000	5	50.000	8	75.000	3	100.00	7
Naphthalene			0.5000	28	2.0000	2	5.0000	5	10.000	-3	20.000	-8	50.000	-8	75.000	-9	100.00	-6
1,2,3-Trichlorobenzene			0.5000	19	2.0000	-3	5.0000	2	10.000	-8	20.000	-8	50.000	-2	75.000	-3	100.00	3
tert-Butyl Alcohol (TEA)			5.0000	-3	20.000	12	50.000	4	100.00	-4	200.00	-2	500.00	-3	750.00	-5	1000.0	1
Isopropyl Ether (DIPE)			0.5000	15	2.0000	5	5.0000	12	10.000	4	20.000	-1	50.000	-7	75.000	-10	100.00	-17
Ethyl tert-Butyl Ether (ETBE)			0.5000	8	2.0000	7	5.0000	9	10.000	3	20.000	0	50.000	-6	75.000	-7	100.00	-13
Methyl tert-Amyl Ether (TAME)			0.5000	0	2.0000	5	5.0000	9	10.000	1	20.000	2	50.000	-3	75.000	-4	100.00	-8
Dibromofluoromethane	50.000	-1	50.000	4	50.000	0	50.000	0	50.000	4	50.000	0	50.000	-2	50.000	-1	50.000	-3
1,2-Dichloroethane-d4	50.000	9	50.000	9	50.000	8	50.000	8	50.000	4	50.000	2	50.000	-8	50.000	-13	50.000	-20
Toluene-d8	50.000	0	50.000	2	50.000	1	50.000	1	50.000	1	50.000	0	50.000	-4	50.000	-1	50.000	-2
Bromofluorobenzene	50.000	9	50.000	11	50.000	4	50.000	6	50.000	-1	50.000	-3	50.000	-7	50.000	-8	50.000	-10

DAR 02/06/15 [Freon 12]: Combined split peak in 2PPB (jb514).

DAR 02/06/15 [Vinyl Chloride]: Combined split peak in multiple levels.

DAR 02/06/15 [Ethanol]: Combined split peak in multiple levels.

DAR 02/06/15 [1,2-Dichloropropane]: Corrected automatically drawn baseline in 5PPB (jb515).

DAR 02/06/15 [2-Chloroethylvinylether]: Average RF under 0.05, not usable

Analytst: DAR

Date: 02/06/15

Reviewer: IW

Date: 02/09/15

m>manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor

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495052755001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA10
Calnum : 495052755001

Name : 826GOX10
Cal Date : 05-FEB-2015

Type : WATER

ICV 495052755021 (jb521 06-FEB-2015) stds: S24978 (10000X), S26526 (2500X)
ICV 495052755022 (jb522 06-FEB-2015) stds: S26221 (10000X), S26275 (10000X),
S26249 (10000X), S26526 (2500X)

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
Freon 12	495052755021	20.00	20.67	ug/L	3	30	
Chloromethane	495052755021	20.00	18.07	ug/L	-10	30	
Vinyl Chloride	495052755021	20.00	18.96	ug/L	-5	20	
Bromomethane	495052755021	20.00	17.20	ug/L	-14	30	
Chloroethane	495052755021	20.00	18.98	ug/L	-5	30	
Trichlorofluoromethane	495052755021	20.00	18.51	ug/L	-7	30	
Acetone	495052755022	25.00	17.54	ug/L	-30	40	!v-
Freon 113	495052755022	25.00	20.08	ug/L	-20	30	
1,1-Dichloroethene	495052755022	25.00	23.86	ug/L	-5	20	
Methylene Chloride	495052755022	25.00	23.96	ug/L	-4	30	
Carbon Disulfide	495052755022	25.00	24.95	ug/L	0	30	
MTBE	495052755022	25.00	23.27	ug/L	-7	30	
trans-1,2-Dichloroethene	495052755022	25.00	24.02	ug/L	-4	30	
Vinyl Acetate	495052755022	25.00	30.63	ug/L	23	40	!v+
1,1-Dichloroethane	495052755022	25.00	23.06	ug/L	-8	30	
2-Butanone	495052755022	25.00	21.33	ug/L	-15	40	
2,2-Dichloropropane	495052755022	25.00	21.72	ug/L	-13	30	
cis-1,2-Dichloroethene	495052755022	25.00	24.75	ug/L	-1	30	
Chloroform	495052755022	25.00	23.68	ug/L	-5	20	
Bromochloromethane	495052755022	25.00	25.95	ug/L	4	30	
1,1,1-Trichloroethane	495052755022	25.00	24.35	ug/L	-3	30	
1,1-Dichloropropene	495052755022	25.00	23.32	ug/L	-7	30	
Carbon Tetrachloride	495052755022	25.00	24.44	ug/L	-2	30	
1,2-Dichloroethane	495052755022	25.00	23.56	ug/L	-6	30	
Benzene	495052755022	25.00	23.97	ug/L	-4	30	
Trichloroethene	495052755022	25.00	25.19	ug/L	1	30	
1,2-Dichloropropane	495052755022	25.00	23.75	ug/L	-5	20	
Bromodichloromethane	495052755022	25.00	24.89	ug/L	0	30	
Dibromomethane	495052755022	25.00	24.69	ug/L	-1	30	
4-Methyl-2-Pentanone	495052755022	25.00	22.30	ug/L	-11	40	
cis-1,3-Dichloropropene	495052755022	25.00	25.83	ug/L	3	30	
Toluene	495052755022	25.00	24.90	ug/L	0	20	
trans-1,3-Dichloropropene	495052755022	25.00	23.96	ug/L	-4	30	
1,1,2-Trichloroethane	495052755022	25.00	24.95	ug/L	0	30	
2-Hexanone	495052755022	25.00	22.25	ug/L	-11	40	
1,3-Dichloropropane	495052755022	25.00	24.62	ug/L	-2	30	
Tetrachloroethene	495052755022	25.00	25.63	ug/L	3	30	
Dibromochloromethane	495052755022	25.00	25.66	ug/L	3	30	
1,2-Dibromoethane	495052755022	25.00	25.24	ug/L	1	30	
Chlorobenzene	495052755022	25.00	25.87	ug/L	3	30	
1,1,1,2-Tetrachloroethane	495052755022	25.00	25.81	ug/L	3	30	
Ethylbenzene	495052755022	25.00	24.50	ug/L	-2	20	
m,p-Xylenes	495052755022	50.00	51.12	ug/L	2	30	
o-Xylene	495052755022	25.00	26.55	ug/L	6	30	
Styrene	495052755022	25.00	26.19	ug/L	5	30	
Bromoform	495052755022	25.00	27.62	ug/L	10	30	
Isopropylbenzene	495052755022	25.00	25.53	ug/L	2	30	

Analyte	ICV Seqnum	Spiked	Quant	Units	%D	Max	Flags
1,1,2,2-Tetrachloroethane	495052755022	25.00	24.23	ug/L	-3	30	
1,2,3-Trichloropropane	495052755022	25.00	22.99	ug/L	-8	30	
Propylbenzene	495052755022	25.00	26.60	ug/L	6	30	
Bromobenzene	495052755022	25.00	26.42	ug/L	6	30	
1,3,5-Trimethylbenzene	495052755022	25.00	25.79	ug/L	3	30	
2-Chlorotoluene	495052755022	25.00	24.95	ug/L	0	30	
4-Chlorotoluene	495052755022	25.00	24.85	ug/L	-1	30	
tert-Butylbenzene	495052755022	25.00	26.20	ug/L	5	30	
1,2,4-Trimethylbenzene	495052755022	25.00	25.19	ug/L	1	30	
sec-Butylbenzene	495052755022	25.00	27.19	ug/L	9	30	
para-Isopropyl Toluene	495052755022	25.00	25.77	ug/L	3	30	
1,3-Dichlorobenzene	495052755022	25.00	26.60	ug/L	6	30	
1,4-Dichlorobenzene	495052755022	25.00	25.24	ug/L	1	30	
n-Butylbenzene	495052755022	25.00	24.07	ug/L	-4	30	
1,2-Dichlorobenzene	495052755022	25.00	26.75	ug/L	7	30	
1,2-Dibromo-3-Chloropropane	495052755022	25.00	23.88	ug/L	-4	30	
1,2,4-Trichlorobenzene	495052755022	25.00	25.16	ug/L	1	30	
Hexachlorobutadiene	495052755022	25.00	27.41	ug/L	10	30	
Naphthalene	495052755022	25.00	26.74	ug/L	7	30	
1,2,3-Trichlorobenzene	495052755022	25.00	26.21	ug/L	5	30	
tert-Butyl Alcohol (TBA)	495052755022	125.0	112.0	ug/L	-10	30	
Isopropyl Ether (DIPE)	495052755022	25.00	22.91	ug/L	-8	30	
Ethyl tert-Butyl Ether (ETBE)	495052755022	25.00	22.86	ug/L	-9	30	
Methyl tert-Amyl Ether (TAME)	495052755022	25.00	23.37	ug/L	-7	30	

495052755021: Analyst: DAR

Date: 02/06/15

Reviewer: LW

Date: 02/09/15

495052755022: Analyst: DAR

Date: 02/06/15

Reviewer: LW

Date: 02/09/15

!=warning +=high bias -=low bias v=ICV

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.3055	1.2707	15.00	14.60	ug/L	-3	30	0.3000	
1,2,3-Trichloropropane	1.1185	1.0718	15.00	14.37	ug/L	-4	30	0.0500	
Propylbenzene	3.7870	3.9077	15.00	15.48	ug/L	3	30	0.0500	
Bromobenzene	0.9808	1.0276	15.00	15.72	ug/L	5	30	0.0500	
1,3,5-Trimethylbenzene	2.5352	2.5973	15.00	15.37	ug/L	2	30	0.0500	
2-Chlorotoluene	2.8142	2.8367	15.00	15.12	ug/L	1	30	0.0500	
4-Chlorotoluene	2.6010	2.5818	15.00	14.89	ug/L	-1	30	0.0500	
tert-Butylbenzene	2.1264	2.1989	15.00	15.51	ug/L	3	30	0.0500	
1,2,4-Trimethylbenzene	2.4287	2.4231	15.00	14.97	ug/L	0	30	0.0500	
sec-Butylbenzene	3.0880	3.2249	15.00	15.67	ug/L	4	30	0.0500	
para-Isopropyl Toluene	2.3141	2.3367	15.00	15.15	ug/L	1	30	0.0500	
1,3-Dichlorobenzene	1.4963	1.5646	15.00	15.69	ug/L	5	30	0.0500	
1,4-Dichlorobenzene	1.5444	1.5839	15.00	15.38	ug/L	3	30	0.0500	
n-Butylbenzene	1.9053	1.8226	15.00	14.35	ug/L	-4	30	0.0500	
1,2-Dichlorobenzene	1.5665	1.6028	15.00	15.35	ug/L	2	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.2709	0.2169	15.00	12.01	ug/L	-20	30	0.0500	
1,2,4-Trichlorobenzene	0.6580	0.6448	15.00	14.70	ug/L	-2	30	0.0500	
Hexachlorobutadiene	0.4222	0.5070	15.00	18.01	ug/L	20	30	0.0500	
Naphthalene	1.7528	1.5265	15.00	13.06	ug/L	-13	30	0.0500	
1,2,3-Trichlorobenzene	0.6710	0.6553	15.00	14.65	ug/L	-2	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0778	0.0620	150.0	119.6	ug/L	-20	30	0.0050	!v-
Isopropyl Ether (DIPE)	4.2794	4.2921	15.00	15.04	ug/L	0	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	3.2471	3.3068	15.00	15.28	ug/L	2	30	0.0500	
Methyl tert-Amyl Ether (TAME)	1.3228	1.3318	15.00	15.10	ug/L	1	30	0.0500	
Dibromofluoromethane	0.8065	0.8114	50.00	50.30	ug/L	1	30	0.0500	
1,2-Dichloroethane-d4	0.5248	0.5143	50.00	49.00	ug/L	-2	30	0.0500	
Toluene-d8	1.2838	1.2386	50.00	48.24	ug/L	-4	30	0.0500	
Bromofluorobenzene	1.1204	1.0968	50.00	48.95	ug/L	-2	30	0.0500	

ISTD (ICAL bc513)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	663015	507718	-23.42	11.24	11.27	0.03
1,4-Difluorobenzene	1319436	1003320	-23.96	12.46	12.49	0.03
Chlorobenzene-d5	1199148	947190	-21.01	17.06	17.08	0.02
1,4-Dichlorobenzene-d4	576003	454522	-21.09	20.45	20.49	0.04

MCT 04/23/15 [Freon 12]: Combined split peak.

Analyst: MCT Date: 04/23/15 Reviewer: LW Date: 04/24/15

!=warning +=high bias -=low bias c=CCV m>manual integration v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA02 IDF : 1.0
Seqnum : 415164517004 File : bdo04 Time : 24-APR-2015 07:32
Cal : 415092829001 Caldate : 05-MAR-2015 Caltype : WATER
Standards: S25695 (33330X), S26948 (33330X), S26838 (33330X), S26957 (33330X),
S26909 (1000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	1.0126	1.0888	15.00	16.13	ug/L	8	30	0.0500	
Chloromethane	1.4930	1.6358	15.00	16.44	ug/L	10	30	0.1000	
Vinyl Chloride	1.1208	1.2933	15.00	17.31	ug/L	15	20	0.0500	
Bromomethane	0.5362	0.5375	15.00	15.04	ug/L	0	30	0.0500	
Chloroethane	0.6379	0.7626	15.00	17.93	ug/L	20	30	0.0500	
Trichlorofluoromethane	1.2135	1.4343	15.00	17.73	ug/L	18	30	0.0500	
Acetone	0.4912	0.3849	15.00	11.75	ug/L	-22	40	0.0500	!c- !v-
Freon 113	0.6196	0.6226	15.00	15.07	ug/L	0	30	0.0500	
1,1-Dichloroethene	0.6603	0.6169	15.00	14.02	ug/L	-7	20	0.0500	
Methylene Chloride	0.8957	0.9310	15.00	15.59	ug/L	4	30	0.0500	
Carbon Disulfide	2.5310	2.3208	15.00	13.75	ug/L	-8	30	0.0500	
MTBE	2.4536	2.4053	15.00	14.70	ug/L	-2	30	0.0500	
trans-1,2-Dichloroethene	0.7631	0.7823	15.00	15.38	ug/L	3	30	0.0500	
Vinyl Acetate	1.9323	2.1840	15.00	16.95	ug/L	13	40	0.0500	!v+
1,1-Dichloroethane	1.7956	1.8253	15.00	15.25	ug/L	2	30	0.1000	
2-Butanone	0.6650	0.5549	15.00	12.52	ug/L	-17	40	0.0500	
2,2-Dichloropropane	1.1073	1.2945	15.00	17.54	ug/L	17	30	0.0500	
cis-1,2-Dichloroethene	0.8844	0.9226	15.00	15.65	ug/L	4	30	0.0500	
Chloroform	1.5474	1.6395	15.00	15.89	ug/L	6	20	0.0500	
Bromochloromethane	0.4552	0.5083	15.00	16.75	ug/L	12	30	0.0500	
1,1,1-Trichloroethane	1.1836	1.2333	15.00	15.63	ug/L	4	30	0.0500	
1,1-Dichloropropene	0.5556	0.5569	15.00	15.04	ug/L	0	30	0.0500	
Carbon Tetrachloride	0.4791	0.5010	15.00	15.69	ug/L	5	30	0.0500	
1,2-Dichloroethane	0.7334	0.7382	15.00	15.10	ug/L	1	30	0.0500	
Benzene	1.5439	1.5688	15.00	15.24	ug/L	2	30	0.0500	
Trichloroethene	0.4112	0.4014	15.00	14.64	ug/L	-2	30	0.0500	
1,2-Dichloropropane	0.5262	0.5378	15.00	15.33	ug/L	2	20	0.0500	
Bromodichloromethane	0.5994	0.6305	15.00	15.78	ug/L	5	30	0.0500	
Dibromomethane	0.3371	0.3433	15.00	15.27	ug/L	2	30	0.0500	
4-Methyl-2-Pentanone	0.7095	0.5535	15.00	11.70	ug/L	-22	40	0.0500	!c-
cis-1,3-Dichloropropene	0.7152	0.7449	15.00	15.62	ug/L	4	30	0.0500	
Toluene	0.9498	0.9237	15.00	14.59	ug/L	-3	20	0.0500	
trans-1,3-Dichloropropene	0.7274	0.7022	15.00	14.48	ug/L	-3	30	0.0500	
1,1,2-Trichloroethane	0.2488	0.2395	15.00	14.44	ug/L	-4	30	0.0500	
2-Hexanone	0.5540	0.3631	15.00	9.833	ug/L	-34	40	0.0500	!c-
1,3-Dichloropropane	0.7585	0.7313	15.00	14.46	ug/L	-4	30	0.0500	
Tetrachloroethene	0.3542	0.3655	15.00	15.48	ug/L	3	30	0.0500	
Dibromochloromethane	0.4971	0.4994	15.00	15.07	ug/L	0	30	0.0500	
1,2-Dibromoethane	0.4838	0.4582	15.00	14.20	ug/L	-5	30	0.0500	
Chlorobenzene	1.0716	1.0656	15.00	14.92	ug/L	-1	30	0.3000	
1,1,1,2-Tetrachloroethane	0.3999	0.4046	15.00	15.18	ug/L	1	30	0.0500	
Ethylbenzene	1.7443	1.7110	15.00	14.71	ug/L	-2	20	0.0500	
m,p-Xylenes	0.6030	0.6078	30.00	30.24	ug/L	1	30	0.0500	
o-Xylene	0.6190	0.6059	15.00	14.68	ug/L	-2	30	0.0500	
Styrene	1.0917	1.0563	15.00	14.51	ug/L	-3	30	0.0500	
Bromoform	0.3225	0.3318	15.00	15.43	ug/L	3	30	0.1000	
Isopropylbenzene	3.2330	3.1006	15.00	14.39	ug/L	-4	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.3055	1.1190	15.00	12.86	ug/L	-14	30	0.3000	
1,2,3-Trichloropropane	1.1185	0.9868	15.00	13.23	ug/L	-12	30	0.0500	
Propylbenzene	3.7870	3.6255	15.00	14.36	ug/L	-4	30	0.0500	
Bromobenzene	0.9808	0.9433	15.00	14.43	ug/L	-4	30	0.0500	
1,3,5-Trimethylbenzene	2.5352	2.3808	15.00	14.09	ug/L	-6	30	0.0500	
2-Chlorotoluene	2.8142	2.6774	15.00	14.27	ug/L	-5	30	0.0500	
4-Chlorotoluene	2.6010	2.4119	15.00	13.91	ug/L	-7	30	0.0500	
tert-Butylbenzene	2.1264	2.0021	15.00	14.12	ug/L	-6	30	0.0500	
1,2,4-Trimethylbenzene	2.4287	2.1929	15.00	13.54	ug/L	-10	30	0.0500	
sec-Butylbenzene	3.0880	2.9109	15.00	14.14	ug/L	-6	30	0.0500	
para-Isopropyl Toluene	2.3141	2.0684	15.00	13.41	ug/L	-11	30	0.0500	
1,3-Dichlorobenzene	1.4963	1.4526	15.00	14.56	ug/L	-3	30	0.0500	
1,4-Dichlorobenzene	1.5444	1.4595	15.00	14.18	ug/L	-5	30	0.0500	
n-Butylbenzene	1.9053	1.5758	15.00	12.41	ug/L	-17	30	0.0500	
1,2-Dichlorobenzene	1.5665	1.5682	15.00	15.02	ug/L	0	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.2709	0.1836	15.00	10.17	ug/L	-32	30	0.0500	c- ***
1,2,4-Trichlorobenzene	0.6580	0.5397	15.00	12.30	ug/L	-18	30	0.0500	
Hexachlorobutadiene	0.4222	0.4369	15.00	15.53	ug/L	4	30	0.0500	
Naphthalene	1.7528	1.2611	15.00	10.79	ug/L	-28	30	0.0500	!c-
1,2,3-Trichlorobenzene	0.6710	0.5582	15.00	12.48	ug/L	-17	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0778	0.0483	150.0	93.05	ug/L	-38	30	0.0050	!v- c- ***
Isopropyl Ether (DIPE)	4.2794	4.2530	15.00	14.91	ug/L	-1	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	3.2471	3.2642	15.00	15.08	ug/L	1	30	0.0500	
Methyl tert-Amyl Ether (TAME)	1.3228	1.2593	15.00	14.28	ug/L	-5	30	0.0500	
Dibromofluoromethane	0.8065	0.8088	50.00	50.14	ug/L	0	30	0.0500	
1,2-Dichloroethane-d4	0.5248	0.5037	50.00	47.99	ug/L	-4	30	0.0500	
Toluene-d8	1.2838	1.2264	50.00	47.77	ug/L	-4	30	0.0500	
Bromofluorobenzene	1.1204	1.0863	50.00	48.48	ug/L	-3	30	0.0500	

ISTD (ICAL bc513)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	663015	540818	-18.43	11.24	11.27	0.03
1,4-Difluorobenzene	1319436	1088230	-17.52	12.46	12.49	0.03
Chlorobenzene-d5	1199148	1035920	-13.61	17.06	17.08	0.02
1,4-Dichlorobenzene-d4	576003	502450	-12.77	20.45	20.47	0.02

Analyst: MCT Date: 04/24/15 Reviewer: LW Date: 04/27/15

!=warning +=high bias -=low bias c=CCV v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA02 IDF : 1.0
 Seqnum : 415164517011 File : bd011 Time : 24-APR-2015 11:43
 Cal : 415092829001 Caldate : 05-MAR-2015 Caltype : WATER
 Standards: S25695 (33330X), S26948 (33330X), S26838 (33330X), S26957 (33330X), S26909 (1000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	1.0126	1.0069	15.00	14.91	ug/L	-1	30	0.0500	
Chloromethane	1.4930	1.4943	15.00	15.01	ug/L	0	30	0.1000	
Vinyl Chloride	1.1208	1.2761	15.00	17.08	ug/L	14	20	0.0500	
Bromomethane	0.5362	0.4660	15.00	13.04	ug/L	-13	30	0.0500	
Chloroethane	0.6379	0.7429	15.00	17.47	ug/L	16	30	0.0500	
Trichlorofluoromethane	1.2135	1.3389	15.00	16.55	ug/L	10	30	0.0500	
Acetone	0.4912	0.3549	15.00	10.84	ug/L	-28	40	0.0500	!c- !v-
Freon 113	0.6196	0.5954	15.00	14.41	ug/L	-4	30	0.0500	
1,1-Dichloroethene	0.6603	0.6142	15.00	13.95	ug/L	-7	20	0.0500	
Methylene Chloride	0.8957	0.9030	15.00	15.12	ug/L	1	30	0.0500	
Carbon Disulfide	2.5310	2.2868	15.00	13.55	ug/L	-10	30	0.0500	
MTBE	2.4536	2.3534	15.00	14.39	ug/L	-4	30	0.0500	
trans-1,2-Dichloroethene	0.7631	0.7677	15.00	15.09	ug/L	1	30	0.0500	
Vinyl Acetate	1.9323	2.0698	15.00	16.07	ug/L	7	40	0.0500	!v+
1,1-Dichloroethane	1.7956	1.7524	15.00	14.64	ug/L	-2	30	0.1000	
2-Butanone	0.6650	0.5358	15.00	12.09	ug/L	-19	40	0.0500	
2,2-Dichloropropane	1.1073	1.1258	15.00	15.25	ug/L	2	30	0.0500	
cis-1,2-Dichloroethene	0.8844	0.9175	15.00	15.56	ug/L	4	30	0.0500	
Chloroform	1.5474	1.5846	15.00	15.36	ug/L	2	20	0.0500	
Bromochloromethane	0.4552	0.4979	15.00	16.41	ug/L	9	30	0.0500	
1,1,1-Trichloroethane	1.1836	1.1592	15.00	14.69	ug/L	-2	30	0.0500	
1,1-Dichloropropene	0.5556	0.5398	15.00	14.57	ug/L	-3	30	0.0500	
Carbon Tetrachloride	0.4791	0.4781	15.00	14.97	ug/L	0	30	0.0500	
1,2-Dichloroethane	0.7334	0.7011	15.00	14.34	ug/L	-4	30	0.0500	
Benzene	1.5439	1.5521	15.00	15.08	ug/L	1	30	0.0500	
Trichloroethene	0.4112	0.4057	15.00	14.80	ug/L	-1	30	0.0500	
1,2-Dichloropropane	0.5262	0.5279	15.00	15.05	ug/L	0	20	0.0500	
Bromodichloromethane	0.5994	0.6170	15.00	15.44	ug/L	3	30	0.0500	
Dibromomethane	0.3371	0.3349	15.00	14.90	ug/L	-1	30	0.0500	
4-Methyl-2-Pentanone	0.7095	0.5642	15.00	11.93	ug/L	-20	40	0.0500	
cis-1,3-Dichloropropene	0.7152	0.7298	15.00	15.31	ug/L	2	30	0.0500	
Toluene	0.9498	0.9124	15.00	14.41	ug/L	-4	20	0.0500	
trans-1,3-Dichloropropene	0.7274	0.6688	15.00	13.79	ug/L	-8	30	0.0500	
1,1,2-Trichloroethane	0.2488	0.2276	15.00	13.72	ug/L	-9	30	0.0500	
2-Hexanone	0.5540	0.3749	15.00	10.15	ug/L	-32	40	0.0500	!c-
1,3-Dichloropropane	0.7585	0.7133	15.00	14.11	ug/L	-6	30	0.0500	
Tetrachloroethene	0.3542	0.3538	15.00	14.98	ug/L	0	30	0.0500	
Dibromochloromethane	0.4971	0.4926	15.00	14.87	ug/L	-1	30	0.0500	
1,2-Dibromoethane	0.4838	0.4480	15.00	13.89	ug/L	-7	30	0.0500	
Chlorobenzene	1.0716	1.0456	15.00	14.64	ug/L	-2	30	0.3000	
1,1,1,2-Tetrachloroethane	0.3999	0.3958	15.00	14.85	ug/L	-1	30	0.0500	
Ethylbenzene	1.7443	1.6537	15.00	14.22	ug/L	-5	20	0.0500	
m,p-Xylenes	0.6030	0.5991	30.00	29.80	ug/L	-1	30	0.0500	
o-Xylene	0.6190	0.6074	15.00	14.72	ug/L	-2	30	0.0500	
Styrene	1.0917	1.0402	15.00	14.29	ug/L	-5	30	0.0500	
Bromoform	0.3225	0.3181	15.00	14.79	ug/L	-1	30	0.1000	
Isopropylbenzene	3.2330	3.0579	15.00	14.19	ug/L	-5	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.3055	1.1315	15.00	13.00	ug/L	-13	30	0.3000	
1,2,3-Trichloropropane	1.1185	0.9694	15.00	13.00	ug/L	-13	30	0.0500	
Propylbenzene	3.7870	3.5560	15.00	14.08	ug/L	-6	30	0.0500	
Bromobenzene	0.9808	0.9670	15.00	14.79	ug/L	-1	30	0.0500	
1,3,5-Trimethylbenzene	2.5352	2.3609	15.00	13.97	ug/L	-7	30	0.0500	
2-Chlorotoluene	2.8142	2.6318	15.00	14.03	ug/L	-6	30	0.0500	
4-Chlorotoluene	2.6010	2.3745	15.00	13.69	ug/L	-9	30	0.0500	
tert-Butylbenzene	2.1264	2.0319	15.00	14.33	ug/L	-4	30	0.0500	
1,2,4-Trimethylbenzene	2.4287	2.1547	15.00	13.31	ug/L	-11	30	0.0500	
sec-Butylbenzene	3.0880	2.9277	15.00	14.22	ug/L	-5	30	0.0500	
para-Isopropyl Toluene	2.3141	2.0912	15.00	13.56	ug/L	-10	30	0.0500	
1,3-Dichlorobenzene	1.4963	1.4589	15.00	14.63	ug/L	-2	30	0.0500	
1,4-Dichlorobenzene	1.5444	1.4820	15.00	14.39	ug/L	-4	30	0.0500	
n-Butylbenzene	1.9053	1.5402	15.00	12.13	ug/L	-19	30	0.0500	
1,2-Dichlorobenzene	1.5665	1.4857	15.00	14.23	ug/L	-5	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.2709	0.1769	15.00	9.793	ug/L	-35	30	0.0500	c- ***
1,2,4-Trichlorobenzene	0.6580	0.5456	15.00	12.44	ug/L	-17	30	0.0500	
Hexachlorobutadiene	0.4222	0.4227	15.00	15.02	ug/L	0	30	0.0500	
Naphthalene	1.7528	1.3621	15.00	11.66	ug/L	-22	30	0.0500	!c-
1,2,3-Trichlorobenzene	0.6710	0.5628	15.00	12.58	ug/L	-16	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0778	0.0489	150.0	94.17	ug/L	-37	30	0.0050	!v- c- ***
Isopropyl Ether (DIPE)	4.2794	4.1587	15.00	14.58	ug/L	-3	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	3.2471	3.1983	15.00	14.77	ug/L	-2	30	0.0500	
Methyl tert-Amyl Ether (TAME)	1.3228	1.2487	15.00	14.16	ug/L	-6	30	0.0500	
Dibromofluoromethane	0.8065	0.8007	50.00	49.64	ug/L	-1	30	0.0500	
1,2-Dichloroethane-d4	0.5248	0.4781	50.00	45.55	ug/L	-9	30	0.0500	
Toluene-d8	1.2838	1.2221	50.00	47.60	ug/L	-5	30	0.0500	
Bromofluorobenzene	1.1204	1.0844	50.00	48.39	ug/L	-3	30	0.0500	

ISTD (ICAL bc513)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	663015	591624	-10.77	11.24	11.26	0.02
1,4-Difluorobenzene	1319436	1187853	-9.97	12.46	12.48	0.02
Chlorobenzene-d5	1199148	1151650	-3.96	17.06	17.07	0.01
1,4-Dichlorobenzene-d4	576003	543453	-5.65	20.45	20.47	0.02

Analyst: MCT Date: 04/24/15 Reviewer: LW Date: 04/27/15

!=warning +=high bias -=low bias c=CCV v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA03 Run Name : 15PPB IDF : 1.0
 Seqnum : 425171890004 File : cdt04 Time : 29-APR-2015 11:41
 Cal : 425152069005 Caldate : 15-APR-2015 Caltype : WATER
 Standards: S25695 (33330X), S26948 (33330X), S26838 (33330X), S26957 (33330X),
 S26911 (5000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.5268	0.4678	15.00	13.32	ug/L	-11	30	0.0500	
Chloromethane	0.7176	0.6073	15.00	12.70	ug/L	-15	30	0.1000	
Vinyl Chloride	0.6230	0.5840	15.00	14.06	ug/L	-6	20	0.0500	
Bromomethane	0.3637	0.3250	15.00	13.40	ug/L	-11	30	0.0500	!v-
Chloroethane	0.3581	0.3462	15.00	14.50	ug/L	-3	30	0.0500	
Trichlorofluoromethane	0.5849	0.5456	15.00	13.99	ug/L	-7	30	0.0500	
Acetone	0.1113	0.1093	15.00	14.73	ug/L	-2	40	0.0500	
Freon 113	0.3839	0.4237	15.00	16.55	ug/L	10	30	0.0500	
1,1-Dichloroethene	0.4234	0.4125	15.00	14.61	ug/L	-3	20	0.0500	
Methylene Chloride	0.5526	0.5594	15.00	15.19	ug/L	1	30	0.0500	
Carbon Disulfide	1.5749	1.7491	15.00	16.66	ug/L	11	30	0.0500	
MTBE	1.1384	1.1376	15.00	14.99	ug/L	0	30	0.0500	
trans-1,2-Dichloroethene	0.4970	0.5047	15.00	15.23	ug/L	2	30	0.0500	
Vinyl Acetate	0.7048	0.9149	15.00	19.47	ug/L	30	40	0.0500	!c+
1,1-Dichloroethane	0.9178	0.9300	15.00	15.20	ug/L	1	30	0.1000	
2-Butanone	0.1524	0.1790	15.00	17.62	ug/L	17	40	0.0500	
2,2-Dichloropropane	0.6313	0.6884	15.00	16.36	ug/L	9	30	0.0500	
cis-1,2-Dichloroethene	0.5815	0.5870	15.00	15.14	ug/L	1	30	0.0500	
Chloroform	0.9114	0.8979	15.00	14.78	ug/L	-1	20	0.0500	
Bromochloromethane	0.2428	0.2412	15.00	14.91	ug/L	-1	30	0.0500	
1,1,1-Trichloroethane	0.6578	0.6493	15.00	14.81	ug/L	-1	30	0.0500	
1,1-Dichloropropene	0.3946	0.4066	15.00	15.46	ug/L	3	30	0.0500	
Carbon Tetrachloride	0.3064	0.2875	15.00	14.07	ug/L	-6	30	0.0500	
1,2-Dichloroethane	0.3697	0.3507	15.00	14.23	ug/L	-5	30	0.0500	
Benzene	1.1612	1.1571	15.00	14.95	ug/L	0	30	0.0500	
Trichloroethene	0.3044	0.2931	15.00	14.45	ug/L	-4	30	0.0500	
1,2-Dichloropropane	0.3201	0.3387	15.00	15.87	ug/L	6	20	0.0500	
Bromodichloromethane	0.4097	0.4020	15.00	14.72	ug/L	-2	30	0.0500	
Dibromomethane	0.1817	0.1937	15.00	15.99	ug/L	7	30	0.0500	
4-Methyl-2-Pentanone	0.2305	0.2374	15.00	15.45	ug/L	3	40	0.0500	
cis-1,3-Dichloropropene	0.5035	0.5074	15.00	15.11	ug/L	1	30	0.0500	
Toluene	0.7420	0.7442	15.00	15.04	ug/L	0	20	0.0500	
trans-1,3-Dichloropropene	0.4527	0.4627	15.00	15.33	ug/L	2	30	0.0500	
1,1,2-Trichloroethane	0.1417	0.1560	15.00	16.51	ug/L	10	30	0.0500	
2-Hexanone	0.1646	0.1827	15.00	16.65	ug/L	11	40	0.0500	
1,3-Dichloropropane	0.4587	0.4787	15.00	15.66	ug/L	4	30	0.0500	
Tetrachloroethene	0.2796	0.2827	15.00	15.17	ug/L	1	30	0.0500	
Dibromochloromethane	0.2887	0.2789	15.00	14.49	ug/L	-3	30	0.0500	
1,2-Dibromoethane	0.2681	0.2664	15.00	14.90	ug/L	-1	30	0.0500	
Chlorobenzene	0.7996	0.7819	15.00	14.67	ug/L	-2	30	0.3000	
1,1,1,2-Tetrachloroethane	0.2752	0.2679	15.00	14.60	ug/L	-3	30	0.0500	
Ethylbenzene	1.4003	1.4038	15.00	15.04	ug/L	0	20	0.0500	
m,p-Xylenes	0.5114	0.5040	30.00	29.57	ug/L	-1	30	0.0500	
o-Xylene	0.5079	0.5037	15.00	14.88	ug/L	-1	30	0.0500	
Styrene	0.9181	0.9125	15.00	14.91	ug/L	-1	30	0.0500	
Bromoform	0.1798	0.1699	15.00	14.18	ug/L	-5	30	0.1000	
Isopropylbenzene	2.5259	2.4872	15.00	14.77	ug/L	-2	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	0.6267	0.6722	15.00	16.09	ug/L	7	30	0.3000	
1,2,3-Trichloropropane	0.5518	0.5412	15.00	16.61	ug/L	11	30	0.0500	
Propylbenzene	3.1689	3.3008	15.00	15.62	ug/L	4	30	0.0500	
Bromobenzene	0.6546	0.6591	15.00	15.10	ug/L	1	30	0.0500	
1,3,5-Trimethylbenzene	2.0846	2.0285	15.00	14.60	ug/L	-3	30	0.0500	
2-Chlorotoluene	2.1133	2.2065	15.00	15.66	ug/L	4	30	0.0500	
4-Chlorotoluene	2.0462	2.1596	15.00	15.83	ug/L	6	30	0.0500	
tert-Butylbenzene	1.6274	1.6123	15.00	14.86	ug/L	-1	30	0.0500	
1,2,4-Trimethylbenzene	2.1922	2.1521	15.00	14.73	ug/L	-2	30	0.0500	
sec-Butylbenzene	2.6661	2.6869	15.00	15.12	ug/L	1	30	0.0500	
para-Isopropyl Toluene	2.0552	2.0879	15.00	15.24	ug/L	2	30	0.0500	
1,3-Dichlorobenzene	1.1587	1.1676	15.00	15.12	ug/L	1	30	0.0500	
1,4-Dichlorobenzene	1.1649	1.2063	15.00	15.53	ug/L	4	30	0.0500	
n-Butylbenzene	2.0678	2.2642	15.00	16.42	ug/L	9	30	0.0500	
1,2-Dichlorobenzene	1.0909	1.0959	15.00	15.07	ug/L	0	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.0957	0.1023	15.00	16.03	ug/L	7	30	0.0500	
1,2,4-Trichlorobenzene	0.7416	0.7629	15.00	15.43	ug/L	3	30	0.0500	
Hexachlorobutadiene	0.3021	0.3279	15.00	16.28	ug/L	9	30	0.0500	
Naphthalene	1.5151	1.5657	15.00	15.50	ug/L	3	30	0.0500	
1,2,3-Trichlorobenzene	0.6452	0.6627	15.00	15.41	ug/L	3	30	0.0500	
tert-Butyl Alcohol (TBA)	0.0177	0.0279	150.0	235.8	ug/L	57	30	0.0050	c+ calc ***
Isopropyl Ether (DIPE)	1.8627	2.0641	15.00	16.62	ug/L	11	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	1.5923	1.6406	15.00	15.46	ug/L	3	30	0.0500	
Methyl tert-Amyl Ether (TAME)	0.8257	0.7842	15.00	14.25	ug/L	-5	30	0.0500	
Dibromofluoromethane	0.6069	0.6304	50.00	51.94	ug/L	4	30	0.0500	
1,2-Dichloroethane-d4	0.3740	0.3716	50.00	49.68	ug/L	-1	30	0.0500	
Toluene-d8	1.3238	1.3640	50.00	51.52	ug/L	3	30	0.0500	
Bromofluorobenzene	1.0712	1.0897	50.00	50.86	ug/L	2	30	0.0500	

ISTD (ICAL cdf26)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	420665	420229	-0.10	10.41	10.36	-0.05
1,4-Difluorobenzene	704518	734047	4.19	11.57	11.53	-0.04
Chlorobenzene-d5	660609	667273	1.01	15.64	15.61	-0.03
1,4-Dichlorobenzene-d4	318122	330060	3.75	18.40	18.37	-0.03

LW 04/30/15 [tert-Butyl Alcohol (TBA)]: Both calculated values round to 235.8

Analyst: DJA Date: 04/30/15 Reviewer: LW Date: 04/30/15

!=warning +=high bias -=low bias c=CCV calc=check quantitation v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA06 IDF : 1.0
Seqnum : 455158971004 File : fdk04 Time : 20-APR-2015 13:16
Cal : 455130249001 Caldate : 31-MAR-2015 Caltype : WATER
Standards: S25695 (25000X), S26948 (25000X), S26838 (25000X), S26957 (25000X),
S26911 (5000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	1.3466	1.2642	20.00	18.78	ug/L	-6	30	0.0500	
Chloromethane	1.4901	1.1198	20.00	15.03	ug/L	-25	30	0.1000	!c- m
Vinyl Chloride	1.0223	0.9340	20.00	18.27	ug/L	-9	20	0.0500	
Bromomethane	0.4474	0.7365	20.00	32.92	ug/L	65	30	0.0500	c+ ***
Chloroethane	0.7589	0.7417	20.00	19.55	ug/L	-2	30	0.0500	
Trichlorofluoromethane	1.4352	1.4155	20.00	19.73	ug/L	-1	30	0.0500	
Acetone	0.6958	0.5973	20.00	17.17	ug/L	-14	40	0.0500	
Freon 113	0.7535	0.6578	20.00	17.46	ug/L	-13	30	0.0500	
1,1-Dichloroethene	0.7287	0.7105	20.00	19.50	ug/L	-2	20	0.0500	
Methylene Chloride	0.9293	0.9337	20.00	20.09	ug/L	0	30	0.0500	
Carbon Disulfide	2.6973	2.6212	20.00	19.44	ug/L	-3	30	0.0500	
MTBE	2.3600	2.4079	20.00	20.41	ug/L	2	30	0.0500	
trans-1,2-Dichloroethene	0.8437	0.8096	20.00	19.19	ug/L	-4	30	0.0500	
Vinyl Acetate	1.4984	2.2411	20.00	29.91	ug/L	50	40	0.0500	c+ ***
1,1-Dichloroethane	1.7049	1.7717	20.00	20.78	ug/L	4	30	0.1000	
2-Butanone	0.9380	0.8797	20.00	18.76	ug/L	-6	40	0.0500	
2,2-Dichloropropane	1.1361	1.3363	20.00	23.53	ug/L	18	30	0.0500	
cis-1,2-Dichloroethene	0.9473	0.9336	20.00	19.71	ug/L	-1	30	0.0500	
Chloroform	1.5488	1.6501	20.00	21.31	ug/L	7	20	0.0500	
Bromochloromethane	0.3921	0.3874	20.00	19.76	ug/L	-1	30	0.0500	
1,1,1-Trichloroethane	1.1959	1.2604	20.00	21.08	ug/L	5	30	0.0500	
1,1-Dichloropropene	0.6547	0.6965	20.00	21.28	ug/L	6	30	0.0500	
Carbon Tetrachloride	0.5568	0.5712	20.00	20.52	ug/L	3	30	0.0500	
1,2-Dichloroethane	0.6721	0.6708	20.00	19.96	ug/L	0	30	0.0500	
Benzene	1.7743	1.7789	20.00	20.05	ug/L	0	30	0.0500	
Trichloroethene	0.4953	0.4805	20.00	19.40	ug/L	-3	30	0.0500	
1,2-Dichloropropane	0.5513	0.5271	20.00	19.12	ug/L	-4	20	0.0500	
Bromodichloromethane	0.6620	0.6721	20.00	20.30	ug/L	2	30	0.0500	
Dibromomethane	0.3465	0.3363	20.00	19.41	ug/L	-3	30	0.0500	
4-Methyl-2-Pentanone	0.8876	0.9123	20.00	20.56	ug/L	3	40	0.0500	
cis-1,3-Dichloropropene	0.7581	0.7718	20.00	20.36	ug/L	2	30	0.0500	
Toluene	1.1573	1.1560	20.00	19.98	ug/L	0	20	0.0500	
trans-1,3-Dichloropropene	0.8274	0.8576	20.00	20.73	ug/L	4	30	0.0500	
1,1,2-Trichloroethane	0.2900	0.2741	20.00	18.90	ug/L	-5	30	0.0500	
2-Hexanone	0.8507	0.8248	20.00	19.39	ug/L	-3	40	0.0500	
1,3-Dichloropropane	0.8586	0.8650	20.00	20.15	ug/L	1	30	0.0500	
Tetrachloroethene	0.4459	0.5032	20.00	22.57	ug/L	13	30	0.0500	
Dibromochloromethane	0.5524	0.5572	20.00	20.17	ug/L	1	30	0.0500	
1,2-Dibromoethane	0.5654	0.5511	20.00	19.49	ug/L	-3	30	0.0500	
Chlorobenzene	1.2411	1.2753	20.00	20.55	ug/L	3	30	0.3000	
1,1,1,2-Tetrachloroethane	0.4423	0.4494	20.00	20.32	ug/L	2	30	0.0500	
Ethylbenzene	2.2266	2.2959	20.00	20.62	ug/L	3	20	0.0500	
m,p-Xylenes	0.7865	0.8128	40.00	41.34	ug/L	3	30	0.0500	
o-Xylene	0.7774	0.8023	20.00	20.64	ug/L	3	30	0.0500	
Styrene	1.3412	1.4212	20.00	21.19	ug/L	6	30	0.0500	
Bromoform	0.4104	0.4238	20.00	20.65	ug/L	3	30	0.1000	
Isopropylbenzene	3.7089	3.8556	20.00	20.79	ug/L	4	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.4480	1.4400	20.00	19.89	ug/L	-1	30	0.3000	
1,2,3-Trichloropropane	1.2761	1.2237	20.00	19.18	ug/L	-4	30	0.0500	
Propylbenzene	4.8180	5.1195	20.00	21.25	ug/L	6	30	0.0500	
Bromobenzene	0.9794	0.9714	20.00	19.84	ug/L	-1	30	0.0500	
1,3,5-Trimethylbenzene	3.1095	3.3171	20.00	21.34	ug/L	7	30	0.0500	
2-Chlorotoluene	3.3612	3.3393	20.00	19.87	ug/L	-1	30	0.0500	
4-Chlorotoluene	3.1450	3.2099	20.00	20.41	ug/L	2	30	0.0500	
tert-Butylbenzene	2.4529	2.5072	20.00	20.44	ug/L	2	30	0.0500	
1,2,4-Trimethylbenzene	3.2542	3.2402	20.00	19.91	ug/L	0	30	0.0500	
sec-Butylbenzene	3.8335	3.9903	20.00	20.82	ug/L	4	30	0.0500	
para-Isopropyl Toluene	3.0729	3.1821	20.00	20.71	ug/L	4	30	0.0500	
1,3-Dichlorobenzene	1.7378	1.7297	20.00	19.91	ug/L	0	30	0.0500	
1,4-Dichlorobenzene	1.7537	1.7476	20.00	19.93	ug/L	0	30	0.0500	
n-Butylbenzene	3.1278	3.5038	20.00	22.40	ug/L	12	30	0.0500	
1,2-Dichlorobenzene	1.6905	1.6489	20.00	19.51	ug/L	-2	30	0.0500	
1,2-Dibromo-3-Chloropropane	0.4045	0.3718	20.00	18.38	ug/L	-8	30	0.0500	
1,2,4-Trichlorobenzene	0.9953	1.0112	20.00	20.32	ug/L	2	30	0.0500	
Hexachlorobutadiene	0.3969	0.4328	20.00	21.81	ug/L	9	30	0.0500	
Naphthalene	3.3654	3.2265	20.00	19.17	ug/L	-4	30	0.0500	
1,2,3-Trichlorobenzene	0.8771	0.8659	20.00	19.74	ug/L	-1	30	0.0500	
tert-Butyl Alcohol (TBA)	0.1904	0.1975	200.0	207.4	ug/L	4	30	0.0050	
Isopropyl Ether (DIPE)	3.5885	3.9069	20.00	21.77	ug/L	9	30	0.0500	
Ethyl tert-Butyl Ether (ETBE)	2.8313	2.9746	20.00	21.01	ug/L	5	30	0.0500	
Methyl tert-Amyl Ether (TAME)	1.3114	1.3401	20.00	20.44	ug/L	2	30	0.0500	
Dibromofluoromethane	0.7041	0.7079	50.00	50.27	ug/L	1	30	0.0500	
1,2-Dichloroethane-d4	0.4543	0.4338	50.00	47.75	ug/L	-5	30	0.0500	
Toluene-d8	1.3423	1.2974	50.00	48.33	ug/L	-3	30	0.0500	
Bromofluorobenzene	1.0799	1.0704	50.00	49.56	ug/L	-1	30	0.0500	

ISTD (ICAL fcv21)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	466715	530466	13.66	11.90	11.93	0.03
1,4-Difluorobenzene	811177	944259	16.41	13.23	13.26	0.03
Chlorobenzene-d5	697256	801969	15.02	17.92	17.95	0.04
1,4-Dichlorobenzene-d4	364452	441034	21.01	20.65	20.68	0.03

DJA 04/21/15 [Chloromethane]: Corrected fronting or tailing peak integration.

Analyst: DJA Date: 04/21/15 Reviewer: LW Date: 04/21/15

!=warning +=high bias -=low bias c=CCV m>manual integration

CURTIS & TOMPKINS SPIKE USER REPORT FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA06 Run Name : QC785903 IDF : 1.0
 Seqnum : 455171722013.3 File : fdt13 Time : 29-APR-2015 14:34
 Cal : 455130249001 Caldate : 31-MAR-2015 Caltype : WATER
 Standards: S26759 (20000X), S27022 (20000X), S26876 (20000X), S24978 (20000X),
 S26911 (5000X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	1.3466	0.8429	10.00	6.260	ug/L	-37	30	0.0500	c- m u ***
Chloromethane	1.4901	1.2399	10.00	8.321	ug/L	-17	30	0.1000	m u
Vinyl Chloride	1.0223	1.0678	10.00	10.45	ug/L	4	20	0.0500	u
Bromomethane	0.4474	0.4724	10.00	10.56	ug/L	6	30	0.0500	m u
Chloroethane	0.7589	0.7665	10.00	10.10	ug/L	1	30	0.0500	u
Trichlorofluoromethane	1.4352	1.1156	10.00	7.773	ug/L	-22	30	0.0500	m u
Acetone	0.6958	0.6159	12.50	11.06	ug/L	-11	40	0.0500	u
Freon 113	0.7535	0.7302	12.50	12.11	ug/L	-3	30	0.0500	u
1,1-Dichloroethene	0.7287	0.7867	12.50	13.50	ug/L	8	20	0.0500	u
Methylene Chloride	0.9293	0.9900	12.50	13.32	ug/L	7	30	0.0500	u
Carbon Disulfide	2.6973	3.0206	12.50	14.00	ug/L	12	30	0.0500	u
MTBE	2.3600	2.2457	12.50	11.89	ug/L	-5	30	0.0500	u
trans-1,2-Dichloroethene	0.8437	0.8704	12.50	12.90	ug/L	3	30	0.0500	u
Vinyl Acetate	1.4984	2.9011	12.50	24.20	ug/L	94	40	0.0500	c+ u ***
1,1-Dichloroethane	1.7049	1.7935	12.50	13.15	ug/L	5	30	0.1000	u
2-Butanone	0.9380	1.0176	12.50	13.56	ug/L	8	40	0.0500	u
cis-1,2-Dichloroethene	0.9473	0.9908	12.50	13.07	ug/L	5	30	0.0500	u
2,2-Dichloropropane	1.1361	0.9982	12.50	10.98	ug/L	-12	30	0.0500	u
Chloroform	1.5488	1.5251	12.50	12.31	ug/L	-2	20	0.0500	u
Bromochloromethane	0.3921	0.4142	12.50	13.20	ug/L	6	30	0.0500	u
1,1,1-Trichloroethane	1.1959	1.0910	12.50	11.40	ug/L	-9	30	0.0500	u
1,1-Dichloropropene	0.6547	0.6535	12.50	12.48	ug/L	0	30	0.0500	u
Carbon Tetrachloride	0.5568	0.4803	12.50	10.78	ug/L	-14	30	0.0500	u
1,2-Dichloroethane	0.6721	0.5838	12.50	10.86	ug/L	-13	30	0.0500	u
Benzene	1.7743	2.0275	12.50	14.28	ug/L	14	30	0.0500	u
Trichloroethene	0.4953	0.4827	12.50	12.18	ug/L	-3	30	0.0500	u
1,2-Dichloropropane	0.5513	0.5839	12.50	13.24	ug/L	6	20	0.0500	u
Bromodichloromethane	0.6620	0.6106	12.50	11.53	ug/L	-8	30	0.0500	u
Dibromomethane	0.3465	0.3541	12.50	12.77	ug/L	2	30	0.0500	u
4-Methyl-2-Pentanone	0.8876	0.9653	12.50	13.59	ug/L	9	40	0.0500	u
cis-1,3-Dichloropropene	0.7581	0.7897	12.50	13.02	ug/L	4	30	0.0500	u
Toluene	1.1573	1.2644	12.50	13.66	ug/L	9	20	0.0500	u
trans-1,3-Dichloropropene	0.8274	0.7183	12.50	10.85	ug/L	-13	30	0.0500	u
1,1,2-Trichloroethane	0.2900	0.2868	12.50	12.36	ug/L	-1	30	0.0500	u
2-Hexanone	0.8507	0.8834	12.50	12.98	ug/L	4	40	0.0500	u
1,3-Dichloropropane	0.8586	0.8990	12.50	13.09	ug/L	5	30	0.0500	u
Tetrachloroethene	0.4459	0.4765	12.50	13.36	ug/L	7	30	0.0500	u
Dibromochloromethane	0.5524	0.5184	12.50	11.73	ug/L	-6	30	0.0500	u
1,2-Dibromoethane	0.5654	0.5611	12.50	12.40	ug/L	-1	30	0.0500	u
Chlorobenzene	1.2411	1.3177	12.50	13.27	ug/L	6	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.4423	0.4313	12.50	12.19	ug/L	-3	30	0.0500	u
Ethylbenzene	2.2266	2.4555	12.50	13.78	ug/L	10	20	0.0500	u
m,p-Xylenes	0.7865	0.8503	25.00	27.03	ug/L	8	30	0.0500	u
o-Xylene	0.7774	0.8086	12.50	13.00	ug/L	4	30	0.0500	u
Styrene	1.3412	1.3974	12.50	13.02	ug/L	4	30	0.0500	u
Bromoform	0.4104	0.3902	12.50	11.88	ug/L	-5	30	0.1000	u
Isopropylbenzene	3.7089	3.9701	12.50	13.38	ug/L	7	30	0.0500	u

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.4480	1.6476	12.50	14.22	ug/L	14	30	0.3000	u
1,2,3-Trichloropropane	1.2761	1.2595	12.50	12.34	ug/L	-1	30	0.0500	u
Propylbenzene	4.8180	5.2737	12.50	13.68	ug/L	9	30	0.0500	u
Bromobenzene	0.9794	1.0322	12.50	13.17	ug/L	5	30	0.0500	u
1,3,5-Trimethylbenzene	3.1095	3.2713	12.50	13.15	ug/L	5	30	0.0500	u
2-Chlorotoluene	3.3612	3.3540	12.50	12.47	ug/L	0	30	0.0500	u
4-Chlorotoluene	3.1450	3.1478	12.50	12.51	ug/L	0	30	0.0500	u
tert-Butylbenzene	2.4529	2.5402	12.50	12.94	ug/L	4	30	0.0500	u
1,2,4-Trimethylbenzene	3.2542	3.2894	12.50	12.64	ug/L	1	30	0.0500	u
sec-Butylbenzene	3.8335	4.1008	12.50	13.37	ug/L	7	30	0.0500	u
para-Isopropyl Toluene	3.0729	3.1008	12.50	12.61	ug/L	1	30	0.0500	u
1,3-Dichlorobenzene	1.7378	1.8339	12.50	13.19	ug/L	6	30	0.0500	u
1,4-Dichlorobenzene	1.7537	1.8283	12.50	13.03	ug/L	4	30	0.0500	u
n-Butylbenzene	3.1278	3.5086	12.50	14.02	ug/L	12	30	0.0500	u
1,2-Dichlorobenzene	1.6905	1.7243	12.50	12.75	ug/L	2	30	0.0500	u
1,2-Dibromo-3-Chloropropane	0.4045	0.3369	12.50	10.41	ug/L	-17	30	0.0500	u
1,2,4-Trichlorobenzene	0.9953	0.9846	12.50	12.37	ug/L	-1	30	0.0500	u
Hexachlorobutadiene	0.3969	0.4036	12.50	12.71	ug/L	2	30	0.0500	u
Naphthalene	3.3654	3.1703	12.50	11.78	ug/L	-6	30	0.0500	u
1,2,3-Trichlorobenzene	0.8771	0.9207	12.50	13.12	ug/L	5	30	0.0500	u
tert-Butyl Alcohol (TBA)	0.1904	0.2163	62.50	70.98	ug/L	14	30	0.0050	u
Isopropyl Ether (DIPE)	3.5885	4.0088	12.50	13.96	ug/L	12	30	0.0500	u
Ethyl tert-Butyl Ether (ETBE)	2.8313	2.7204	12.50	12.01	ug/L	-4	30	0.0500	u
Methyl tert-Amyl Ether (TAME)	1.3114	1.2923	12.50	12.32	ug/L	-1	30	0.0500	u
Dibromofluoromethane	0.7041	0.6738	50.00	47.85	ug/L	-4	30	0.0500	u
1,2-Dichloroethane-d4	0.4543	0.3481	50.00	38.31	ug/L	-23	30	0.0500	u
Toluene-d8	1.3423	1.3521	50.00	50.37	ug/L	1	30	0.0500	u
Bromofluorobenzene	1.0799	1.0607	50.00	49.11	ug/L	-2	30	0.0500	u

ISTD (ICAL fcv21)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	466715	423608	-9.24	11.90	11.91	0.01
1,4-Difluorobenzene	811177	742854	-8.42	13.23	13.24	0.01
Chlorobenzene-d5	697256	642031	-7.92	17.92	17.93	0.02
1,4-Dichlorobenzene-d4	364452	333479	-8.50	20.65	20.66	0.01

Analyst: KKM Date: 04/30/15 Reviewer: LW Date: 04/30/15

+ = high bias - = low bias c = CCV m = manual integration u = use

CURTIS & TOMPKINS SPIKE USER REPORT FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : QC785507 IDF : 1.0
 Seqnum : 495166227005.1 File : jdp05 Time : 25-APR-2015 12:31
 Cal : 495052755001 Caldate : 05-FEB-2015 Caltype : WATER
 Standards: S26876 (20000X), S27022 (20000X), S26759 (20000X), S26358 (20000X),
 S26941 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Freon 12	0.7156	0.8418	10.00	11.76	ug/L	18	30	0.0500	?LOD u
Chloromethane	1.0892	1.1522	10.00	10.58	ug/L	6	30	0.1000	u
Vinyl Chloride	0.8493	0.9753	10.00	11.48	ug/L	15	20	0.0500	u
Bromomethane	0.5267	0.3549	10.00	6.738	ug/L	-33	30	0.0500	c- m u ***
Chloroethane	0.5345	0.5709	10.00	10.68	ug/L	7	30	0.0500	u
Trichlorofluoromethane	0.9757	1.1401	10.00	11.68	ug/L	17	30	0.0500	u
Acetone	0.4133	0.3723	12.50	11.26	ug/L	-10	40	0.0500	!v- u
Freon 113	0.5238	0.5758	12.50	13.74	ug/L	10	30	0.0500	u
1,1-Dichloroethene	0.4921	0.5019	12.50	12.75	ug/L	2	20	0.0500	u
Methylene Chloride	0.6742	0.6891	12.50	12.78	ug/L	2	30	0.0500	u
Carbon Disulfide	2.0284	2.2028	12.50	13.58	ug/L	9	30	0.0500	u
MTBE	1.9346	2.0319	12.50	13.13	ug/L	5	30	0.0500	u
trans-1,2-Dichloroethene	0.5793	0.5992	12.50	12.93	ug/L	3	30	0.0500	u
Vinyl Acetate	0.9687	2.3322	12.50	30.09	ug/L	141	40	0.0500	!v+ ?LOD c+ u ***
1,1-Dichloroethane	1.3394	1.4182	12.50	13.24	ug/L	6	30	0.1000	u
2-Butanone	0.4787	0.5455	12.50	14.24	ug/L	14	40	0.0500	u
cis-1,2-Dichloroethene	0.6434	0.6787	12.50	13.19	ug/L	5	30	0.0500	u
2,2-Dichloropropane	0.8772	1.1745	12.50	16.74	ug/L	34	30	0.0500	c+ u ***
Chloroform	1.2074	1.3147	12.50	13.61	ug/L	9	20	0.0500	u
Bromochloromethane	0.3255	0.3380	12.50	12.98	ug/L	4	30	0.0500	u
1,1,1-Trichloroethane	0.8985	1.0825	12.50	15.06	ug/L	20	30	0.0500	u
1,1-Dichloropropene	0.5686	0.5906	12.50	12.98	ug/L	4	30	0.0500	u
Carbon Tetrachloride	0.4643	0.5394	12.50	14.52	ug/L	16	30	0.0500	u
1,2-Dichloroethane	0.6894	0.7567	12.50	13.72	ug/L	10	30	0.0500	u
Benzene	1.4951	1.5265	12.50	12.76	ug/L	2	30	0.0500	u
Trichloroethene	0.4003	0.4120	12.50	12.86	ug/L	3	30	0.0500	u
1,2-Dichloropropane	0.4844	0.4803	12.50	12.40	ug/L	-1	20	0.0500	u
Bromodichloromethane	0.5867	0.6011	12.50	12.81	ug/L	2	30	0.0500	u
Dibromomethane	0.3006	0.3030	12.50	12.60	ug/L	1	30	0.0500	u
4-Methyl-2-Pentanone	0.5685	0.6779	12.50	14.91	ug/L	19	40	0.0500	u
cis-1,3-Dichloropropene	0.6682	0.7055	12.50	13.20	ug/L	6	30	0.0500	u
Toluene	1.0455	1.0755	12.50	12.86	ug/L	3	20	0.0500	u
trans-1,3-Dichloropropene	0.6996	0.7412	12.50	13.24	ug/L	6	30	0.0500	u
1,1,2-Trichloroethane	0.2389	0.2437	12.50	12.75	ug/L	2	30	0.0500	u
2-Hexanone	0.4061	0.5630	12.50	17.33	ug/L	39	40	0.0500	u
1,3-Dichloropropane	0.7738	0.8127	12.50	13.13	ug/L	5	30	0.0500	u
Tetrachloroethene	0.4072	0.4110	12.50	12.62	ug/L	1	30	0.0500	u
Dibromochloromethane	0.4812	0.4817	12.50	12.51	ug/L	0	30	0.0500	u
1,2-Dibromoethane	0.4378	0.4532	12.50	12.94	ug/L	4	30	0.0500	u
Chlorobenzene	1.1116	1.1227	12.50	12.63	ug/L	1	30	0.3000	u
1,1,1,2-Tetrachloroethane	0.4039	0.4139	12.50	12.81	ug/L	2	30	0.0500	u
Ethylbenzene	1.9618	2.1051	12.50	13.41	ug/L	7	20	0.0500	u
m,p-Xylenes	0.6734	0.7112	25.00	26.40	ug/L	6	30	0.0500	u
o-Xylene	0.6543	0.6902	12.50	13.18	ug/L	5	30	0.0500	u
Styrene	1.1570	1.1833	12.50	12.78	ug/L	2	30	0.0500	u
Bromoform	0.3094	0.3040	12.50	12.28	ug/L	-2	30	0.1000	u
Isopropylbenzene	3.6169	4.1698	12.50	14.41	ug/L	15	30	0.0500	u

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,1,2,2-Tetrachloroethane	1.1468	1.2731	12.50	13.88	ug/L	11	30	0.3000	u
1,2,3-Trichloropropane	1.1300	1.2544	12.50	13.88	ug/L	11	30	0.0500	u
Propylbenzene	4.3060	4.9415	12.50	14.34	ug/L	15	30	0.0500	u
Bromobenzene	1.0000	1.0287	12.50	12.86	ug/L	3	30	0.0500	u
1,3,5-Trimethylbenzene	2.7458	3.2969	12.50	15.01	ug/L	20	30	0.0500	u
2-Chlorotoluene	3.1782	3.5300	12.50	13.88	ug/L	11	30	0.0500	u
4-Chlorotoluene	2.8873	3.2122	12.50	13.91	ug/L	11	30	0.0500	u
tert-Butylbenzene	2.3241	2.5275	12.50	13.59	ug/L	9	30	0.0500	u
1,2,4-Trimethylbenzene	2.5829	2.8836	12.50	13.96	ug/L	12	30	0.0500	u
sec-Butylbenzene	3.5002	3.9121	12.50	13.97	ug/L	12	30	0.0500	u
para-Isopropyl Toluene	2.5906	2.7494	12.50	13.27	ug/L	6	30	0.0500	u
1,3-Dichlorobenzene	1.7299	1.7701	12.50	12.79	ug/L	2	30	0.0500	u
1,4-Dichlorobenzene	1.7260	1.7443	12.50	12.63	ug/L	1	30	0.0500	u
n-Butylbenzene	2.4296	2.6471	12.50	13.62	ug/L	9	30	0.0500	u
1,2-Dichlorobenzene	1.6384	1.6758	12.50	12.79	ug/L	2	30	0.0500	u
1,2-Dibromo-3-Chloropropane	0.1804	0.2193	12.50	15.19	ug/L	22	30	0.0500	u
1,2,4-Trichlorobenzene	0.8299	0.7915	12.50	11.92	ug/L	-5	30	0.0500	?LOD u
Hexachlorobutadiene	0.4197	0.3854	12.50	11.48	ug/L	-8	30	0.0500	u
Naphthalene	1.9068	1.7259	12.50	11.31	ug/L	-9	30	0.0500	?LOD u
1,2,3-Trichlorobenzene	0.7598	0.7010	12.50	11.53	ug/L	-8	30	0.0500	?LOD u
tert-Butyl Alcohol (TBA)	0.0622	0.0795	62.50	79.94	ug/L	28	30	0.0050	u
Isopropyl Ether (DIPE)	3.4273	3.5116	12.50	12.81	ug/L	2	30	0.0500	u
Ethyl tert-Butyl Ether (ETBE)	2.5339	2.6781	12.50	13.21	ug/L	6	30	0.0500	u
Methyl tert-Amyl Ether (TAME)	1.2763	1.2397	12.50	12.14	ug/L	-3	30	0.0500	u
Dibromofluoromethane	0.6061	0.6537	50.00	53.93	ug/L	8	30	0.0500	u
1,2-Dichloroethane-d4	0.4953	0.5668	50.00	57.22	ug/L	14	30	0.0500	u
Toluene-d8	1.3579	1.4018	50.00	51.62	ug/L	3	30	0.0500	u
Bromofluorobenzene	1.1695	1.2762	50.00	54.56	ug/L	9	30	0.0500	u

ISTD (ICAL jb518)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	1056928	1064983	0.76	11.08	11.07	-0.01
1,4-Difluorobenzene	1663360	1775692	6.75	12.25	12.24	-0.01
Chlorobenzene-d5	1426786	1491302	4.52	16.18	16.16	-0.02
1,4-Dichlorobenzene-d4	723184	682713	-5.60	18.89	18.88	-0.01

Analyst: KKM Date: 04/30/15 Reviewer: LW Date: 04/30/15

!=warning +=high bias -=low bias ?LOD=no LOD c=CCV m>manual integration u=use v=ICV

CURTIS & TOMPKINS SPIKE USER REPORT FOR 266161 MSVOA Water
EPA 8260B

Inst : MSVOA10 Run Name : QC785510 IDF : 1.0
 Seqnum : 495166227007.1 File : jdp07 Time : 25-APR-2015 13:44
 Cal : 495052755001 Caldate : 05-FEB-2015 Caltype : WATER
 Standards: S26208 (11110X), S26941 (2500X)

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Dibromofluoromethane	0.6061	0.6375	50.00	52.59	ug/L	5	30	0.0500	u
1,2-Dichloroethane-d4	0.4953	0.5451	50.00	55.03	ug/L	10	30	0.0500	u
Toluene-d8	1.3579	1.3781	50.00	50.74	ug/L	1	30	0.0500	u
Bromofluorobenzene	1.1695	1.2425	50.00	53.12	ug/L	6	30	0.0500	u

ISTD (ICAL jb518)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Pentafluorobenzene	1056928	1100884	4.16	11.08	11.07	-0.01
1,4-Difluorobenzene	1663360	1810854	8.87	12.25	12.24	-0.01
Chlorobenzene-d5	1426786	1533767	7.50	16.18	16.17	-0.01
1,4-Dichlorobenzene-d4	723184	706876	-2.26	18.89	18.89	0.00

ISTD (ICAL jc709)	ICAL Area	Area	%Drift	ICAL RT	RT	Drift
Chlorobenzene-d5 TIC	6593335	5749623	-12.80	16.16	16.16	0.00

TEW 04/25/15 [Gasoline C5-C12]: Separated from coeluting peak. [general version]
 TEW 04/25/15 [Gasoline C6-C10]: Separated from coeluting peak. [general version]
 TEW 04/25/15 [Gasoline C7-C12]: Separated from coeluting peak. [general version]

Analyst: KKM Date: 04/30/15 Reviewer: LW Date: 04/30/15

u=use

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 415163075

Date : 04/23/15
 Sequence : MSVOA02 bdn

Reference : bc513
 Analyzed : 03/05/15 18:01

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	663015	11.24	1319436	12.46	1199148	17.06	576003	20.45
		LOWER LIMIT	331508	10.74	659718	11.96	599574	16.56	288002	19.95
		UPPER LIMIT	1326030	11.74	2638872	12.96	2398296	17.56	1152006	20.95
004	CCV		507718	11.27	1003320	12.49	947190	17.08	454522	20.49
005	BS	QC785228	534784	11.27	1063273	12.49	995267	17.09	473394	20.48
006	BSD	QC785229	547685	11.27	1089815	12.49	1011698	17.08	479566	20.48
009	BLANK	QC785230	530883	11.27	1055194	12.48	977131	17.09	429580	20.48
010	SAMPLE	266232-002	522820	11.27	1035342	12.49	982695	17.08	434445	20.48
011	MSS	266161-007	515521	11.26	1032143	12.48	961652	17.09	423560	20.48
012	SAMPLE	266161-010	510685	11.27	1009944	12.49	948334	17.08	421844	20.47
013	SAMPLE	266161-011	498026	11.27	1004729	12.49	935618	17.08	414502	20.48
014	SAMPLE	266161-012	492238	11.26	978013	12.48	925553	17.09	411341	20.48
015	SAMPLE	266161-014	486921	11.27	970972	12.48	915864	17.09	420884	20.48
016	SAMPLE	266161-018	477102	11.27	960199	12.49	910531	17.08	400891	20.48
017	SAMPLE	266161-022	482183	11.27	967833	12.49	901264	17.09	399835	20.49
018	SAMPLE	266161-023	479796	11.27	963853	12.49	906267	17.08	393399	20.48
019	SAMPLE	266161-024	502490	11.28	1042572	12.49	954017	17.09	419842	20.48
020	SAMPLE	266161-025	519718	11.28	1031011	12.49	964440	17.08	422866	20.49
021	SAMPLE	266161-015	500869	11.27	1019501	12.49	952415	17.09	417675	20.48
022	MS	QC785265	510188	11.28	1022591	12.49	982462	17.09	469141	20.48
023	MSD	QC785266	22506 *	11.28	23013 *	12.49	5942 *	17.09	3396 *	20.49

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 415164517

Date : 04/24/15
 Sequence : MSVOA02 bdo

Reference : bc513
 Analyzed : 03/05/15 18:01

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	663015	11.24	1319436	12.46	1199148	17.06	576003	20.45
		LOWER LIMIT	331508	10.74	659718	11.96	599574	16.56	288002	19.95
		UPPER LIMIT	1326030	11.74	2638872	12.96	2398296	17.56	1152006	20.95
004	CCV		540818	11.27	1088230	12.49	1035920	17.08	502450	20.47
006	BS	QC785380	543451	11.26	1095456	12.48	1051928	17.08	499911	20.47
007	BSD	QC785381	556002	11.26	1139735	12.48	1101599	17.08	518427	20.47
008	MS	QC785265	581657	11.26	1190929	12.48	1117574	17.08	525166	20.47
009	MSD	QC785266	564576	11.27	1153487	12.48	1105410	17.07	522153	20.47
011	CCV		591624	11.26	1187853	12.48	1151650	17.07	543453	20.47
012	CCV		566808	11.26	1181346	12.48	1132181	17.07	497893	20.47
014	BLANK	QC785382	552251	11.27	1151153	12.48	1076373	17.07	486267	20.47
015	SAMPLE	266161-015	541496	11.26	1091752	12.48	1060339	17.07	471125	20.47
016	SAMPLE	266161-026	533779	11.26	1089333	12.47	1052431	17.08	469188	20.47
017	SAMPLE	266161-018	559276	11.26	1063092	12.48	1037884	17.07	464006	20.48
018	SAMPLE	266161-022	528348	11.26	1085620	12.48	1033567	17.08	458064	20.47
019	SAMPLE	266269-005	524205	11.26	1072901	12.48	1038801	17.07	476762	20.47
020	SAMPLE	266269-006	511082	11.25	1050634	12.48	1024396	17.07	466907	20.47
021	SAMPLE	266269-007	516108	11.26	1068346	12.47	1035376	17.08	468596	20.47
022	SAMPLE	266269-008	507203	11.26	1052821	12.48	1016538	17.07	457977	20.47
023	SAMPLE	266269-009	510234	11.26	1049473	12.47	1018086	17.08	467841	20.47
024	SAMPLE	266269-010	504879	11.25	1041762	12.48	1016344	17.08	460185	20.47
025	SAMPLE	266269-011	502442	11.26	1039541	12.48	1005597	17.07	455008	20.47
026	SAMPLE	266257-002	506406	11.26	1044019	12.47	1015515	17.08	454971	20.47
027	SAMPLE	266257-003	492446	11.26	1025043	12.47	997945	17.08	451961	20.47
028	SAMPLE	266257-004	496074	11.26	1034649	12.48	1009314	17.07	460697	20.47
029	SAMPLE	266161-013	498460	11.26	1029952	12.48	1001698	17.08	452004	20.47
030	SAMPLE	266161-020	505122	11.26	1053143	12.48	1006347	17.08	440644	20.48

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 415164517

Date : 04/24/15
 Sequence : MSVOA02 bdo

Reference : bdn07
 Analyzed : 04/23/15 09:30

#	Type	Sample ID	PFLBZ	RT
		ICAL STD	522525	11.26
		LOWER LIMIT	261263	10.76
		UPPER LIMIT	1045050	11.76
012	CCV		566808	11.26
035	LOD	262728-009	479270	11.27
036	LOD	262728-009	489356	11.27

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 425171890

Date : 04/29/15
 Sequence : MSVOA03 cdt

Reference : cdf26
 Analyzed : 04/15/15 00:51

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	420665	10.41	704518	11.57	660609	15.64	318122	18.40
		LOWER LIMIT	210333	9.91	352259	11.07	330305	15.14	159061	17.90
		UPPER LIMIT	841330	10.91	1409036	12.07	1321218	16.14	636244	18.90
002	IB		378184	10.37	648194	11.53	623359	15.62	317103	18.37
004	CCV	15PPB	420229	10.36	734047	11.53	667273	15.61	330060	18.37
005	BS	QC785928	398766	10.37	688966	11.53	630314	15.61	311657	18.37
006	BSD	QC785929	379491	10.36	660297	11.53	609115	15.61	300174	18.37
008	IB		368154	10.37	638757	11.53	567250	15.62	296967	18.37
009	BLANK	QC785930	372553	10.37	642272	11.53	589091	15.61	289528	18.37
010	SAMPLE	266326-003	373708	10.37	650773	11.54	591749	15.62	294676	18.38
011	SAMPLE	266370-001	352308	10.37	613530	11.53	560912	15.62	282064	18.37
012	SAMPLE	266234-005	347435	10.37	603290	11.53	566890	15.62	279988	18.38
013	SAMPLE	266161-013	345963	10.37	596831	11.53	551500	15.61	279254	18.38
014	SAMPLE	266371-010	340553	10.37	567201	11.53	553975	15.62	275253	18.38
015	SAMPLE	266374-012	352105	10.37	602491	11.53	569281	15.62	274517	18.38
016	SAMPLE	266306-008	350691	10.37	618864	11.54	570810	15.62	285582	18.38
017	SAMPLE	266326-001	357592	10.37	615676	11.53	561855	15.62	287080	18.38
018	SAMPLE	266326-002	357642	10.38	611907	11.54	563491	15.62	286283	18.38
019	SAMPLE	266370-002	370708	10.37	647920	11.54	592005	15.61	286116	18.38
020	SAMPLE	266370-003	366348	10.37	622850	11.53	580802	15.61	294933	18.38
021	SAMPLE	266370-004	381166	10.38	668629	11.54	605713	15.62	297766	18.38
022	SAMPLE	266370-005	386181	10.37	658958	11.53	621231	15.62	304342	18.38
023	SAMPLE	266409-001	365988	10.37	645977	11.53	600734	15.62	306265	18.37
024	IB		397176	10.37	687549	11.53	626632	15.62	308715	18.38
025	IB		373801	10.37	659628	11.54	596329	15.62	298988	18.38

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 455158971

Date : 04/20/15
 Sequence : MSVOA06 fdk

Reference : fcv21
 Analyzed : 04/01/15 00:29

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	466715	11.90	811177	13.23	697256	17.92	364452	20.65
		LOWER LIMIT	233358	11.40	405589	12.73	348628	17.42	182226	20.15
		UPPER LIMIT	933430	12.40	1622354	13.73	1394512	18.42	728904	21.15
002	IB		465023	11.94	808382	13.26	704568	17.94	379492	20.67
004	CCV		530466	11.93	944259	13.26	801969	17.95	441034	20.68
005	BS	QC784858	537155	11.93	890930	13.26	775557	17.94	417029	20.67
006	BSD	QC784859	502161	11.93	888512	13.25	752459	17.94	397574	20.67
007	IB		507126	11.93	857814	13.26	751092	17.94	402883	20.67
008	BLANK	QC784860	473538	11.93	810887	13.26	715305	17.94	381234	20.67
009	SAMPLE	266161-001	447982	11.93	770994	13.26	661784	17.94	348962	20.67
010	SAMPLE	266178-009	449984	11.93	771475	13.26	653324	17.94	350890	20.67
011	SAMPLE	266178-010	425264	11.93	711887	13.25	641369	17.94	352314	20.67
012	SAMPLE	266178-011	411305	11.93	710447	13.26	624092	17.94	335365	20.67
013	SAMPLE	266178-014	398596	11.93	700364	13.25	612235	17.94	336105	20.67
014	SAMPLE	266178-017	404472	11.93	715467	13.26	603998	17.94	342943	20.67
015	SAMPLE	266178-019	400699	11.93	681292	13.26	603937	17.94	331330	20.68
016	SAMPLE	266178-015	401075	11.93	690143	13.26	615169	17.94	334724	20.67
017	SAMPLE	266178-012	382592	11.93	672528	13.24	573036	17.93	327473	20.67
018	SAMPLE	266161-002	373700	11.93	652471	13.25	563352	17.94	322879	20.66
019	SAMPLE	266161-003	380797	11.92	674785	13.25	567189	17.94	314957	20.67
020	SAMPLE	266161-004	380967	11.92	639366	13.25	561400	17.93	313384	20.67
021	SAMPLE	266161-008	360670	11.92	628303	13.25	537839	17.94	296665	20.66
022	SAMPLE	266161-009	369939	11.93	631822	13.26	561937	17.94	311672	20.67
023	SAMPLE	266178-008	366625	11.93	631574	13.26	551614	17.94	311799	20.67

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 455171722

Date : 04/29/15
 Sequence : MSVOA06 fdt

Reference : fcv21
 Analyzed : 04/01/15 00:29

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	466715	11.90	811177	13.23	697256	17.92	364452	20.65
		LOWER LIMIT	233358	11.40	405589	12.73	348628	17.42	182226	20.15
		UPPER LIMIT	933430	12.40	1622354	13.73	1394512	18.42	728904	21.15
002	IB		318737	11.91	586755	13.24	501349	17.93	265903	20.66
004	CCV		309470	11.91	559579	13.24	471366	17.93	255274	20.66
005	CCV		315665	11.91	572466	13.24	487107	17.93	252607	20.66
007	CCV		503352	11.92	873902	13.24	761584	17.93	402129	20.66
010	CCV		443772	11.91	810691	13.24	708725	17.92	371868	20.66
012	CCV		430352	11.91	773065	13.25	652018	17.93	341812	20.66
013	CCV/BS	QC785903	423608	11.91	742854	13.24	642031	17.93	333479	20.66
014	BSD	QC785904	391047	11.91	681245	13.24	602566	17.93	322071	20.66
015	IB		378223	11.90	675860	13.23	563533	17.92	316407	20.66
017	BLANK	QC785905	315803	11.91	582377	13.24	501528	17.93	264902	20.66
018	SAMPLE	266161-013	304999	11.90	545875	13.23	470757	17.92	247835	20.66
019	SAMPLE	266399-013	291708	11.91	532307	13.24	468598	17.93	240812	20.66
020	SAMPLE	266399-014	277724	11.91	513493	13.24	444430	17.93	229633	20.66
021	SAMPLE	266399-015	271446	11.91	509586	13.24	432104	17.93	226058	20.66
022	SAMPLE	266399-016	257318	11.91	473744	13.23	414789	17.93	216545	20.66
023	SAMPLE	266399-019	261323	11.91	482922	13.24	405293	17.93	218524	20.66
024	SAMPLE	266399-020	261226	11.91	465857	13.24	415203	17.93	216163	20.66
025	SAMPLE	266399-023	262037	11.91	481828	13.24	415030	17.93	219563	20.66
026	SAMPLE	266399-024	261623	11.91	467612	13.24	416207	17.93	225415	20.66
027	SAMPLE	266399-025	254740	11.91	473925	13.24	417999	17.93	224197	20.66
028	SAMPLE	266399-026	258759	11.91	477581	13.24	420446	17.93	221607	20.66
029	SAMPLE	266399-027	258001	11.92	474800	13.25	413891	17.93	225079	20.67
030	SAMPLE	266399-028	255189	11.92	468872	13.25	406724	17.94	222371	20.67
031	SAMPLE	266399-029	259874	11.91	474258	13.25	414932	17.93	220626	20.66
032	SAMPLE	266399-030	247316	11.92	466740	13.25	413440	17.94	217771	20.67
033	IB		367991	11.92	670758	13.25	574528	17.94	270442	20.67
034	IB		253531	11.92	459285	13.24	404625	17.93	218723	20.66
035	IB		262816	11.92	475185	13.25	413704	17.94	228570	20.67

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 495166227

Date : 04/25/15
 Sequence : MSVOA10 jdp

Reference : jb518
 Analyzed : 02/06/15 02:47

#	Type	Sample ID	PFLBZ	RT	14DFB	RT	CLBZD5	RT	DCBZ14D4	RT
		ICAL STD	1056928	11.08	1663360	12.25	1426786	16.18	723184	18.89
		LOWER LIMIT	528464	10.58	831680	11.75	713393	15.68	361592	18.39
		UPPER LIMIT	2113856	11.58	3326720	12.75	2853572	16.68	1446368	19.39
002	CCV/BS	QC785507	1085178	11.07	1804341	12.24	1509686	16.16	686948	18.89
003	BSD	QC785508	1098911	11.08	1822709	12.24	1548154	16.16	669225	18.88
005	CCV/BS	QC785507	1064983	11.07	1775692	12.24	1491302	16.16	682713	18.88
006	BSD	QC785508	1081794	11.07	1796185	12.24	1522408	16.16	673661	18.89
007	CCV/BS	QC785510	1100884	11.07	1810854	12.24	1533767	16.17	706876	18.89
008	BSD	QC785511	1055365	11.07	1760266	12.23	1480144	16.16	672717	18.88
010	IB		1108587	11.07	1784033	12.24	1461498	16.17	578131	18.88
011	BLANK	QC785509	937994	11.07	1554879	12.24	1299491	16.17	509927	18.89
012	SAMPLE	266161-015	1038438	11.07	1694519	12.24	1427070	16.16	569113	18.89
013	SAMPLE	266161-026	1034205	11.07	1699815	12.23	1420727	16.16	568562	18.89
014	SAMPLE	266286-001	990068	11.07	1653491	12.23	1382648	16.16	577914	18.88
015	SAMPLE	266286-002	1003398	11.07	1652924	12.23	1371673	16.16	537721	18.88
016	SAMPLE	266286-003	1001786	11.07	1658850	12.23	1378710	16.16	595560	18.89
017	SAMPLE	266286-004	991267	11.06	1659371	12.23	1386524	16.16	555420	18.88
018	SAMPLE	266331-004	882701	11.07	1498340	12.23	1251178	16.16	517974	18.88
019	SAMPLE	266331-005	995641	11.07	1623302	12.23	1361008	16.16	606106	18.89
020	SAMPLE	266331-006	966818	11.06	1573847	12.23	1301600	16.16	521876	18.89
021	SAMPLE	266161-020	980185	11.07	1590403	12.23	1330557	16.16	547533	18.89
022	SAMPLE	266258-002	958708	11.06	1572467	12.23	1303253	16.16	543839	18.89
023	SAMPLE	266258-003	928513	11.07	1552612	12.23	1290448	16.16	520579	18.89
024	IB		996413	11.06	1685168	12.24	1392251	16.15	547614	18.88

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 495166227

Date : 04/25/15
 Sequence : MSVOA10 jdp

Reference : jc709
 Analyzed : 03/08/15 05:07

#	Type	Sample ID	CLBZD5-TIC	RT
		ICAL STD	6593335	16.16
		LOWER LIMIT	3296668	15.66
		UPPER LIMIT	13186670	16.66
007	CCV/BS	QC785510	5749623	16.16

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 415092829

Instrument : MSVOA02 Begun : 03/05/15 11:09
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	bc501	X	IB			03/05/15 11:09	1.0	1	
002	bc502	X	IB			03/05/15 11:44	1.0	1	
003	bc503	TUN	BFB			03/05/15 12:15	1.0	2	
004	bc504	X	IB			03/05/15 12:42	1.0	1	
005	bc505	X	IB			03/05/15 13:17	1.0	1	
006	bc506	IB	CALIB			03/05/15 13:52	1.0	1	
007	bc507	ICAL				03/05/15 14:27	1.0	3 4 5 6 1	
008	bc508	ICAL				03/05/15 15:03	1.0	3 4 5 6 1	
009	bc509	ICAL				03/05/15 15:38	1.0	3 4 5 6 1	
010	bc510	ICAL				03/05/15 16:14	1.0	3 4 5 6 1	
011	bc511	ICAL				03/05/15 16:50	1.0	3 4 5 6 1	
012	bc512	ICAL				03/05/15 17:26	1.0	3 4 5 6 1	
013	bc513	ICAL				03/05/15 18:01	1.0	3 4 5 6 1	
014	bc514	ICAL				03/05/15 18:37	1.0	3 4 5 6 1	
015	bc515	ICAL				03/05/15 19:12	1.0	3 4 5 6 1	
016	bc516	ICV	GAS			03/05/15 19:47	1.0	7 1	
017	bc517	ICV	MIX			03/05/15 20:23	1.0	8 9 10 1	
018	bc518	X	IB			03/05/15 20:58	1.0	1	
019	bc519	X	IB			03/05/15 21:33	1.0	1	

MCT 03/12/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 19.

Analyst: MCT Date: 03/12/15 Reviewer: TKM Date: 03/12/15

Standards used: 1=S26528 2=S26000 3=S25695 4=S26560 5=S26570 6=S26571 7=S26359 8=S26569 9=S26642 10=S26759

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 415163075

Instrument : MSVOA02 Begun : 04/23/15 05:55
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	bdn01	X	HIGH GASES			04/23/15 05:55	1.0	1	
002	bdn02	X	IB			04/23/15 06:30	1.0	1	
003	bdn03	TUN	BFB			04/23/15 07:03	1.0	2	
004	bdn04	CCV				04/23/15 07:31	1.0	3 4 5 6 1	
005	bdn05	BS	QC785228	Water	222502	04/23/15 08:21	1.0	7 8 9 10 1	
006	bdn06	BSD	QC785229	Water	222502	04/23/15 08:55	1.0	7 8 9 10 1	
007	bdn07	ICAL	A/A	Water		04/23/15 09:30	1.0	11 1	
008	bdn08	X	IB			04/23/15 10:05	1.0	1	
009	bdn09	BLANK	QC785230	Water	222502	04/23/15 10:40	1.0	1	
010	bdn10	SAMPLE	266232-002	Water	222502	04/23/15 11:15	1.0	1	
011	bdn11	MSS	266161-007	Water	222502	04/23/15 11:50	1.0	1	
012	bdn12	SAMPLE	266161-010	Water	222502	04/23/15 12:25	1.0	1	
013	bdn13	SAMPLE	266161-011	Water	222502	04/23/15 13:00	1.0	1	
014	bdn14	SAMPLE	266161-012	Water	222502	04/23/15 13:35	1.0	1	
015	bdn15	SAMPLE	266161-014	Water	222502	04/23/15 14:10	1.0	1	
016	bdn16	SAMPLE	266161-018	Water	222502	04/23/15 14:45	1.0	1	
017	bdn17	SAMPLE	266161-022	Water	222502	04/23/15 15:20	1.0	1	
018	bdn18	SAMPLE	266161-023	Water	222502	04/23/15 15:55	1.0	1	
019	bdn19	SAMPLE	266161-024	Water	222502	04/23/15 16:30	1.0	1	
020	bdn20	SAMPLE	266161-025	Water	222502	04/23/15 17:05	1.0	1	
021	bdn21	SAMPLE	266161-015	Water	222502	04/23/15 17:40	2.0	1	
022	bdn22	MS	QC785265	Water	222502	04/23/15 18:15	1.0	7 8 9 10 1	
023	bdn23	MSD	QC785266	Water	222502	04/23/15 18:50	1.0	7 8 9 10 1	
024	bdn24	X	IB			04/23/15 19:25	1.0	1	
025	bdn25	X	IB			04/23/15 20:00	1.0	1	
026	bdn26	X	IB			04/23/15 20:35	1.0	1	
027	bdn27	X	IB			04/23/15 21:10	1.0	1	
028	bdn28	LOD	262728-009	Water	222502	04/23/15 21:45	1.0	11 1	<<t

MCT 04/24/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 28.

Analyst: MCT Date: 04/24/15 Reviewer: LW Date: 04/24/15

Standards used: 1=S26909 2=S26000 3=S25695 4=S26948 5=S26838 6=S26957 7=S26876 8=S27022 9=S26759 10=S26358 11=S27011

Flags used: <<t=out of clock

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 415164517

Instrument : MSVOA02
 Method : EPA 8260B

Begun : 04/24/15 05:57
 SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	bdo01	X	IB			04/24/15 05:57	1.0	1	
002	bdo02	X	IB			04/24/15 06:31	1.0	1	
003	bdo03	TUN	BFB			04/24/15 07:04	1.0	2	
004	bdo04	CCV				04/24/15 07:32	1.0	3 4 5 6 1	
005	bdo05	X	QC785380	Water	222542	04/24/15 08:21	1.0	7 8 9 10 1	spk
006	bdo06	BS	QC785380	Water	222542	04/24/15 08:56	1.0	7 8 9 10 1	
007	bdo07	BSD	QC785381	Water	222542	04/24/15 09:31	1.0	7 8 9 10 1	
008	bdo08	MS	QC785265	Water	222502	04/24/15 10:06	1.0	7 8 9 10 1	
009	bdo09	MSD	QC785266	Water	222502	04/24/15 10:40	1.0	7 8 9 10 1	
010	bdo10	TUN	BFB			04/24/15 11:16	1.0	2	
011	bdo11	CCV				04/24/15 11:43	1.0	3 4 5 6 1	
012	bdo12	CCV		Water		04/24/15 12:30	1.0	11 1	
013	bdo13	X	IB			04/24/15 13:05	1.0	1	
014	bdo14	BLANK	QC785382	Water	222542	04/24/15 13:40	1.0	1	
015	bdo15	SAMPLE	266161-015	Water	222542	04/24/15 14:15	1.0	1	
016	bdo16	SAMPLE	266161-026	Water	222542	04/24/15 14:50	1.0	1	
017	bdo17	SAMPLE	266161-018	Water	222542	04/24/15 15:25	1.0	1	
018	bdo18	SAMPLE	266161-022	Water	222542	04/24/15 16:00	1.0	1	
019	bdo19	SAMPLE	266269-005	Water	222542	04/24/15 16:35	1.0	1	
020	bdo20	SAMPLE	266269-006	Water	222542	04/24/15 17:10	1.0	1	
021	bdo21	SAMPLE	266269-007	Water	222542	04/24/15 17:45	1.0	1	
022	bdo22	SAMPLE	266269-008	Water	222542	04/24/15 18:20	1.0	1	
023	bdo23	SAMPLE	266269-009	Water	222542	04/24/15 18:55	1.0	1	
024	bdo24	SAMPLE	266269-010	Water	222542	04/24/15 19:30	1.0	1	
025	bdo25	SAMPLE	266269-011	Water	222542	04/24/15 20:05	1.0	1	
026	bdo26	SAMPLE	266257-002	Water	222542	04/24/15 20:40	1.0	1	pH > 2
027	bdo27	SAMPLE	266257-003	Water	222542	04/24/15 21:14	1.0	1	pH > 2
028	bdo28	SAMPLE	266257-004	Water	222542	04/24/15 21:49	1.0	1	pH > 2
029	bdo29	SAMPLE	266161-013	Water	222542	04/24/15 22:24	3.33	1	
030	bdo30	SAMPLE	266161-020	Water	222542	04/24/15 22:58	5.0	1	
031	bdo31	X	IB			04/24/15 23:33	1.0	1	
032	bdo32	X	IB			04/25/15 00:08	1.0	1	
033	bdo33	X	IB			04/25/15 00:42	1.0	1	
034	bdo34	X	IB			04/25/15 01:17	1.0	1	
035	bdo35	LOD	262728-009	Water	222542	04/25/15 01:52	1.0	11 1	<<t
036	bdo36	LOD	262728-009	Water	222542	04/25/15 02:27	1.0	11 1	<<t

MCT 04/27/15 : Matrix spikes were not performed for this analysis in batch 222542 due to insufficient sample amount.

MCT 04/27/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 36.

Analyst: MCT Date: 04/27/15 Reviewer: LW Date: 04/27/15

Standards used: 1=S26909 2=S26000 3=S25695 4=S26948 5=S26838 6=S26957 7=S26876 8=S27022 9=S26759 10=S26358 11=S27011

Flags used: <<t=out of clock spk=5% spike rule

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 425152069

Instrument : MSVOA03 Begun : 04/15/15 00:30
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
006	cdf06	TUN	BFB			04/15/15 14:29	1.0	1	t
007	cdf07	TUN	BFB			04/15/15 14:51	1.0	1	
008	cdf08	TUN	BFB			04/15/15 15:12	1.0	1	
009	cdf09	IB				04/15/15 15:34	1.0	2	
010	cdf10	X	LOWPT			04/15/15 15:55	1.0	2	
011	cdf11	IB				04/15/15 16:59	1.0	2	
012	cdf12	IB				04/15/15 17:42	1.0	2	
013	cdf13	TUN	BFB			04/15/15 18:04	1.0	1	t
014	cdf14	TUN	BFB			04/15/15 18:25	1.0	1	
015	cdf15	IB				04/15/15 19:08	1.0	2	
016	cdf16	IB				04/15/15 19:30	1.0	2	
017	cdf17	IB				04/15/15 20:12	1.0	2	
018	cdf18	IB				04/15/15 20:34	1.0	2	
019	cdf19	IB	CALIB			04/15/15 21:17	1.0	2	
020	cdf20	ICAL	.25/.5PPB			04/15/15 21:38	1.0	3 4 5 6 2	
021	cdf21	ICAL	.5/1PPB			04/15/15 22:21	1.0	2 3 4 5 6	
022	cdf22	ICAL	2PPB			04/15/15 22:43	1.0	3 4 5 6 2	
023	cdf23	ICAL	5PPB			04/15/15 23:26	1.0	2 3 4 5 6	
024	cdf24	ICAL	10PPB			04/15/15 23:47	1.0	2 3 4 5 6	
025	cdf25	ICAL	20PPB			04/15/15 00:30	1.0	2 3 4 5 6	
026	cdf26	ICAL	50PPB			04/15/15 00:51	1.0	2 3 4 5 6	
027	cdf27	ICAL	75PPB			04/16/15 01:34	1.0	2 3 4 5 6	
028	cdf28	ICAL	100PPB			04/16/15 01:56	1.0	2 3 4 5 6	
029	cdf29	ICV	GAS			04/16/15 02:39	1.0	7 2	
030	cdf30	ICV				04/16/15 03:00	1.0	8 9 10 2	
031	cdf31	IB				04/16/15 03:43	1.0	2	
032	cdf32	IB				04/16/15 04:04	1.0	2	

DAR 04/16/15 : adjusted tune after file 8

DAR 04/16/15 : started sequence at file 6 no files 1-5

DAR 04/16/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 6 through 32.

Analyst: DAR Date: 04/16/15 Reviewer: LW Date: 04/17/15

Standards used: 1=S26000 2=S26911 3=S25695 4=S26948 5=S26838 6=S25156 7=S24978 8=S26876 9=S27022 10=S26759

Flags used: t=tune failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 425171890

Instrument : MSVOA03 Begun : 04/29/15 08:50
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	cdt01	X	HIGH GAS			04/29/15 08:50	1.0	1	
002	cdt02	IB				04/29/15 09:33	1.0	1	?t
003	cdt03	TUN	BFB			04/29/15 11:20	1.0	2	
004	cdt04	CCV	15PPB			04/29/15 11:41	1.0	3 4 5 6 1	
005	cdt05	BS	QC785928	Water	222684	04/29/15 12:46	1.0	7 8 9 10 1	
006	cdt06	BSD	QC785929	Water	222684	04/29/15 13:29	1.0	7 8 9 10 1	
007	cdt07	X	A/A CCV			04/29/15 13:50	1.0	1	
008	cdt08	IB				04/29/15 14:33	1.0	1	
009	cdt09	BLANK	QC785930	Water	222684	04/29/15 15:16	1.0	1	
010	cdt10	SAMPLE	266326-003	Water	222684	04/29/15 15:37	1.0	1	spk
011	cdt11	SAMPLE	266370-001	Water	222684	04/29/15 16:20	1.0	1	
012	cdt12	SAMPLE	266234-005	Water	222684	04/29/15 17:03	1.0	1	
013	cdt13	SAMPLE	266161-013	Water	222684	04/29/15 17:25	1.0	1	
014	cdt14	SAMPLE	266371-010	Water	222684	04/29/15 18:07	1.0	1	
015	cdt15	SAMPLE	266374-012	Water	222684	04/29/15 18:29	1.0	1	
016	cdt16	SAMPLE	266306-008	Water	222684	04/29/15 19:12	1.0	1	
017	cdt17	SAMPLE	266326-001	Water	222684	04/29/15 19:33	1.0	1	spk
018	cdt18	SAMPLE	266326-002	Water	222684	04/29/15 20:16	1.0	1	spk
019	cdt19	SAMPLE	266370-002	Water	222684	04/29/15 20:38	1.0	1	
020	cdt20	SAMPLE	266370-003	Water	222684	04/29/15 21:21	1.0	1	
021	cdt21	SAMPLE	266370-004	Water	222684	04/29/15 21:42	1.0	1	
022	cdt22	SAMPLE	266370-005	Water	222684	04/29/15 22:25	1.0	1	
023	cdt23	SAMPLE	266409-001	Water	222684	04/29/15 22:46	1.0	1	
024	cdt24	IB				04/29/15 23:29	222700	1	<<t
025	cdt25	IB				04/29/15 23:51	222700	1	<<t

DJA 04/30/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 25.

DJA 04/30/15 : Matrix spikes were not performed for this analysis in batch 222684 due to insufficient sample amount.

Analyst: DJA Date: 04/30/15 Reviewer: LW Date: 04/30/15

Standards used: 1=S26911 2=S26000 3=S25695 4=S26948 5=S26838 6=S26957 7=S26876 8=S27022 9=S26759 10=S26358

Flags used: <<t=out of clock ?t=missing tune spk=5% spike rule

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 455130249

Instrument : MSVOA06 Begun : 03/31/15 10:49
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	fcv01	X	HIGH GAS			03/31/15 10:49	1.0	1	
002	fcv02	X	IB			03/31/15 11:21	1.0	1	
003	fcv03	TUN	BFB			03/31/15 11:58	1.0	2	
004	fcv04	CCV				03/31/15 12:39	1.0	3 4 5 6 1	cc-
005	fcv05	X	QC782420	Water	221776	03/31/15 13:11	1.0	7 8 9 10 1	cc-
006	fcv06	X	QC782421	Water	221776	03/31/15 13:44	1.0	7 8 9 10 1	cc-
007	fcv07	IB				03/31/15 14:17	1.0	1	
008	fcv08	X	QC782422	Water	221776	03/31/15 14:51	1.0	1	cc-
009	fcv09	X	LOWPT			03/31/15 17:50	1.0	1	
010	fcv10	TUN	BFB			03/31/15 18:35	1.0	2	
011	fcv11	IB				03/31/15 19:02	1.0	1	
012	fcv12	IB				03/31/15 19:34	1.0	1	
013	fcv13	IB				03/31/15 20:07	1.0	1	
014	fcv14	IB	CALIB			03/31/15 20:40	1.0	1	
015	fcv15	ICAL	.25/.5PPB			03/31/15 21:12	1.0	11 12 5 6 1	
016	fcv16	ICAL	.5/1PPB			03/31/15 21:45	1.0	11 12 5 6 1	
017	fcv17	ICAL	2PPB			03/31/15 22:19	1.0	11 12 5 6 1	
018	fcv18	ICAL	5PPB			03/31/15 22:51	1.0	1 11 12 5 6	
019	fcv19	ICAL	10PPB			03/31/15 23:24	1.0	1 11 12 5 6	
020	fcv20	ICAL	20PPB			03/31/15 23:56	1.0	1 11 12 5 6	
021	fcv21	ICAL	50PPB			04/01/15 00:29	1.0	1 11 12 5 6	
022	fcv22	ICAL	75PPB			04/01/15 01:03	1.0	1 11 12 5 6	
023	fcv23	ICAL	100PPB			04/01/15 01:35	1.0	1 11 12 5 6	
024	fcv24	ICV	GAS			04/01/15 02:08	1.0	8 1	
025	fcv25	ICV	MIX			04/01/15 02:41	1.0	7 10 9 1	

DAR 04/01/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 25.

Analyst: DAR Date: 04/01/15 Reviewer: LW Date: 04/02/15

Standards used: 1=S26911 2=S26000 3=S25695 4=S26851 5=S26838 6=S25156 7=S26759 8=S26359 9=S26642 10=S26569 11=S26360
 12=S26948

Flags used: --low bias cc=CCV CCC failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 455131716

Instrument : MSVOA06 Begun : 04/01/15 11:16
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	fd101	X	IB			04/01/15 11:16	1.0	1
002	fd102	TUN	BFB			04/01/15 11:45	1.0	2
003	fd103	ICV				04/01/15 12:17	1.0	3 1
004	fd104	ICV				04/01/15 13:27	1.0	4 1
005	fd105	TUN	BFB			04/01/15 14:04	1.0	2
006	fd106	CCV				04/01/15 14:30	1.0	5 6 7 8 1
007	fd107	CCV				04/01/15 15:02	1.0	9 3 10 11 1
008	fd108	TUN	BFB			04/01/15 16:19	1.0	2
009	fd109	IB				04/01/15 16:50	1.0	1
010	fd110	IB				04/01/15 17:25	1.0	1
011	fd111	IB	CALIB			04/01/15 18:01	1.0	1
012	fd112	ICAL	2.5PPB			04/01/15 18:37	1.0	6 7 12 1
013	fd113	ICAL	5PPB			04/01/15 19:12	1.0	1 6 7 12
014	fd114	ICAL	10PPB			04/01/15 19:48	1.0	1 6 7 12
015	fd115	ICAL	20PPB			04/01/15 20:23	1.0	1 6 7 12
016	fd116	ICAL	50PPB			04/01/15 20:59	1.0	1 6 7 12
017	fd117	ICAL	60PPB			04/01/15 21:35	1.0	1 6 7 12
018	fd118	ICAL	75PPB			04/01/15 22:10	1.0	1 6 7 12
019	fd119	ICAL	100PPB			04/01/15 22:46	1.0	1 6 7 12
020	fd120	ICAL	200PPB			04/01/15 23:22	1.0	1 6 7 12
021	fd121	ICV	GAS			04/01/15 23:57	1.0	3 1
022	fd122	ICV	MIX			04/02/15 00:33	1.0	9 10 11 1

DAR 04/02/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 22.

Analyst: DAR Date: 04/02/15 Reviewer: LW Date: 04/03/15
 Standards used: 1=S26911 2=S26000 3=S26359 4=S26672 5=S25695 6=S26948 7=S26838 8=S25156 9=S26759 10=S26642 11=S26569
 12=S26957

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 455158971

Instrument : MSVOA06 Begun : 04/20/15 09:31
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	fdk01	X	HIGH GAS			04/20/15 09:31	1.0	1	
002	fdk02	IB				04/20/15 10:03	1.0	1	?t
003	fdk03	TUN	BFB			04/20/15 12:47	1.0	2	
004	fdk04	CCV				04/20/15 13:16	1.0	3 4 5 6 1	
005	fdk05	BS	QC784858	Water	222398	04/20/15 14:06	1.0	7 8 9 10 1	
006	fdk06	BSD	QC784859	Water	222398	04/20/15 14:39	1.0	7 8 9 10 1	
007	fdk07	IB				04/20/15 15:11	1.0	1	
008	fdk08	BLANK	QC784860	Water	222398	04/20/15 15:43	1.0	1	
009	fdk09	SAMPLE	266161-001	Water	222398	04/20/15 16:16	1.0	1	
010	fdk10	SAMPLE	266178-009	Water	222398	04/20/15 16:48	1.0	1	
011	fdk11	SAMPLE	266178-010	Water	222398	04/20/15 17:21	1.0	1	
012	fdk12	SAMPLE	266178-011	Water	222398	04/20/15 17:53	1.0	1	
013	fdk13	SAMPLE	266178-014	Water	222398	04/20/15 18:26	1.0	1	
014	fdk14	SAMPLE	266178-017	Water	222398	04/20/15 18:58	1.0	1	
015	fdk15	SAMPLE	266178-019	Water	222398	04/20/15 19:30	1.0	1	
016	fdk16	SAMPLE	266178-015	Water	222398	04/20/15 20:03	1.0	1	
017	fdk17	SAMPLE	266178-012	Water	222398	04/20/15 20:36	1.0	1	
018	fdk18	SAMPLE	266161-002	Water	222398	04/20/15 21:09	1.0	1	
019	fdk19	SAMPLE	266161-003	Water	222398	04/20/15 21:41	1.0	1	
020	fdk20	SAMPLE	266161-004	Water	222398	04/20/15 22:15	1.0	1	
021	fdk21	SAMPLE	266161-008	Water	222398	04/20/15 22:47	1.0	1	
022	fdk22	SAMPLE	266161-009	Water	222398	04/20/15 23:20	1.0	1	
023	fdk23	SAMPLE	266178-008	Water	222398	04/20/15 23:52	2.0	1	
024	fdk24	X	IB			04/21/15 00:25	1.0	1	
025	fdk25	X	IB			04/21/15 00:58	1.0	1	

DJA 04/21/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 25.

DJA 04/21/15 : Matrix spikes were not performed for this analysis in batch 222398 due to insufficient sample amount.

Analyst: DJA Date: 04/21/15 Reviewer: LW Date: 04/21/15

Standards used: 1=S26911 2=S26000 3=S25695 4=S26948 5=S26838 6=S26957 7=S26759 8=S27022 9=S26876 10=S24978

Flags used: ?t=missing tune

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 455171722

Instrument : MSVOA06 Begun : 04/29/15 06:02
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	fdt01	X	IB			04/29/15 06:02	1.0	1	
002	fdt02	IB				04/29/15 06:35	1.0	1	?t
003	fdt03	TUN	BFB			04/29/15 07:10	1.0	2	
004	fdt04	CCV				04/29/15 07:42	1.0	3 4 5 6 1	cc+
005	fdt05	CCV				04/29/15 08:41	1.0	3 4 5 6 1	cc+
006	fdt06	TUN	BFB			04/29/15 10:41	1.0	2	
007	fdt07	CCV				04/29/15 11:10	1.0	3 4 5 6 1	
008	fdt08	TUN	BFB			04/29/15 11:45	1.0	2	t
009	fdt09	TUN	BFB			04/29/15 11:57	1.0	2	
010	fdt10	CCV				04/29/15 12:27	1.0	3 4 5 6 1	
011	fdt11	TUN	BFB			04/29/15 13:20	1.0	2	
012	fdt12	CCV				04/29/15 13:46	1.0	3 4 5 6 1	
013	fdt13	CCV/BS	QC785903	Water	222678	04/29/15 14:34	1.0	7 8 9 10 1	
014	fdt14	BSD	QC785904	Water	222678	04/29/15 15:07	1.0	7 8 9 10 1	
015	fdt15	IB				04/29/15 15:40	1.0	1	
016	fdt16	X	QC785905	Water	222678	04/29/15 16:14	1.0	1	
017	fdt17	BLANK	QC785905	Water	222678	04/29/15 16:47	1.0	1	
018	fdt18	SAMPLE	266161-013	Water	222678	04/29/15 17:20	1.0	1	headspace <= 1 mL
019	fdt19	SAMPLE	266399-013	Water	222678	04/29/15 17:53	25.0	1	
020	fdt20	SAMPLE	266399-014	Water	222678	04/29/15 18:26	500.0	1	
021	fdt21	SAMPLE	266399-015	Water	222678	04/29/15 18:59	5.0	1	
022	fdt22	SAMPLE	266399-016	Water	222678	04/29/15 19:33	10.0	1	
023	fdt23	SAMPLE	266399-019	Water	222678	04/29/15 20:06	20.0	1	
024	fdt24	SAMPLE	266399-020	Water	222678	04/29/15 20:39	20.0	1	
025	fdt25	SAMPLE	266399-023	Water	222678	04/29/15 21:12	10.0	1	
026	fdt26	SAMPLE	266399-024	Water	222678	04/29/15 21:44	10.0	1	
027	fdt27	SAMPLE	266399-025	Water	222678	04/29/15 22:17	14.29	1	
028	fdt28	SAMPLE	266399-026	Water	222678	04/29/15 22:49	20.0	1	
029	fdt29	SAMPLE	266399-027	Water	222678	04/29/15 23:22	25.0	1	
030	fdt30	SAMPLE	266399-028	Water	222678	04/29/15 23:55	25.0	1	
031	fdt31	SAMPLE	266399-029	Water	222678	04/30/15 00:28	20.0	1	
032	fdt32	SAMPLE	266399-030	Water	222678	04/30/15 01:01	33.33	1	
033	fdt33	IB				04/30/15 01:33	1.0	1	<<t
034	fdt34	IB				04/30/15 02:07	1.0	1	<<t
035	fdt35	IB				04/30/15 02:39	1.0	1	<<t

MCT 04/29/15 : Adjusted tune : file fdt06,fdt08.

DAR 04/29/15 : adjusted tune after file 10

DAR 04/29/15 : accidentally ran IB instead of blank for file 16

MCT 04/30/15 : Matrix spikes were not performed for this analysis in batch 222678 due to insufficient sample amount.

MCT 04/30/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 35.

Analyst: MCT Date: 04/30/15 Reviewer: LW Date: 04/30/15

Standards used: 1=S26911 2=S26000 3=S25695 4=S26948 5=S26838 6=S26957 7=S26759 8=S27022 9=S26876 10=S24978

Flags used: +=high bias <<t=out of clock ?t=missing tune cc=CCV CCC failure t=tune failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 495052755

Instrument : MSVOA10 Begun : 02/05/15 15:15
 Method : EPA 8260B SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	jb501	X	IB			02/05/15 15:15	1.0	1	
002	jb502	TUN	BFB			02/05/15 17:15	1.0	2	t
003	jb503	TUN	BFB			02/05/15 18:32	1.0	2	
004	jb504	IB	LOWPT			02/05/15 19:08	1.0	1	
005	jb505	IB	LOWPT			02/05/15 20:05	1.0	1	
006	jb506	TUN	BFB			02/05/15 20:36	1.0	2	
007	jb507	X	IB			02/05/15 21:07	1.0	1	
008	jb508	X	IB			02/05/15 21:38	1.0	1	
009	jb509	X	IB			02/05/15 22:09	1.0	1	
010	jb510	X	IB			02/05/15 22:40	1.0	1	
011	jb511	IB	CALIB IB			02/05/15 23:11	1.0	1	
012	jb512	ICAL	0.25/0.5PPB			02/05/15 23:42	1.0	3 4 1	
013	jb513	ICAL	0.5/1PPB			02/06/15 00:13	1.0	5 6 3 4 1	
014	jb514	ICAL	2PPB			02/06/15 00:44	1.0	5 6 3 4 1	
015	jb515	ICAL	5PPB			02/06/15 01:14	1.0	5 6 3 4 1	
016	jb516	ICAL	10PPB			02/06/15 01:45	1.0	5 6 3 4 1	
017	jb517	ICAL	20PPB			02/06/15 02:16	1.0	5 6 3 4 1	
018	jb518	ICAL	50PPB			02/06/15 02:47	1.0	5 6 3 4 1	
019	jb519	ICAL	75PPB			02/06/15 03:18	1.0	5 6 3 4 1	
020	jb520	ICAL	100PPB			02/06/15 03:49	1.0	5 6 3 4 1	
021	jb521	ICV	20PPB			02/06/15 04:19	1.0	7 1	
022	jb522	ICV	25PPB			02/06/15 04:50	1.0	8 9 10 1	
023	jb523	X	IB			02/06/15 05:21	1.0	1	
024	jb524	X	IB			02/06/15 05:52	1.0	1	
025	jb525	X	IB			02/06/15 06:23	1.0	1	
026	jb526	X	IB			02/06/15 06:54	1.0	1	
027	jb527	X	IB			02/06/15 07:25	1.0	1	

DAR 02/06/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 27.

Analyst: DAR Date: 02/06/15 Reviewer: LW Date: 02/09/15

Standards used: 1=S26526 2=S26000 3=S26396 4=S24979 5=S24977 6=S26560 7=S24978 8=S26221 9=S26275 10=S26249

Flags used: t=tune failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 495166227

Instrument : MSVOA10
 Method : EPA 8260B

Begun : 04/25/15 10:27
 SOP Version : TVH_8260B_rv1

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	jdp01	TUN	BFB			04/25/15 10:27	1.0	1	
002	jdp02	CCV/BS	QC785507	Water	222575	04/25/15 10:59	1.0	2 3 4 5 6	spk cc+
003	jdp03	BSD	QC785508	Water	222575	04/25/15 11:30	1.0	2 3 4 5 6	spk cc+
004	jdp04	TUN	BFB			04/25/15 12:06	1.0	1	
005	jdp05	CCV/BS	QC785507	Water	222575	04/25/15 12:31	1.0	2 3 4 5 6	
006	jdp06	BSD	QC785508	Water	222575	04/25/15 13:13	1.0	2 3 4 5 6	
007	jdp07	CCV/BS	QC785510	Water	222575	04/25/15 13:44	1.0	7 6	
008	jdp08	BSD	QC785511	Water	222575	04/25/15 14:15	1.0	7 6	
009	jdp09	X	A/A			04/25/15 14:46	1.0	8 6	
010	jdp10	IB				04/25/15 15:17	1.0	6	
011	jdp11	BLANK	QC785509	Water	222575	04/25/15 15:48	1.0	6	
012	jdp12	SAMPLE	266161-015	Water	222575	04/25/15 16:19	1.0	6	headspace <= 1 mL
013	jdp13	SAMPLE	266161-026	Water	222575	04/25/15 16:49	1.0	6	
014	jdp14	SAMPLE	266286-001	Water	222575	04/25/15 17:21	1.0	6	pH > 2
015	jdp15	SAMPLE	266286-002	Water	222575	04/25/15 17:52	1.0	6	
016	jdp16	SAMPLE	266286-003	Water	222575	04/25/15 18:23	1.0	6	pH > 2
017	jdp17	SAMPLE	266286-004	Water	222575	04/25/15 18:53	1.0	6	pH > 2
018	jdp18	SAMPLE	266331-004	Water	222575	04/25/15 19:24	1.0	6	pH > 2
019	jdp19	SAMPLE	266331-005	Water	222575	04/25/15 19:56	1.0	6	pH > 2
020	jdp20	SAMPLE	266331-006	Water	222575	04/25/15 20:27	1.0	6	
021	jdp21	SAMPLE	266161-020	Water	222575	04/25/15 20:59	5.0	6	
022	jdp22	SAMPLE	266258-002	Water	222575	04/25/15 21:31	4.0	6	foamer
023	jdp23	SAMPLE	266258-003	Water	222575	04/25/15 22:02	1.0	6	
024	jdp24	IB				04/25/15 22:33	1.0	6	

DAR 04/27/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 24.

DAR 04/27/15 : Matrix spikes were not performed for this analysis in batch 222575 due to insufficient sample amount.

Analyst: DAR Date: 04/27/15 Reviewer: LW Date: 04/27/15

Standards used: 1=S26000 2=S26876 3=S27022 4=S26759 5=S26358 6=S26941 7=S26208 8=S27011

Flags used: +=high bias cc=CCV CCC failure spk=5% spike rule

MSVOA WATER Prepsheet

Batch #: 222398
 Prep Date: 4/20/15
 Instrument: MSG

Dilutions prepared & pH of dilutions checked (initials/date): DJA 4/20/15
 For Undiluted samples, pH checked (initials/date): JCS 4/20/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
266161-1	A	✓					1X	TB				
2	B	✓					1X					
3	↓	✓					1X					
266178-8	B	✓			10		2X					
9	↓	✓					1X					
10	✓	✓										
11	✓	✓										
12	✓	✓						load last				
13	✓	✓										
14	✓	✓						load 2nd last				
15	✓	✓										
16	✓	✓										
17	✓	✓										
18												
19												
20												
21												
22												

MSVOA WATER Prepsheet

Batch #: 222SD2
 Prep Date: 4/23/15
 Instrument: MS2

Dilutions prepared & pH of dilutions checked (initials/date): MS 4/23/15
 For Undiluted samples, pH checked (initials/date): GAFF 4/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$ Rush
21 266232-2	B	✓				1	1X	LEAKED			4/27	✓
22 266161-7	B	✓					1X	MS2			4/29	
23 -10		✓										
24 -11		✓										
25 -12		✓										
26 -13		✓			9		3.3X	→ OUT OFF				
27 -14		✓					1X					
28 -15		✓			7		2X					
29 -18		✓					1X					
30 -20		✓			11		5X	→ OUT OFF				
31 22		✓					1X					
32 -23		✓										
33 -24		✓										
34 -25	✓	✓										
35 -PUMPED		✓			A2		1X					
36 -PUMPED	E											
37												
38												
39												
40												
41 262728-9								LOD (A/A)				
42												

MSVOA WATER Prepsheet

Batch #: 282542/22702
 Prep Date: 4/24/15
 Instrument: WR62

Dilutions prepared & pH of dilutions checked (initials/date): JKS 4/23 & 4/24
 For Undiluted samples, pH checked (initials/date): NS 4/25

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$ Rush
266161-15	C	✓				1	1X	OD.			4/29	
-7ms F16		✓			A2	1	1X	OC 785265, 222JDZ				
-7ms H		✓				1	↓	66 ↓				
-26 B	B	✓					1X					
13 B	B	✓			9		33X					
-20 B	B	✓			7		5X					
266269-5 A	A	✓					1X					
-6		✓										
-7		✓										
-8		✓										
-9		✓										
-10		✓										
-11		✓										
266161-18 C	C	✓				1	1X	TOE C.D				
-22 C	C	✓				1	↓	↓				
266257-2 E	E	7				1	1X	ES ↓				
-3 D	D	7				1	1X	↓				
-4 D	D	7				1	↓	↓				
262708-9	-						K/A	LOO @ 1-520B				
								@ 348B				

MSVOA WATER Prepsheet

Dilutions prepared & pH of dilutions checked (initials/date): WJS 4/23 & 4/24
 For Undiluted samples, pH checked (initials/date): WJS 4/25

Batch #: 222542/22202
 Prep Date: 4/24/15
 Instrument: WRP 2

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR#	DF	Comments	20% ccv?	hold	due	\$Rush
1 266161-15	C	✓				1	1X	OD.			4/29	
2 -7ms F.G		✓			A2	1	1X	OC 785265, 222J02				
3 -7ms H		✓				1	↓	66 ↓				
4 -26 B		✓					1X					
5 -13 B		✓			9		3.3X					
6 -20 B		✓			7		5X					
7 266269-5 A		✓					1X					
8 -6		✓										
9 -7		✓										
10 -8		✓										
11 -9		✓										
12 -10		✓										
13 -11		✓										
14 266161-18 C		✓				1	1X	TOE C.D				
15 -22 C		✓				1	↓	↓				
16 266257-2 E		7				1	1X	ES ↓				
17 -3 D		7				1	1X	↓				
18 -4 D		7				1	↓	↓				
19												
20												
21 262728-9 -							K/A	L00 @ 1.522B				
22								@ 3.22B				

MSVOA WATER Prepsheet

Dilutions prepared & pH of dilutions checked (initials/date): NT 4/25
 For Undiluted samples, pH checked (initials/date): pat 4/25/11

Batch #: 222575
 Prep Date: 4/25/15
 Instrument: MS10

Sample ID	Vial	pH <2	pH if >2	HS? lml	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
1 266161-15	A	✓		1ml		1	1X	1/2.0.3.ccl J TSA c-				
2	-26 C	✓				1	1X	↓				
3	-20 C	✓				1	5X					
4 266258-2	C	✓			8	1	4X					
5	-3 B	✓				1	1X					
6 266234-2	---					1	1X	Not run NT 4/25/15				
7 266286-1	A		5				1X					
8	-2		✓									
9	↓ -3		4				↓					
10	↓ -4		3				↓					
11 266321-4	F		3									
12	-5 A		6	1								
13	-6 A	✓										
14												
15												
16												
17												
18												
19												
20												
21												
22												

MSVOA WATER Prepsheet

Dilutions prepared & pH of dilutions checked (initials/date): UM 4/29
 For Undiluted samples, pH checked (initials/date): 2/24/30/11

Batch #: 222478
 Prep Date: _____
 Instrument: 225-6

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$Rush
21 266161-13	A	✓		ml			1X	TBA				
2 266344-13	D	✓			1		25X					
3	14	✓			2		500X					
4	15	✓			3		5X					
5	16	✓			4		10X					
6	19	✓			5		20X					
7	20	✓			6		20X					
8	23	✓			7		10X					
9	24	✓			8		10X					
10	25	✓			9		17.2X					
11	25	✓			10		20X					
12	27	✓			11		25X					
13	28	✓			1		25X					
14	29	✓			2		20X					
15	30	✓			3		33X					
16												
17												
18												
19												
20												
21												
22												

MSVOA WATER Prepsheet

Batch #: 222684
 Prep Date: 4/29/15
 Instrument: MS3

Dilutions prepared & pH of dilutions checked (initials/date): _____

For Undiluted samples, pH checked (initials/date): 204/30/15

Sample ID	Vial	pH <2	pH if >2	HS?	Dil'n flask ID	RR #	DF	Comments	20% ccv?	hold	due	\$ Rush
22 266306-8	A	✓				1	1X	geo oil, confirm J rawls hms				
22 266371-10	B	✓					1X	Chlhex c.ov				
266285-22								OD				
22 266234-5	B	✓				1	1X	c- broomth + F113 20%				
266326-1	B	✓					1X					
-2	B	✓					↓					
-3	A	✓					↓	TB				
266400-1	A	✓					1X					
266371-12	D	✓				1	1X	OD # Due 5/4				
266370-1	B	✓					1X	TB				
-2	↓	✓					↓					
-3	↓	✓					↓					
-4	↓	✓					↓					
-5	↓	✓					↓					
266161-13	C	✓				1	1X	OD				



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266161
ANALYTICAL REPORT
Semivolatile Organics by GC/MS

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

Table with 2 columns: Sample ID and Lab ID. Rows include 20150415CCC2, 20150415ER, 20150417EPA, 20150417B280A, 20150417CTP, 20150417ER.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: [Handwritten Signature]
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 05/01/2015

**CASE NARRATIVE
SEMIVOLATILE ORGANICS BY GC/MS (EPA 8270C)**

Laboratory number: 266161
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/17/15
Samples Received: 04/17/15

This data package contains sample and QC results for six water samples, requested for the above referenced project on 04/17/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Semivolatile Organics by GC/MS (EPA 8270C):

Low recovery was observed for 4-chloroaniline in the LCS for batch 222409.

Low recovery was observed for bis(2-ethylhexyl)phthalate in the MSD of 20150415CCC2 (lab # 266161-007); the LCS was within limits, and the associated RPD was within limits.

Bis(2-ethylhexyl)phthalate was detected between the MDL and the RL in the method blank for batch 222409.

No other analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266161

Chain of Custody Record No. 6878

Project name:	Lab PO#:		TIEMI technical contact:	TIEMI project manager:	Lab: C+T		MS / MSD	Analysis Required																		
	Sample Location (Pt. ID)				Field samplers:	No./Container Types		VOA	SVOA	Pest/PCBs	Metals - distilled *	TPH Purgeables	TPH Extractables	PAHs	Preservative Added											
Project (CTO) number:	Sample ID	Sample Location (Pt. ID)	Field samplers' signatures:	Date	Time	Matrix	40 ml VOA	1 liter Amber	500 ml Poly	Sieve	Glass Jar															
2015 Grandwater	20150415TB	Sara Weadley	Danya Aragon, Karl Han J	4/15/15	0900	water	2																			
1035225323.05	20150415CCCT	Jason Brodersen	Daymond Khal Milan		0915		3																			
	20150415B175W				1000		3																			
	20150415B175S				1045		3																			
	20150415B150				1155		3																			
	20150415B150D				1200		3																			
	20150415CCC2				1315		9																			
	20150415CCC3				1530		6																			
	20150415ER				1530		3																			
	20150416GEO				1435	water	3																			
	20150417EPA				935		3																			
	20150417B280A						3																			

Relinquished by:	Name (print)	Company Name	Date	Time
Tracy Bebjan	Mark Duthy	Tetra Tech	4-17-15	12:55
Tracy Bebjan	Tracy Bebjan	CBT	4-17-15	12:55
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				
Turnaround time/remarks:				
* Metals were field filled - STD TAT - Cold E meter				
Fed Ex #: N/A				



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266161

Chain of Custody Record No. 6085

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Lab PO#: 15 OAK 32
Lab: C+T
Project name: 2015 Ground water
Project (CTO) number: 1035225323.05
TEMI technical contact: Sara Woodley
TEMI project manager: Jason Broderick
Field samplers: Dupe Argen, Mark Doffy
Field samplers' signatures: [Signatures]

Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	No./Container Types						Analysis Required					
						40 ml VOA	1 liter Amber	500 ml Poly	Sleeve	Glass Jar	VOA	SVOA	Pest/PCBs	Metals	TPH Purgeables	TPH Extractions	
20150416EERC		4/16/15	0950	water		3	1				X	X	X				
20150416EF P289			1040			3					X	X	X				
20150416B473			1140			3					X	X	X				
20150416FG			1245				1				X	X	X				
20150416B158			1400				1				X	X	X				
20150416ER			1430				1				X	X	X				
20150416S08			1440				1				X	X	X				
20150416FB			0900				2				X	X	X				
20150416B474		4/14/15	1025	water			1				X	X	X				
20150416P211			1020				1				X	X	X				
20150416NRLF			1235				3				X	X	X				
20150416B277			1355				3				X	X	X				

Relinquished by:	Received by:	Relinquished by:	Received by:	Relinquished by:	Received by:	Company Name	Date	Time
[Signature]	[Signature]	[Signature]	[Signature]	[Signature]	[Signature]	Tetra Tech CAT	4-17-15 4-17-15	1255 1255

Turnaround time/remarks: *field filtered -std. TAF Cold data



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266161

Chain of Custody Record No. 6086

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No./Container Types

Lab: C T I

Lab PO#: 150AK 32

Project name: 2015 Groundwater

Field samplers: Dayna Aragon - Mark Duffly

Field samplers' signatures: *[Signature]*

TIEMI technical contact: Sara Woolley

TIEMI project manager: Jason Brodergen

Sample ID

Date

Sample Location (Pt. ID)

Project (CTO) number: 103S22532305

40 ml VOA

Time

Matrix

MS / MSD

1 liter Amber

500 ml Poly

Sieve

Glass Jar

VOA

Res/PCBs

Metals

TPH Purgeables

VOA

Metals

TPH Purgeables

TPH Extractables

VOA

Res/PCBs

Metals

TPH Purgeables

VOA

Res/PCBs

Metals

TPH Purgeables

VOA

Res/PCBs

Metals

TPH Purgeables

VOA

Res/PCBs

Metals

TPH Purgeables

VOA

Res/PCBs

Metals

TPH Purgeables

VOA

Res/PCBs

Metals

TPH Purgeables

VOA

Res/PCBs

Metals

TPH Purgeables

VOA

Res/PCBs

Metals

TPH Purgeables

VOA

Res/PCBs

Metals

TPH Purgeables

VOA

Res/PCBs

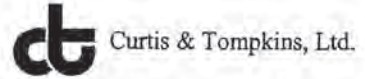
Metals

TPH Purgeables

Relinquished by:	Name (print)	Company Name	Date	Time
<i>[Signature]</i>	Mark Duffly	Tetra Tech	4-17-15	1255
<i>[Signature]</i>	Trey Babja	CTI	4-17-15	1255
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: Metals * Field filtered
- STD TAJ
Cold on lead

COOLER RECEIPT CHECKLIST



Login # 266161 Date Received 4/17/15 Number of coolers 3
 Client Tetra Tech Project 2015 Groundwater

Date Opened 4/17 By (print) SL (sign) [Signature]
 Date Logged in 4/17 By (print) SL (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) _____ YES NO
- Shipping info _____
- 2A. Were custody seals present? YES (circle) on cooler on samples NO
 How many _____ Name _____ Date _____
- 2B. Were custody seals intact upon arrival? _____ YES NO N/A
3. Were custody papers dry and intact when received? _____ YES NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ YES NO
5. Is the project identifiable from custody papers? (If so fill out top of form) _____ YES NO
6. Indicate the packing in cooler: (if other, describe) _____
 Bubble Wrap Foam blocks Bags None
 Cloth material Cardboard Styrofoam Paper towels
7. Temperature documentation: * Notify PM if temperature exceeds 6°C
 Type of ice used: Wet Blue/Gel None Temp(°C) 3.5°, 3.7°, 3.1°
 Samples Received on ice & cold without a temperature blank; temp. taken with IR gun
 Samples received on ice directly from the field. Cooling process had begun
8. Were Method 5035 sampling containers present? _____ YES NO
 If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ YES NO
10. Are there any missing / extra samples? _____ YES NO
11. Are samples in the appropriate containers for indicated tests? _____ YES NO
12. Are sample labels present, in good condition and complete? _____ YES NO
13. Do the sample labels agree with custody papers? _____ YES NO
14. Was sufficient amount of sample sent for tests requested? _____ YES NO
15. Are the samples appropriately preserved? _____ YES NO N/A
16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A
17. Did you document your preservative check? _____ YES NO N/A
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A
20. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A
21. Was the client contacted concerning this sample delivery? _____ YES NO
 If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Curtis & Tompkins Sample Preservation for 266161

Sample	pH: <2	>9	>12	Other
-004a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-005a	X	[]	[]	[]
-006a	X	[]	[]	[]
-007a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	[]	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
g	[]	[]	[]	[]
h	[]	[]	[]	[]
i	[]	[]	[]	[]
j	X	[]	[]	[]
k	X	[]	[]	[]
l	X	[]	[]	[]
m	[]	[]	[]	[]
n	[]	[]	[]	[]
o	[]	[]	[]	[]
p	[]	[]	[]	[]
q	[]	[]	[]	[]
r	[]	[]	[]	[]

Sample	pH: <2	>9	>12	Other
-008a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-009a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
-013a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-016a	X	[]	[]	[]
-017a	X	[]	[]	[]
-018a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]

Sample	pH: <2	>9	>12	Other
-019a	X	[]	[]	[]
-020a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-021a	X	[]	[]	[]
-023a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-025a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
-026a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]

Analyst: SL
 Date: 4/17/15
 Page 1 of 1

Results & QC Summary

Semivolatile Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150415CCC2	Batch#:	222409
Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.4	1.4
Phenol	ND	9.4	0.96
bis(2-Chloroethyl)ether	ND	9.4	1.1
2-Chlorophenol	ND	9.4	0.77
1,3-Dichlorobenzene	ND	9.4	0.97
1,4-Dichlorobenzene	ND	9.4	0.99
Benzyl alcohol	ND	9.4	1.0
1,2-Dichlorobenzene	ND	9.4	2.0
2-Methylphenol	ND	9.4	2.0
bis(2-Chloroisopropyl) ether	ND	9.4	1.4
4-Methylphenol	ND	9.4	1.6
N-Nitroso-di-n-propylamine	ND	9.4	1.1
Hexachloroethane	ND	9.4	1.0
Nitrobenzene	ND	9.4	1.2
Isophorone	ND	9.4	1.2
2-Nitrophenol	ND	19	2.5
2,4-Dimethylphenol	ND	9.4	2.3
Benzoic acid	ND	47	15
bis(2-Chloroethoxy)methane	ND	9.4	1.0
2,4-Dichlorophenol	ND	9.4	2.0
1,2,4-Trichlorobenzene	ND	9.4	2.1
4-Chloroaniline	ND	9.4	1.9
Hexachlorobutadiene	ND	9.4	2.3
4-Chloro-3-methylphenol	ND	9.4	0.99
Hexachlorocyclopentadiene	ND	19	0.64
2,4,6-Trichlorophenol	ND	9.4	0.86
2,4,5-Trichlorophenol	ND	9.4	0.80
2-Chloronaphthalene	ND	9.4	1.7
2-Nitroaniline	ND	19	1.1
Dimethylphthalate	ND	9.4	1.9
2,6-Dinitrotoluene	ND	9.4	1.7
3-Nitroaniline	ND	19	1.8
2,4-Dinitrophenol	ND	19	2.4
4-Nitrophenol	ND	19	1.7
Dibenzofuran	ND	9.4	1.8
2,4-Dinitrotoluene	ND	9.4	2.0

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150415CCC2	Batch#:	222409
Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.4	0.96
4-Chlorophenyl-phenylether	ND	9.4	1.5
4-Nitroaniline	ND	19	2.3
2,3,4,6-Tetrachlorophenol	ND	9.4	2.0
4,6-Dinitro-2-methylphenol	ND	19	1.1
N-Nitrosodiphenylamine	ND	9.4	1.6
Azobenzene	ND	9.4	1.1
4-Bromophenyl-phenylether	ND	9.4	1.9
Hexachlorobenzene	ND	9.4	1.9
Pentachlorophenol	ND	19	1.8
Carbazole	ND	9.4	2.2
Di-n-butylphthalate	ND	9.4	1.1
Butylbenzylphthalate	ND	9.4	0.95
3,3'-Dichlorobenzidine	ND	19	0.99
bis(2-Ethylhexyl)phthalate	11	9.4	1.7
Di-n-octylphthalate	ND	9.4	1.7

Surrogate	%REC	Limits
2-Fluorophenol	79	38-120
Phenol-d5	88	38-120
2,4,6-Tribromophenol	89	46-120
Nitrobenzene-d5	83	51-120
2-Fluorobiphenyl	75	54-120
Terphenyl-d14	78	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150415ER	Batch#:	222409
Lab ID:	266161-009	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	10	1.5
Phenol	ND	10	1.1
bis(2-Chloroethyl)ether	ND	10	1.3
2-Chlorophenol	ND	10	0.85
1,3-Dichlorobenzene	ND	10	1.1
1,4-Dichlorobenzene	ND	10	1.1
Benzyl alcohol	ND	10	1.2
1,2-Dichlorobenzene	ND	10	2.2
2-Methylphenol	ND	10	2.2
bis(2-Chloroisopropyl) ether	ND	10	1.5
4-Methylphenol	ND	10	1.8
N-Nitroso-di-n-propylamine	ND	10	1.3
Hexachloroethane	ND	10	1.1
Nitrobenzene	ND	10	1.3
Isophorone	ND	10	1.4
2-Nitrophenol	ND	21	2.7
2,4-Dimethylphenol	ND	10	2.6
Benzoic acid	ND	52	16
bis(2-Chloroethoxy)methane	ND	10	1.1
2,4-Dichlorophenol	ND	10	2.2
1,2,4-Trichlorobenzene	ND	10	2.3
4-Chloroaniline	ND	10	2.1
Hexachlorobutadiene	ND	10	2.5
4-Chloro-3-methylphenol	ND	10	1.1
Hexachlorocyclopentadiene	ND	21	0.71
2,4,6-Trichlorophenol	ND	10	0.95
2,4,5-Trichlorophenol	ND	10	0.88
2-Chloronaphthalene	ND	10	1.9
2-Nitroaniline	ND	21	1.2
Dimethylphthalate	ND	10	2.1
2,6-Dinitrotoluene	ND	10	1.8
3-Nitroaniline	ND	21	2.0
2,4-Dinitrophenol	ND	21	2.7
4-Nitrophenol	ND	21	1.8
Dibenzofuran	ND	10	1.9

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150415ER	Batch#:	222409
Lab ID:	266161-009	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
2,4-Dinitrotoluene	ND	10	2.2
Diethylphthalate	ND	10	1.1
4-Chlorophenyl-phenylether	ND	10	1.7
4-Nitroaniline	ND	21	2.5
2,3,4,6-Tetrachlorophenol	ND	10	2.2
4,6-Dinitro-2-methylphenol	ND	21	1.2
N-Nitrosodiphenylamine	ND	10	1.8
Azobenzene	ND	10	1.2
4-Bromophenyl-phenylether	ND	10	2.1
Hexachlorobenzene	ND	10	2.1
Pentachlorophenol	ND	21	2.0
Carbazole	ND	10	2.4
Di-n-butylphthalate	ND	10	1.2
Butylbenzylphthalate	ND	10	1.1
3,3'-Dichlorobenzidine	ND	21	1.1
bis(2-Ethylhexyl)phthalate	4.6 J	10	1.9
Di-n-octylphthalate	ND	10	1.9

Surrogate	%REC	Limits
2-Fluorophenol	74	38-120
Phenol-d5	83	38-120
2,4,6-Tribromophenol	82	46-120
Nitrobenzene-d5	79	51-120
2-Fluorobiphenyl	74	54-120
Terphenyl-d14	84	21-120

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150417EPA	Batch#:	222409
Lab ID:	266161-011	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.6	1.4
Phenol	ND	9.6	0.98
bis(2-Chloroethyl)ether	ND	9.6	1.2
2-Chlorophenol	ND	9.6	0.79
1,3-Dichlorobenzene	ND	9.6	0.99
1,4-Dichlorobenzene	ND	9.6	1.0
Benzyl alcohol	ND	9.6	1.1
1,2-Dichlorobenzene	ND	9.6	2.0
2-Methylphenol	ND	9.6	2.1
bis(2-Chloroisopropyl) ether	ND	9.6	1.4
4-Methylphenol	ND	9.6	1.6
N-Nitroso-di-n-propylamine	ND	9.6	1.2
Hexachloroethane	ND	9.6	1.1
Nitrobenzene	ND	9.6	1.2
Isophorone	ND	9.6	1.3
2-Nitrophenol	ND	19	2.5
2,4-Dimethylphenol	ND	9.6	2.4
Benzoic acid	ND	48	15
bis(2-Chloroethoxy)methane	ND	9.6	1.0
2,4-Dichlorophenol	ND	9.6	2.0
1,2,4-Trichlorobenzene	ND	9.6	2.2
4-Chloroaniline	ND	9.6	2.0
Hexachlorobutadiene	ND	9.6	2.3
4-Chloro-3-methylphenol	ND	9.6	1.0
Hexachlorocyclopentadiene	ND	19	0.65
2,4,6-Trichlorophenol	ND	9.6	0.88
2,4,5-Trichlorophenol	ND	9.6	0.82
2-Chloronaphthalene	ND	9.6	1.8
2-Nitroaniline	ND	19	1.1
Dimethylphthalate	ND	9.6	1.9
2,6-Dinitrotoluene	ND	9.6	1.7
3-Nitroaniline	ND	19	1.9
2,4-Dinitrophenol	ND	19	2.5
4-Nitrophenol	ND	19	1.7
Dibenzofuran	ND	9.6	1.8

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150417EPA	Batch#:	222409
Lab ID:	266161-011	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
2,4-Dinitrotoluene	ND	9.6	2.0
Diethylphthalate	ND	9.6	0.98
4-Chlorophenyl-phenylether	ND	9.6	1.6
4-Nitroaniline	ND	19	2.3
2,3,4,6-Tetrachlorophenol	ND	9.6	2.1
4,6-Dinitro-2-methylphenol	ND	19	1.1
N-Nitrosodiphenylamine	ND	9.6	1.6
Azobenzene	ND	9.6	1.1
4-Bromophenyl-phenylether	ND	9.6	1.9
Hexachlorobenzene	ND	9.6	1.9
Pentachlorophenol	ND	19	1.9
Carbazole	ND	9.6	2.2
Di-n-butylphthalate	ND	9.6	1.1
Butylbenzylphthalate	ND	9.6	0.97
3,3'-Dichlorobenzidine	ND	19	1.0
bis(2-Ethylhexyl)phthalate	2.9 J	9.6	1.8
Di-n-octylphthalate	ND	9.6	1.8

Surrogate	%REC	Limits
2-Fluorophenol	70	38-120
Phenol-d5	78	38-120
2,4,6-Tribromophenol	76	46-120
Nitrobenzene-d5	73	51-120
2-Fluorobiphenyl	67	54-120
Terphenyl-d14	76	21-120

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150417B280A	Batch#:	222409
Lab ID:	266161-012	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.8	1.4
Phenol	ND	9.8	1.0
bis(2-Chloroethyl)ether	ND	9.8	1.2
2-Chlorophenol	ND	9.8	0.80
1,3-Dichlorobenzene	ND	9.8	1.0
1,4-Dichlorobenzene	ND	9.8	1.0
Benzyl alcohol	ND	9.8	1.1
1,2-Dichlorobenzene	ND	9.8	2.0
2-Methylphenol	ND	9.8	2.1
bis(2-Chloroisopropyl) ether	ND	9.8	1.4
4-Methylphenol	ND	9.8	1.7
N-Nitroso-di-n-propylamine	ND	9.8	1.2
Hexachloroethane	ND	9.8	1.1
Nitrobenzene	ND	9.8	1.2
Isophorone	ND	9.8	1.3
2-Nitrophenol	ND	20	2.6
2,4-Dimethylphenol	ND	9.8	2.4
Benzoic acid	ND	49	15
bis(2-Chloroethoxy)methane	ND	9.8	1.1
2,4-Dichlorophenol	ND	9.8	2.1
1,2,4-Trichlorobenzene	ND	9.8	2.2
4-Chloroaniline	ND	9.8	2.0
Hexachlorobutadiene	ND	9.8	2.3
4-Chloro-3-methylphenol	ND	9.8	1.0
Hexachlorocyclopentadiene	ND	20	0.66
2,4,6-Trichlorophenol	ND	9.8	0.90
2,4,5-Trichlorophenol	ND	9.8	0.83
2-Chloronaphthalene	ND	9.8	1.8
2-Nitroaniline	ND	20	1.2
Dimethylphthalate	ND	9.8	2.0
2,6-Dinitrotoluene	ND	9.8	1.7
3-Nitroaniline	ND	20	1.9
2,4-Dinitrophenol	ND	20	2.5
4-Nitrophenol	ND	20	1.7
Dibenzofuran	ND	9.8	1.8
2,4-Dinitrotoluene	ND	9.8	2.0

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150417B280A	Batch#:	222409
Lab ID:	266161-012	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.8	1.0
4-Chlorophenyl-phenylether	ND	9.8	1.6
4-Nitroaniline	ND	20	2.4
2,3,4,6-Tetrachlorophenol	ND	9.8	2.1
4,6-Dinitro-2-methylphenol	ND	20	1.2
N-Nitrosodiphenylamine	ND	9.8	1.6
Azobenzene	ND	9.8	1.1
4-Bromophenyl-phenylether	ND	9.8	2.0
Hexachlorobenzene	ND	9.8	1.9
Pentachlorophenol	ND	20	1.9
Carbazole	ND	9.8	2.3
Di-n-butylphthalate	ND	9.8	1.2
Butylbenzylphthalate	ND	9.8	0.99
3,3'-Dichlorobenzidine	ND	20	1.0
bis(2-Ethylhexyl)phthalate	ND	9.8	1.8
Di-n-octylphthalate	ND	9.8	1.8

Surrogate	%REC	Limits
2-Fluorophenol	71	38-120
Phenol-d5	79	38-120
2,4,6-Tribromophenol	78	46-120
Nitrobenzene-d5	74	51-120
2-Fluorobiphenyl	68	54-120
Terphenyl-d14	78	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150417CTP	Batch#:	222409
Lab ID:	266161-025	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.3	1.4
Phenol	ND	9.3	0.95
bis(2-Chloroethyl)ether	ND	9.3	1.1
2-Chlorophenol	ND	9.3	0.76
1,3-Dichlorobenzene	ND	9.3	0.96
1,4-Dichlorobenzene	ND	9.3	0.99
Benzyl alcohol	ND	9.3	1.0
1,2-Dichlorobenzene	ND	9.3	2.0
2-Methylphenol	ND	9.3	2.0
bis(2-Chloroisopropyl) ether	ND	9.3	1.4
4-Methylphenol	ND	9.3	1.6
N-Nitroso-di-n-propylamine	ND	9.3	1.1
Hexachloroethane	ND	9.3	1.0
Nitrobenzene	ND	9.3	1.1
Isophorone	ND	9.3	1.2
2-Nitrophenol	ND	19	2.4
2,4-Dimethylphenol	ND	9.3	2.3
Benzoic acid	ND	47	15
bis(2-Chloroethoxy)methane	ND	9.3	1.0
2,4-Dichlorophenol	ND	9.3	2.0
1,2,4-Trichlorobenzene	ND	9.3	2.1
4-Chloroaniline	ND	9.3	1.9
Hexachlorobutadiene	ND	9.3	2.2
4-Chloro-3-methylphenol	ND	9.3	0.98
Hexachlorocyclopentadiene	ND	19	0.63
2,4,6-Trichlorophenol	ND	9.3	0.86
2,4,5-Trichlorophenol	ND	9.3	0.79
2-Chloronaphthalene	ND	9.3	1.7
2-Nitroaniline	ND	19	1.1
Dimethylphthalate	ND	9.3	1.9
2,6-Dinitrotoluene	ND	9.3	1.7
3-Nitroaniline	ND	19	1.8
2,4-Dinitrophenol	ND	19	2.4
4-Nitrophenol	ND	19	1.7
Dibenzofuran	ND	9.3	1.7
2,4-Dinitrotoluene	ND	9.3	1.9

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150417CTP	Batch#:	222409
Lab ID:	266161-025	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.3	0.95
4-Chlorophenyl-phenylether	ND	9.3	1.5
4-Nitroaniline	ND	19	2.2
2,3,4,6-Tetrachlorophenol	ND	9.3	2.0
4,6-Dinitro-2-methylphenol	ND	19	1.1
N-Nitrosodiphenylamine	ND	9.3	1.6
Azobenzene	ND	9.3	1.1
4-Bromophenyl-phenylether	ND	9.3	1.9
Hexachlorobenzene	ND	9.3	1.9
Pentachlorophenol	ND	19	1.8
Carbazole	ND	9.3	2.2
Di-n-butylphthalate	ND	9.3	1.1
Butylbenzylphthalate	ND	9.3	0.94
3,3'-Dichlorobenzidine	ND	19	0.98
bis(2-Ethylhexyl)phthalate	ND	9.3	1.7
Di-n-octylphthalate	ND	9.3	1.7

Surrogate	%REC	Limits
2-Fluorophenol	73	38-120
Phenol-d5	80	38-120
2,4,6-Tribromophenol	81	46-120
Nitrobenzene-d5	76	51-120
2-Fluorobiphenyl	71	54-120
Terphenyl-d14	80	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150417ER	Batch#:	222409
Lab ID:	266161-026	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.3	1.4
Phenol	ND	9.3	0.95
bis(2-Chloroethyl)ether	ND	9.3	1.1
2-Chlorophenol	ND	9.3	0.76
1,3-Dichlorobenzene	ND	9.3	0.96
1,4-Dichlorobenzene	ND	9.3	0.99
Benzyl alcohol	ND	9.3	1.0
1,2-Dichlorobenzene	ND	9.3	2.0
2-Methylphenol	ND	9.3	2.0
bis(2-Chloroisopropyl) ether	ND	9.3	1.4
4-Methylphenol	ND	9.3	1.6
N-Nitroso-di-n-propylamine	ND	9.3	1.1
Hexachloroethane	ND	9.3	1.0
Nitrobenzene	ND	9.3	1.1
Isophorone	ND	9.3	1.2
2-Nitrophenol	ND	19	2.4
2,4-Dimethylphenol	ND	9.3	2.3
Benzoic acid	ND	47	15
bis(2-Chloroethoxy)methane	ND	9.3	1.0
2,4-Dichlorophenol	ND	9.3	2.0
1,2,4-Trichlorobenzene	ND	9.3	2.1
4-Chloroaniline	ND	9.3	1.9
Hexachlorobutadiene	ND	9.3	2.2
4-Chloro-3-methylphenol	ND	9.3	0.98
Hexachlorocyclopentadiene	ND	19	0.63
2,4,6-Trichlorophenol	ND	9.3	0.86
2,4,5-Trichlorophenol	ND	9.3	0.79
2-Chloronaphthalene	ND	9.3	1.7
2-Nitroaniline	ND	19	1.1
Dimethylphthalate	ND	9.3	1.9
2,6-Dinitrotoluene	ND	9.3	1.7
3-Nitroaniline	ND	19	1.8
2,4-Dinitrophenol	ND	19	2.4
4-Nitrophenol	ND	19	1.7
Dibenzofuran	ND	9.3	1.7
2,4-Dinitrotoluene	ND	9.3	1.9

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150417ER	Batch#:	222409
Lab ID:	266161-026	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
Diethylphthalate	ND	9.3	0.95
4-Chlorophenyl-phenylether	ND	9.3	1.5
4-Nitroaniline	ND	19	2.2
2,3,4,6-Tetrachlorophenol	ND	9.3	2.0
4,6-Dinitro-2-methylphenol	ND	19	1.1
N-Nitrosodiphenylamine	ND	9.3	1.6
Azobenzene	ND	9.3	1.1
4-Bromophenyl-phenylether	ND	9.3	1.9
Hexachlorobenzene	ND	9.3	1.9
Pentachlorophenol	ND	19	1.8
Carbazole	ND	9.3	2.2
Di-n-butylphthalate	ND	9.3	1.1
Butylbenzylphthalate	ND	9.3	0.94
3,3'-Dichlorobenzidine	ND	19	0.98
bis(2-Ethylhexyl)phthalate	ND	9.3	1.7
Di-n-octylphthalate	ND	9.3	1.7

Surrogate	%REC	Limits
2-Fluorophenol	73	38-120
Phenol-d5	75	38-120
2,4,6-Tribromophenol	87	46-120
Nitrobenzene-d5	84	51-120
2-Fluorobiphenyl	77	54-120
Terphenyl-d14	69	21-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784902	Batch#:	222409
Matrix:	Water	Prepared:	04/20/15
Units:	ug/L	Analyzed:	04/21/15

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	10	1.5
Phenol	ND	10	1.0
bis(2-Chloroethyl)ether	ND	10	1.2
2-Chlorophenol	ND	10	0.82
1,3-Dichlorobenzene	ND	10	1.0
1,4-Dichlorobenzene	ND	10	1.1
Benzyl alcohol	ND	10	1.1
1,2-Dichlorobenzene	ND	10	2.1
2-Methylphenol	ND	10	2.2
bis(2-Chloroisopropyl) ether	ND	10	1.4
4-Methylphenol	ND	10	1.7
N-Nitroso-di-n-propylamine	ND	10	1.2
Hexachloroethane	ND	10	1.1
Nitrobenzene	ND	10	1.2
Isophorone	ND	10	1.3
2-Nitrophenol	ND	20	2.6
2,4-Dimethylphenol	ND	10	2.5
Benzoic acid	ND	50	16
bis(2-Chloroethoxy)methane	ND	10	1.1
2,4-Dichlorophenol	ND	10	2.1
1,2,4-Trichlorobenzene	ND	10	2.2
4-Chloroaniline	ND	10	2.1
Hexachlorobutadiene	ND	10	2.4
4-Chloro-3-methylphenol	ND	10	1.0
Hexachlorocyclopentadiene	ND	20	0.68
2,4,6-Trichlorophenol	ND	10	0.92
2,4,5-Trichlorophenol	ND	10	0.85
2-Chloronaphthalene	ND	10	1.8
2-Nitroaniline	ND	20	1.2
Dimethylphthalate	ND	10	2.0
2,6-Dinitrotoluene	ND	10	1.8
3-Nitroaniline	ND	20	1.9
2,4-Dinitrophenol	ND	20	2.6
4-Nitrophenol	ND	20	1.8
Dibenzofuran	ND	10	1.9

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784902	Batch#:	222409
Matrix:	Water	Prepared:	04/20/15
Units:	ug/L	Analyzed:	04/21/15

Analyte	Result	RL	MDL
2,4-Dinitrotoluene	ND	10	2.1
Diethylphthalate	ND	10	1.0
4-Chlorophenyl-phenylether	ND	10	1.6
4-Nitroaniline	ND	20	2.4
2,3,4,6-Tetrachlorophenol	ND	10	2.1
4,6-Dinitro-2-methylphenol	ND	20	1.2
N-Nitrosodiphenylamine	ND	10	1.7
Azobenzene	ND	10	1.2
4-Bromophenyl-phenylether	ND	10	2.0
Hexachlorobenzene	ND	10	2.0
Pentachlorophenol	ND	20	1.9
Carbazole	ND	10	2.3
Di-n-butylphthalate	ND	10	1.2
Butylbenzylphthalate	ND	10	1.0
3,3'-Dichlorobenzidine	ND	20	1.0
bis(2-Ethylhexyl)phthalate	6.5 J	10	1.8
Di-n-octylphthalate	ND	10	1.8

Surrogate	%REC	Limits
2-Fluorophenol	82	38-120
Phenol-d5	91	38-120
2,4,6-Tribromophenol	83	46-120
Nitrobenzene-d5	87	51-120
2-Fluorobiphenyl	79	54-120
Terphenyl-d14	89	21-120

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC784903	Batch#:	222409
Matrix:	Water	Prepared:	04/20/15
Units:	ug/L	Analyzed:	04/21/15

Analyte	Spiked	Result	%REC	Limits
N-Nitrosodimethylamine	80.00	68.55	86	45-120
Phenol	80.00	66.14	83	46-120
bis(2-Chloroethyl)ether	80.00	67.00	84	59-120
2-Chlorophenol	80.00	62.64	78	48-120
1,3-Dichlorobenzene	80.00	50.31	63	50-120
1,4-Dichlorobenzene	80.00	52.45	66	52-120
Benzyl alcohol	80.00	71.62	90	64-120
1,2-Dichlorobenzene	80.00	52.55	66	53-120
2-Methylphenol	80.00	68.37	85	40-120
bis(2-Chloroisopropyl) ether	80.00	66.55	83	43-120
4-Methylphenol	80.00	72.05	90	46-120
N-Nitroso-di-n-propylamine	80.00	66.33	83	46-120
Hexachloroethane	80.00	50.40	63	42-120
Nitrobenzene	80.00	69.04	86	63-120
Isophorone	80.00	52.63	66	62-120
2-Nitrophenol	80.00	60.69	76	43-122
2,4-Dimethylphenol	80.00	44.52	56	47-120
Benzoic acid	120.0	54.61	46	20-120
bis(2-Chloroethoxy)methane	30.00	19.78	66	62-120
2,4-Dichlorophenol	80.00	59.08	74	50-120
1,2,4-Trichlorobenzene	80.00	51.97	65	53-120
4-Chloroaniline	80.00	28.86	36 *	39-120
Hexachlorobutadiene	80.00	50.48	63	42-120
4-Chloro-3-methylphenol	80.00	52.44	66	40-120
Hexachlorocyclopentadiene	80.00	16.39	20	13-120
2,4,6-Trichlorophenol	80.00	67.82	85	49-120
2,4,5-Trichlorophenol	80.00	67.35	84	49-120
2-Chloronaphthalene	30.00	20.79	69	61-120
2-Nitroaniline	80.00	61.36	77	56-120
Dimethylphthalate	80.00	67.49	84	43-120
2,6-Dinitrotoluene	80.00	63.78	80	65-120
3-Nitroaniline	80.00	56.16	70	55-120
2,4-Dinitrophenol	80.00	54.67	68	45-120
4-Nitrophenol	80.00	81.20	102	40-120
Dibenzofuran	30.00	24.11	80	65-120
2,4-Dinitrotoluene	80.00	69.61	87	64-120
Diethylphthalate	30.00	25.53	85	45-120
4-Chlorophenyl-phenylether	30.00	24.55	82	64-120

*= Value outside of QC limits; see narrative

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC784903	Batch#:	222409
Matrix:	Water	Prepared:	04/20/15
Units:	ug/L	Analyzed:	04/21/15

Analyte	Spiked	Result	%REC	Limits
4-Nitroaniline	80.00	43.00	54	50-120
2,3,4,6-Tetrachlorophenol	80.00	66.58	83	42-126
4,6-Dinitro-2-methylphenol	80.00	59.49	74	45-131
N-Nitrosodiphenylamine	30.00	16.64	55	54-120
Azobenzene	30.00	24.01	80	55-120
4-Bromophenyl-phenylether	30.00	21.05	70	63-120
Hexachlorobenzene	80.00	65.42	82	59-120
Pentachlorophenol	80.00	62.94	79	47-120
Carbazole	80.00	53.90	67	50-120
Di-n-butylphthalate	30.00	24.61	82	56-120
Butylbenzylphthalate	30.00	23.51	78	51-120
3,3'-Dichlorobenzidine	80.00	28.10	35	30-120
bis(2-Ethylhexyl)phthalate	30.00	36.06	120	58-126
Di-n-octylphthalate	30.00	25.71	86	54-120

Surrogate	%REC	Limits
2-Fluorophenol	69	38-120
Phenol-d5	80	38-120
2,4,6-Tribromophenol	88	46-120
Nitrobenzene-d5	74	51-120
2-Fluorobiphenyl	68	54-120
Terphenyl-d14	72	21-120

*= Value outside of QC limits; see narrative

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150415CCC2	Batch#:	222409
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/22/15

Type: MS Lab ID: QC784904

Analyte	MSS Result	Spiked	Result	%REC	Limits
N-Nitrosodimethylamine	<1.382	74.77	61.66	82	49-120
Phenol	<0.9598	74.77	60.52	81	55-120
bis(2-Chloroethyl)ether	<1.145	74.77	58.61	78	60-120
2-Chlorophenol	<0.7713	74.77	55.48	74	57-120
1,3-Dichlorobenzene	<0.9703	74.77	48.67	65	53-120
1,4-Dichlorobenzene	<0.9948	74.77	50.37	67	51-120
Benzyl alcohol	<1.042	74.77	65.03	87	66-120
1,2-Dichlorobenzene	<1.973	74.77	50.33	67	56-120
2-Methylphenol	<2.037	74.77	60.99	82	55-120
bis(2-Chloroisopropyl) ether	<1.363	74.77	59.33	79	48-120
4-Methylphenol	<1.609	74.77	64.94	87	56-120
N-Nitroso-di-n-propylamine	<1.133	74.77	60.40	81	57-120
Hexachloroethane	<1.039	74.77	49.55	66	45-120
Nitrobenzene	<1.158	74.77	61.52	82	68-120
Isophorone	<1.230	74.77	49.83	67	64-120
2-Nitrophenol	<2.458	74.77	54.69	73	52-120
2,4-Dimethylphenol	<2.347	74.77	44.19	59	50-120
Benzoic acid	<14.83	112.1	79.82	71	37-132
bis(2-Chloroethoxy)methane	<1.026	28.04	18.43	66	64-120
2,4-Dichlorophenol	<2.002	74.77	54.75	73	60-120
1,2,4-Trichlorobenzene	<2.115	74.77	49.65	66	62-120
4-Chloroaniline	<1.934	74.77	38.95	52	28-120
Hexachlorobutadiene	<2.255	74.77	48.73	65	53-120
4-Chloro-3-methylphenol	<0.9883	74.77	49.13	66	62-120
Hexachlorocyclopentadiene	<0.6386	74.77	15.85	21	1-120
2,4,6-Trichlorophenol	<0.8640	74.77	61.31	82	53-120
2,4,5-Trichlorophenol	<0.8000	74.77	60.83	81	53-120
2-Chloronaphthalene	<1.724	28.04	19.85	71	62-120
2-Nitroaniline	<1.122	74.77	61.08	82	44-120
Dimethylphthalate	<1.887	74.77	62.32	83	64-120
2,6-Dinitrotoluene	<1.667	74.77	57.13	76	64-120
3-Nitroaniline	<1.818	74.77	52.83	71	36-120

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150415CCC2	Batch#:	222409
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/22/15

Analyte	MSS Result	Spiked	Result	%REC	Limits
2,4-Dinitrophenol	<2.443	74.77	58.15	78	29-128
4-Nitrophenol	<1.674	74.77	75.62	101	61-120
Dibenzofuran	<1.764	28.04	21.92	78	57-120
2,4-Dinitrotoluene	<1.968	74.77	63.03	84	58-120
Diethylphthalate	<0.9589	28.04	23.04	82	66-120
4-Chlorophenyl-phenylether	<1.523	28.04	22.06	79	61-120
4-Nitroaniline	<2.268	74.77	48.22	64	32-120
2,3,4,6-Tetrachlorophenol	<2.022	74.77	62.52	84	65-121
4,6-Dinitro-2-methylphenol	<1.111	74.77	56.38	75	33-127
N-Nitrosodiphenylamine	<1.587	28.04	15.35	55	42-120
Azobenzene	<1.087	28.04	21.65	77	61-120
4-Bromophenyl-phenylether	<1.891	28.04	19.00	68	65-120
Hexachlorobenzene	<1.870	74.77	58.05	78	60-120
Pentachlorophenol	<1.819	74.77	60.45	81	56-122
Carbazole	<2.173	74.77	59.44	79	59-120
Di-n-butylphthalate	<1.126	28.04	22.03	79	63-120
Butylbenzylphthalate	<0.9527	28.04	20.97	75	58-120
3,3'-Dichlorobenzidine	<0.9869	74.77	19.74	26	1-120
bis(2-Ethylhexyl)phthalate	11.21	28.04	27.65	59	54-120
Di-n-octylphthalate	<1.718	28.04	23.23	83	48-122

Surrogate	%REC	Limits
2-Fluorophenol	66	38-120
Phenol-d5	76	38-120
2,4,6-Tribromophenol	85	46-120
Nitrobenzene-d5	69	51-120
2-Fluorobiphenyl	64	54-120
Terphenyl-d14	58	21-120

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150415CCC2	Batch#:	222409
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/22/15

Type: MSD Lab ID: QC784905

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
N-Nitrosodimethylamine	75.47	68.60	91	49-120	10	35
Phenol	75.47	67.51	89	55-120	10	31
bis(2-Chloroethyl)ether	75.47	66.30	88	60-120	11	31
2-Chlorophenol	75.47	63.05	84	57-120	12	31
1,3-Dichlorobenzene	75.47	55.66	74	53-120	12	51
1,4-Dichlorobenzene	75.47	57.46	76	51-120	12	45
Benzyl alcohol	75.47	72.73	96	66-120	10	29
1,2-Dichlorobenzene	75.47	58.31	77	56-120	14	42
2-Methylphenol	75.47	66.45	88	55-120	8	31
bis(2-Chloroisopropyl) ether	75.47	66.72	88	48-120	11	31
4-Methylphenol	75.47	72.64	96	56-120	10	64
N-Nitroso-di-n-propylamine	75.47	65.73	87	57-120	8	28
Hexachloroethane	75.47	56.03	74	45-120	11	43
Nitrobenzene	75.47	69.07	92	68-120	11	28
Isophorone	75.47	53.90	71	64-120	7	31
2-Nitrophenol	75.47	60.96	81	52-120	10	62
2,4-Dimethylphenol	75.47	45.83	61	50-120	3	61
Benzoic acid	113.2	86.89	77	37-132	8	72
bis(2-Chloroethoxy)methane	28.30	20.38	72	64-120	9	29
2,4-Dichlorophenol	75.47	61.79	82	60-120	11	27
1,2,4-Trichlorobenzene	75.47	55.94	74	62-120	11	29
4-Chloroaniline	75.47	38.18	51	28-120	3	57
Hexachlorobutadiene	75.47	54.49	72	53-120	10	36
4-Chloro-3-methylphenol	75.47	54.10	72	62-120	9	28
Hexachlorocyclopentadiene	75.47	15.27	20	1-120	5	73
2,4,6-Trichlorophenol	75.47	67.44	89	53-120	9	56
2,4,5-Trichlorophenol	75.47	68.03	90	53-120	10	54
2-Chloronaphthalene	28.30	21.72	77	62-120	8	34
2-Nitroaniline	75.47	65.98	87	44-120	7	33
Dimethylphthalate	75.47	67.17	89	64-120	7	56
2,6-Dinitrotoluene	75.47	63.39	84	64-120	9	40
3-Nitroaniline	75.47	57.70	76	36-120	8	50

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C
Field ID:	20150415CCC2	Batch#:	222409
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/22/15

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
2,4-Dinitrophenol	75.47	63.38	84	29-128	8	45
4-Nitrophenol	75.47	80.61	107	61-120	5	55
Dibenzofuran	28.30	23.82	84	57-120	7	33
2,4-Dinitrotoluene	75.47	67.59	90	58-120	6	43
Diethylphthalate	28.30	24.73	87	66-120	6	30
4-Chlorophenyl-phenylether	28.30	24.25	86	61-120	8	58
4-Nitroaniline	75.47	50.21	67	32-120	3	34
2,3,4,6-Tetrachlorophenol	75.47	68.75	91	65-121	9	37
4,6-Dinitro-2-methylphenol	75.47	62.91	83	33-127	10	65
N-Nitrosodiphenylamine	28.30	17.98	64	42-120	15	55
Azobenzene	28.30	24.09	85	61-120	10	33
4-Bromophenyl-phenylether	28.30	21.46	76	65-120	11	47
Hexachlorobenzene	75.47	65.17	86	60-120	11	29
Pentachlorophenol	75.47	67.81	90	56-122	11	58
Carbazole	75.47	66.48	88	59-120	10	26
Di-n-butylphthalate	28.30	24.35	86	63-120	9	28
Butylbenzylphthalate	28.30	22.89	81	58-120	8	30
3,3'-Dichlorobenzidine	75.47	19.98	26	1-120	0	54
bis(2-Ethylhexyl)phthalate	28.30	25.81	52 *	54-120	8	52
Di-n-octylphthalate	28.30	25.24	89	48-122	7	33

Surrogate	%REC	Limits
2-Fluorophenol	75	38-120
Phenol-d5	85	38-120
2,4,6-Tribromophenol	92	46-120
Nitrobenzene-d5	76	51-120
2-Fluorobiphenyl	70	54-120
Terphenyl-d14	60	21-120

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

CURTIS & TOMPKINS DFTPP TUNE FOR 266161 MSBNA Water
EPA 8270C

Inst : MSBNA09 Run Name : DFTPP IDF : 1.0
Seqnum : 585053925006 File : rb606 Time : 06-FEB-2015 13:30

Standards: S26170

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	185035	37.05	
68	< 2% of mass 69	0	0.00	
69		189077	100.00	
70	< 2% of mass 69	969	0.51	
127	40% - 60% of mass 198	222400	44.53	
197	< 1% of mass 198	0	0.00	
198		499477	100.00	
199	5% - 9% of mass 198	32802	6.57	
275	10% - 30% of mass 198	144805	28.99	
365	> 1% of mass 198	14227	2.85	
441	Present, < mass 443	70312	79.48	
442	> 40% and < 100% of mass 198	468480	93.79	
443	17% - 23% of mass 442	88464	18.88	

Analyst: KMH Date: 02/06/15 Reviewer: LW Date: 02/11/15

PEM Report

File Name : G:\msbna09\020615\RB606.D
 Date Acquired : 6 Feb 2015 1:30 pm
 Sample Name : TUN,S26170
 Misc. Info : DFTPP
 Calib. Title : MSBNA09 BNA DFTPP/PEM
 Inst. Name : MSBNA09
 AcquisitionMeth: DFTPP09.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.820	5.07	858800
Benzidine	0.705	6.94	4670113
4,4'-DDT		7.96	2623321
4,4'-DDE		7.17	3146
4,4'-DDD		7.59	36229
% Breakdown: 4,4'-DDT	LIMIT <=20%	1%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.8	PASS
	8270D <=2	2	PASS
Tailing: Benzidine	8270C <3.0	0.7	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 266161 MSBNA Water
EPA 8270C

Inst : MSBNA09 Run Name : DFTPP IDF : 1.0
Seqnum : 585160700002 File : rd102 Time : 21-APR-2015 15:35

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	174522	43.00	
68	< 2% of mass 69	0	0.00	
69		186304	100.00	
70	< 2% of mass 69	1074	0.58	
127	40% - 60% of mass 198	204650	50.42	
197	< 1% of mass 198	0	0.00	
198		405866	100.00	
199	5% - 9% of mass 198	27482	6.77	
275	10% - 30% of mass 198	118424	29.18	
365	> 1% of mass 198	14686	3.62	
441	Present, < mass 443	59157	84.57	
442	> 40% and < 100% of mass 198	369130	90.95	
443	17% - 23% of mass 442	69949	18.95	

Analyst: NPM Date: 04/21/15 Reviewer: LW Date: 04/23/15

PEM Report

File Name : G:\msbna09\042115\RDL02.D
 Date Acquired : 21 Apr 2015 3:35 pm
 Sample Name : TUN,S26814
 Misc. Info : DFTPP
 Calib. Title : MSBNA09 BNA DFTPP/PEM
 Inst. Name : MSBNA09
 AcquisitionMeth: DFTPP09.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.717	4.89	539977
Benzidine	1.088	6.75	2894625
4,4'-DDT		7.77	2442714
4,4'-DDE		6.98	2606
4,4'-DDD		7.40	40878
<hr/>			
% Breakdown: 4,4'-DDT	LIMIT <=20%	2%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.7	PASS
	8270D <=2	2	PASS
Tailing: Benzidine	8270C <3.0	1.1	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS DFTPP TUNE FOR 266161 MSBNA Water
EPA 8270C

Inst : MSBNA09 Run Name : DFTPP IDF : 1.0
Seqnum : 585161912002 File : rdm02 Time : 22-APR-2015 10:58

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	185577	43.40	
68	< 2% of mass 69	0	0.00	
69		198421	100.00	
70	< 2% of mass 69	1057	0.53	
127	40% - 60% of mass 198	214976	50.28	
197	< 1% of mass 198	0	0.00	
198		427562	100.00	
199	5% - 9% of mass 198	28933	6.77	
275	10% - 30% of mass 198	124237	29.06	
365	> 1% of mass 198	14798	3.46	
441	Present, < mass 443	63306	84.60	
442	> 40% and < 100% of mass 198	397952	93.07	
443	17% - 23% of mass 442	74829	18.80	

Analyst: KMH Date: 04/22/15 Reviewer: LW Date: 04/23/15

PEM Report

File Name : G:\msbna09\042215\RDM02.D
 Date Acquired : 22 Apr 2015 10:58 am
 Sample Name : TUN,S26814
 Misc. Info : DFTPP
 Calib. Title : MSBNA09 BNA DFTPP/PEM
 Inst. Name : MSBNA09
 AcquisitionMeth: DFTPP09.M

Compound Name	Tailing Factor	RT	Area
Pentachlorophenol	1.746	4.88	571128
Benzidine	1.058	6.73	3437840
4,4'-DDT		7.75	2086162
4,4'-DDE		6.97	3339
4,4'-DDD		7.38	72390
% Breakdown: 4,4'-DDT	LIMIT <=20%	4%	PASS
Tailing: Pentachlorophenol	8270C <5.0	1.7	PASS
	8270D <=2	2	PASS
Tailing: Benzidine	8270C <3.0	1.1	PASS
	8270D <=2	1	PASS

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 MSBNA Water: EPA 8270C

Inst : MSBNA09 Name : 6PTBNA9
 Calnum : 585053925002 Date : 06-FEB-2015 13:54
 Units : ug/mL

Level File	Seqnum	Sample ID	Analyzed	StdS
L1	rb607	585053925007	ICAL 06-FEB-2015 13:54	S26474
L2	rb608	585053925008	ICAL 06-FEB-2015 14:23	S26475
L3	rb609	585053925009	ICAL 06-FEB-2015 14:54	S26476
L4	rb610	585053925010	ICAL 06-FEB-2015 15:24	S26477
L5	rb611	585053925011	ICAL 06-FEB-2015 15:54	S26478
L6	rb612	585053925012	ICAL 06-FEB-2015 16:25	S26479
L7	rb613	585053925013	ICAL 06-FEB-2015 16:55	S26480
L8	rb614	585053925014	ICAL 06-FEB-2015 17:25	S26481
L9	rb615	585053925015	ICAL 06-FEB-2015 17:55	S26482

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type X	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
N-Nitrosodimethylamine		0.5659	0.6116	0.6205	0.6286	0.6165	0.6221	0.6278	0.6212	AVRG R	1.62796			0.6143	3	15	0.05	0.99	
Phenol		1.4111	1.4798	1.5477	1.5174	1.4851	1.4738	1.4783	1.5165	AVRG R	0.67172			1.4887	3	15	0.05	0.99	
bis(2-Chloroethyl) ether		1.2224m	1.2259	1.2231	1.2056	1.1703	1.0945	1.0593	1.0449	AVRG R	0.86524			1.1557	7	15	0.05	0.99	
2-Chlorophenol		1.3556	1.3872	1.4133	1.4070	1.3865	1.3515	1.3110	1.2874	AVRG R	0.73398			1.3624	3	15	0.05	0.99	
1,3-Dichlorobenzene		1.5566m	1.5980m	1.5935m	1.6103m	1.5676m	1.5883m	1.5384m	1.5180m	AVRG R	0.63640			1.5713	2	15	0.05	0.99	
1,4-Dichlorobenzene		1.6026m	1.6319m	1.6366m	1.6292m	1.6035m	1.5714m	1.5573m	1.5129m	AVRG R	0.62768			1.5932	3	15	0.05	0.99	
Benzyl alcohol		0.7279	0.7142	0.6467	0.6583	0.7199	0.8953	0.9243		AVRG R	1.32410			0.7552	15	15	0.05	0.99	
1,2-Dichlorobenzene		1.4752	1.4769	1.5022	1.4833	1.4783	1.4373	1.4027	1.3756	AVRG R	0.68778			1.4539	3	15	0.05	0.99	
2-Methylphenol		1.0301	1.0146	0.9852	0.9268	0.9138	0.9505	0.9709	1.0118	AVRG R	1.02515			0.9755	4	15	0.05	0.99	
bis(2-Chloroisopropyl) ether		1.4729	1.4521	1.4219	1.3811	1.3006	1.2032	1.2018	1.2389	AVRG R	0.74959			1.3341	8	15	0.05	0.99	
4-Methylphenol		1.4193	1.3496	1.2843	1.2882	1.3471	1.5711	1.6132	1.6609	AVRG R	0.69362			1.4417	11	15	0.05	0.99	
N-Nitroso-di-n-propylamine		0.5627	0.5699	0.7300	0.8113	0.8431	0.9198	0.9327		LINR R	7.20285			0.7671	0.998	15	0.050	0.99	
Hexachloroethane		0.5640	0.5678	0.5803	0.5809	0.5731	0.5720	0.5563	0.5520	AVRG R	1.75965			0.5683	2	15	0.05	0.99	
Nitrobenzene		0.3422	0.3499	0.3659	0.3603	0.3514	0.3513	0.3492	0.3540	AVRG R	2.83253			0.3530	2	15	0.05	0.99	
Isophorone		0.6196	0.7268	0.8465	0.9041	0.9278	0.8666	0.8196	0.7906	AVRG R	1.23047			0.8127	12	15	0.05	0.99	
2-Nitrophenol			0.1907	0.1932	0.1963	0.2077	0.2229	0.2199	0.2111	AVRG R	4.85517			0.2060	6	15	0.05	0.99	
2,4-Dimethylphenol		0.3284	0.3174	0.3623	0.3974	0.4363	0.4350	0.4187	0.3969	AVRG R	2.58688			0.3866	12	15	0.05	0.99	
bis(2-Chloroethoxy)methane			0.2959	0.3779	0.4411	0.5049	0.4934	0.4699	0.4540	LINR R	2.14414			0.4339	0.988	15	0.05	0.99	
Benzoic acid		0.1770	0.2231	0.2762	0.2924	0.3126	0.2889	0.2776	0.2669	QUAD A	-26.711		-0.00271	0.2644	0.996	15	0.05	0.99	
2,4-Dichlorophenol		0.3053	0.3029	0.3213	0.3405	0.3659	0.3622	0.3496	0.3312	AVRG R	2.98630			0.3349	7	15	0.05	0.99	
1,2,4-Trichlorobenzene		0.3580	0.3726	0.3901	0.3895	0.3735	0.3296	0.3072	0.2980	AVRG R	2.83846			0.3523	10	15	0.05	0.99	
4-Chloroaniline		0.3291	0.4187	0.5288	0.5819	0.6124	0.5611	0.5281		LINR R	1.65587			0.5086	0.986	15	0.05	0.99	
Hexachlorobutadiene		0.2076	0.2157	0.2290	0.2316	0.2244	0.1879	0.1726	0.1648	AVRG R	4.89735			0.2042	13	15	0.05	0.99	
4-Chloro-3-methylphenol		0.3333	0.3749	0.4223	0.4515	0.4562	0.4194	0.3950	0.3697	AVRG R	2.48278			0.4028	11	15	0.05	0.99	

Analyte	L1	L2	L3	L4	L5	L6	L7	L8	L9	Type X	a0	a1	a2	Avg	r ² %RSD	Max %RSD	Min RF	Min r ²	Flg
Hexachlorocyclopentadiene		0.3093	0.3377	0.3579	0.3938	0.4329	0.4266	0.4282	AVRG R		2.60571		0.3838	13	15	0.050	0.99		
2,4,6-Trichlorophenol		0.3949	0.4484	0.4477	0.4427	0.4467	0.4323	0.4394	AVRG R		2.29884		0.4350	4	15	0.05	0.99		
2,4,5-Trichlorophenol		0.4514	0.4861	0.4797	0.4820	0.4668	0.4580	0.4429	AVRG R		2.14876		0.4654	3	15	0.05	0.99		
2-Chloronaphthalene		1.2042	1.2820	1.2930	1.2812	1.3034	1.2668	1.2760	AVRG R		0.78594		0.3700	3	15	0.05	0.99		
2-Nitroaniline		0.3516	0.3683	0.3692	0.3681	0.3768	0.3770	0.3791	AVRG R		2.70249		1.4964	2	15	0.05	0.99		
Dimethylphthalate		1.4754	1.5400	1.5251	1.5196	1.5090	1.4576	1.4698	AVRG R		0.66827		0.3593	2	15	0.05	0.99		
2,6-Dinitrotoluene		0.3458	0.3494	0.3656	0.3679	0.3659	0.3550	0.3616	AVRG R		2.78300		0.3693	4	15	0.05	0.99		
3-Nitroaniline		0.3439	0.3599m	0.3615m	0.3729	0.3847	0.3792	0.3834	AVRG R		2.70748		0.2246	1.000	15	0.050	0.99		
2,4-Dinitrophenol		0.1610	0.2011	0.2111	0.2323	0.2517	0.2535	0.2617	LINR R	9.11394	3.54789		0.1687	5	15	0.050	0.99		
4-Nitrophenol		0.1498	0.1656	0.1677	0.1731	0.1765	0.1721	0.1759	AVRG R		5.92915		1.8442	5	15	0.05	0.99		
Dibenzofuran		1.8872	1.9384	1.9237	1.8957	1.8188	1.7312	1.7147	AVRG R		0.54223		0.4732	4	15	0.05	0.99		
2,4-Dinitrotoluene	0.4591	0.4764	0.4959	0.4919	0.4871	0.4730	0.4500	0.4521	AVRG R		2.11337		0.4078	4	15	0.05	0.99		
2,3,4,6-Tetrachlorophenol	0.3750	0.3902	0.4140	0.4172	0.4224	0.4209	0.4104	0.4123	AVRG R		2.45213		1.4948	1	15	0.05	0.99		
Diethylphthalate		1.4621	1.5161	1.5133	1.5120	1.5065	1.4732	1.4803	AVRG R		0.66900		0.7828	2	15	0.05	0.99		
4-Chlorophenyl-phenylether		0.7748	0.8073	0.7987	0.7990	0.7810	0.7617	0.7571	AVRG R		1.27746		0.3752	6	15	0.05	0.99		
4-Nitroaniline		0.3357	0.3595	0.3664	0.3751	0.3909	0.4096	0.3893	AVRG R		2.66528		0.1644	5	15	0.05	0.99		
4,6-Dinitro-2-methylphenol		0.1469	0.1597	0.1636	0.1685	0.1723	0.1723	0.1673	AVRG R		6.08377		0.5976	2	15	0.05	0.99		
N-Nitrosodiphenylamine		0.5838	0.6103	0.6090	0.6018	0.6018	0.5895	0.5872	AVRG R		1.67323		0.6931	1	15	0.05	0.99		
Azobenzene		0.6738	0.6902	0.6928	0.7003	0.6949	0.7052	0.6943	AVRG R		1.44289		0.2489	2	15	0.05	0.99		
4-Bromophenyl-phenylether		0.2408	0.2494	0.2510	0.2517	0.2499	0.2512	0.2483	AVRG R		4.01784		0.2534	2	15	0.05	0.99		
Hexachlorobenzene	0.2466	0.2488	0.2562	0.2584	0.2611	0.2591	0.2499	0.2469	AVRG R		3.94661		0.1756	7	15	0.05	0.99		
Pentachlorophenol		0.1501	0.1689	0.1758	0.1797	0.1840	0.1841	0.1864	AVRG R		5.69567		0.9844	7	15	0.05	0.99		
Carbazole	0.8250	0.9665	1.0369	1.0453	1.0328	0.9958	1.0174	0.9552	AVRG R		1.01589		1.2737	3	15	0.05	0.99		
Di-n-butylphthalate		1.2287	1.2754	1.2908	1.3024	1.2939	1.3104	1.2145	AVRG R		0.78511		0.5013	3	15	0.05	0.99		
Butylbenzylphthalate		0.4725	0.4972	0.5068	0.5109	0.5080	0.5072	0.5064	AVRG R		1.99485		0.4545	5	15	0.05	0.99		
3,3'-Dichlorobenzidine		0.4076	0.4480	0.4599	0.4715	0.4736	0.4627	0.4581	AVRG R		2.20030		0.7038	3	15	0.05	0.99		
bis(2-Ethylhexyl)phthalate		0.6929	0.7158	0.7251	0.7297	0.7086	0.6833	0.6714	AVRG R		1.42082		1.2834	4	15	0.05	0.99		
Di-n-octylphthalate		1.1652	1.2657	1.2934	1.3036	1.3260	1.3088	1.3210	AVRG R		0.77919		1.2757	9	15	0.05	0.99		
2-Fluorophenol	1.0257	1.1469	1.2395	1.2931	1.3290	1.3239	1.3693	1.3701	AVRG R		0.78391		1.4728	3	15	0.05	0.99		
Phenol-d5	1.4054	1.4686	1.5137	1.5267	1.5119	1.4763	1.4408	1.4399	AVRG R		0.67898		0.3914	4	15	0.05	0.99		
Nitrobenzene-d5	0.3586	0.3765	0.3968	0.4130	0.4093	0.3957	0.3896	0.3912	AVRG R		2.55493		1.6889	4	15	0.05	0.99		
2-Fluorobiphenyl	1.5294	1.6444	1.6680	1.7518	1.7527	1.7449	1.7349	1.6847	AVRG R		0.59208		0.2228	11	15	0.05	0.99		
2,4,6-Tribromophenol	0.1717	0.1986	0.2123	0.2254	0.2281	0.2361	0.2412	0.2433	AVRG R		4.48788		1.0430	3	15	0.05	0.99		
Terphenyl-d14	0.9757	1.0232	1.0322	1.0686	1.0835	1.0838	1.0509	1.0262	AVRG R		0.95877								

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
N-Nitrosodimethylamine			10.000	-8	20.000	0	32.000	1	40.000	2	50.000	0	80.000	1	100.000	2	120.000	1
Phenol			10.000	-5	20.000	-1	32.000	4	40.000	2	50.000	0	80.000	-1	100.000	-1	120.000	2
bis(2-Chloroethyl) ether			10.000	6	20.000	6	32.000	6	40.000	4	50.000	1	80.000	-5	100.000	-8	120.000	-10
2-Chlorophenol			10.000	-1	20.000	2	32.000	4	40.000	3	50.000	2	80.000	-1	100.000	-4	120.000	-6
1,3-Dichlorobenzene			10.000	-1	20.000	2	32.000	1	40.000	2	50.000	0	80.000	1	100.000	-2	120.000	-3
1,4-Dichlorobenzene			10.000	1	20.000	2	32.000	3	40.000	2	50.000	1	80.000	-1	100.000	-2	120.000	-5
Benzyl alcohol			10.000	-4	20.000	-5	32.000	-14	40.000	-13	50.000	-5	80.000	19	100.000	22		
1,2-Dichlorobenzene			10.000	1	20.000	2	32.000	3	40.000	2	50.000	2	80.000	-1	100.000	-4	120.000	-5
2-Methylphenol			10.000	6	20.000	4	32.000	1	40.000	-5	50.000	-6	80.000	-3	100.000	0	120.000	4
bis(2-Chloroisopropyl) ether			10.000	10	20.000	9	32.000	7	40.000	4	50.000	-3	80.000	-10	100.000	-10	120.000	-7
4-Methylphenol			10.000	-2	20.000	-6	32.000	-11	40.000	-11	50.000	-7	80.000	9	100.000	12	120.000	15
N-Nitroso-di-n-propylamine			10.000	28	20.000	-7	32.000	-5	40.000	-1	50.000	-1	80.000	1	100.000	0		
Hexachloroethane			10.000	-1	20.000	0	32.000	2	40.000	2	50.000	1	80.000	1	100.000	-2	120.000	-3
Nitrobenzene			10.000	-3	20.000	-1	32.000	4	40.000	2	50.000	0	80.000	0	100.000	-1	120.000	0
Isophorone			10.000	-24	20.000	-11	32.000	4	40.000	11	50.000	14	80.000	7	100.000	1	120.000	-3
2-Nitrophenol					20.000	-7	32.000	-6	40.000	-5	50.000	1	80.000	8	100.000	7	120.000	2
2,4-Dimethylphenol			10.000	-15	20.000	-18	32.000	-6	40.000	3	50.000	13	80.000	13	100.000	8	120.000	3
bis(2-Chloroethoxy)methane					10.000	-18	16.000	-9	20.000	1	25.000	12	40.000	6	50.000	0	60.000	-4
Benzoic acid			50.000	2	60.000	-1	80.000	-2	90.000	-1	100.000	5	120.000	0	130.000	-1	140.000	0
2,4-Dichlorophenol			10.000	-9	20.000	-10	32.000	-4	40.000	2	50.000	9	80.000	8	100.000	4	120.000	-1
1,2,4-Trichlorobenzene			10.000	2	20.000	6	32.000	11	40.000	11	50.000	6	80.000	-6	100.000	-13	120.000	-15
4-Chloroaniline			10.000	-25	20.000	-17	32.000	-1	40.000	8	50.000	12	80.000	2	100.000	-4		
Hexachlorobutadiene			10.000	2	20.000	6	32.000	12	40.000	13	50.000	10	80.000	10	100.000	-8	120.000	-19
4-Chloro-3-methylphenol			10.000	-17	20.000	-7	32.000	5	40.000	12	50.000	13	80.000	4	100.000	-2	120.000	-8
Hexachlorocyclopentadiene					20.000	-19	32.000	-12	40.000	-7	50.000	3	80.000	13	100.000	11	120.000	12
2,4,6-Trichlorophenol			10.000	-9	20.000	-2	32.000	3	40.000	3	50.000	2	80.000	2	100.000	-1	120.000	1
2,4,5-Trichlorophenol			10.000	-3	20.000	-2	32.000	4	40.000	3	50.000	4	80.000	0	100.000	-2	120.000	-5
2-Chloronaphthalene					10.000	-5	16.000	1	20.000	2	25.000	1	40.000	2	50.000	0	60.000	0
2-Nitroaniline					20.000	-5	32.000	0	40.000	0	50.000	-1	80.000	2	100.000	2	120.000	2
Dimethylphthalate			10.000	-1	20.000	-1	32.000	3	40.000	2	50.000	2	80.000	2	100.000	-3	120.000	-2
2,6-Dinitrotoluene			10.000	-4	20.000	-3	32.000	1	40.000	2	50.000	2	80.000	2	100.000	-1	120.000	1
3-Nitroaniline					20.000	-7	32.000	-3	40.000	-2	50.000	1	80.000	4	100.000	3	120.000	4
2,4-Dinitrophenol					20.000	3	32.000	0	40.000	-2	50.000	1	80.000	1	100.000	-1	120.000	0
4-Nitrophenol					20.000	-11	32.000	-2	40.000	-1	50.000	3	80.000	5	100.000	2	120.000	4
Dibenzofuran					10.000	2	16.000	5	20.000	4	25.000	3	40.000	-1	50.000	-6	60.000	-7
2,4-Dinitrotoluene			10.000	-3	20.000	1	32.000	5	40.000	4	50.000	3	80.000	0	100.000	-5	120.000	-4
2,3,4,6-Tetrachlorophenol			10.000	-8	20.000	-4	32.000	2	40.000	2	50.000	4	80.000	3	100.000	1	120.000	1
Diethylphthalate					10.000	-2	16.000	1	20.000	1	25.000	1	40.000	1	50.000	-1	60.000	-1
4-Chlorophenyl-phenylether					10.000	-1	16.000	3	20.000	2	25.000	2	40.000	0	50.000	-3	60.000	-3
4-Nitroaniline					20.000	-11	32.000	-4	40.000	-2	50.000	0	80.000	4	100.000	9	120.000	4
4,6-Dinitro-2-methylphenol					20.000	-11	32.000	-3	40.000	0	50.000	3	80.000	5	100.000	5	120.000	2
N-Nitrosodiphenylamine					10.000	-2	16.000	2	20.000	2	25.000	1	40.000	1	50.000	-1	60.000	-2

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D	L8	%D	L9	%D
Azobenzene					10.000	-3	16.000	0	20.000	0	25.000	1	40.000	0	50.000	2	60.000	0
4-Bromophenyl-phenylether					10.000	-3	16.000	0	20.000	0	25.000	1	40.000	0	50.000	1	60.000	0
Hexachlorobenzene			10.000	-3	20.000	-2	32.000	1	40.000	2	50.000	3	80.000	2	100.000	-1	120.000	-3
Pentachlorophenol					20.000	-15	32.000	-4	40.000	0	50.000	2	80.000	5	100.000	5	120.000	6
Carbazole			10.000	-16	20.000	-2	32.000	5	40.000	6	50.000	5	80.000	1	100.000	3	120.000	-3
Di-n-butylphthalate					10.000	-4	16.000	0	20.000	1	25.000	2	40.000	2	50.000	3	60.000	-5
Butylbenzylphthalate					10.000	-6	16.000	-1	20.000	1	25.000	2	40.000	1	50.000	1	60.000	1
3,3'-Dichlorobenzidine					20.000	-10	32.000	-1	40.000	1	50.000	4	80.000	4	100.000	2	120.000	1
bis(2-Ethylhexyl)phthalate					10.000	-2	16.000	2	20.000	3	25.000	4	40.000	1	50.000	-3	60.000	-5
Di-n-octylphthalate					10.000	-9	16.000	-1	20.000	1	25.000	2	40.000	3	50.000	2	60.000	3
2-Fluorophenol	2.0000	-20	5.0000	-10	10.000	-3	16.000	1	20.000	4	25.000	4	40.000	7	50.000	7	60.000	8
Phenol-d5	2.0000	-5	5.0000	0	10.000	3	16.000	4	20.000	3	25.000	0	40.000	-2	50.000	-2	60.000	0
Nitrobenzene-d5	2.0000	-8	5.0000	-4	10.000	1	16.000	6	20.000	5	25.000	1	40.000	0	50.000	0	60.000	0
2-Fluorobiphenyl	2.0000	-9	5.0000	-3	10.000	-1	16.000	4	20.000	4	25.000	3	40.000	3	50.000	0	60.000	0
2,4,6-Tribromophenol	2.0000	-23	5.0000	-11	10.000	-5	16.000	1	20.000	2	25.000	6	40.000	8	50.000	9	60.000	12
Terphenyl-d14	2.0000	-6	5.0000	-2	10.000	-1	16.000	2	20.000	4	25.000	4	40.000	1	50.000	0	60.000	-2

NPM 02/11/15 [Aniline]: Picked or reassigned peak in all levels.

NPM 02/11/15 [bis(2-Chloroethyl)ether]: Corrected automatically drawn baseline in multiple levels.

NPM 02/11/15 [3-Nitroaniline]: Corrected automatically drawn baseline in multiple levels.

NPM 02/11/15 [1,3-Dichlorobenzene]: Picked or reassigned peak in all levels.

NPM 02/11/15 [1,4-Dichlorobenzene]: Picked or reassigned peak in all levels.

KMH 03/11/15 : cut 1 loop to improve Di-n-octylphthalate

Analyst: NPM

Date: 02/11/15 Reviewer: LW

Date: 02/12/15

mmanual integration

X=A: Instrument response = a0 + amount * a1 + amount^2 * a2 (invert equation before quantitating); X=R: Instrument amount = a0 + response * a1 + response^2 * a2; AVRQ=Average response factor; LINR=Linear regression; QUAD=Quadratic regression

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 MSBNA Water
EPA 8270C

Inst : MSBNA09
Calnum : 585053925002

Name : 6PTBNA9
Cal Date : 06-FEB-2015

ICV 585053925016 (rb616 06-FEB-2015) stds: S25418

Analyte	Spiked	Quant	Units	%D	Max	Flags
N-Nitrosodimethylamine	40.00	37.54	ug/mL	-6	30	
Phenol	40.00	37.44	ug/mL	-6	20	
bis(2-Chloroethyl)ether	40.00	38.40	ug/mL	-4	30	
2-Chlorophenol	40.00	37.66	ug/mL	-6	30	
1,3-Dichlorobenzene	40.00	37.29	ug/mL	-7	30	
1,4-Dichlorobenzene	40.00	37.07	ug/mL	-7	20	
Benzyl alcohol	40.00	34.99	ug/mL	-13	30	
1,2-Dichlorobenzene	40.00	38.23	ug/mL	-4	30	
2-Methylphenol	40.00	36.34	ug/mL	-9	30	
bis(2-Chloroisopropyl) ether	40.00	38.47	ug/mL	-4	30	
4-Methylphenol	40.00	30.83	ug/mL	-23	30	!v-
N-Nitroso-di-n-propylamine	40.00	37.36	ug/mL	-7	30	
Hexachloroethane	40.00	37.20	ug/mL	-7	30	
Nitrobenzene	40.00	36.37	ug/mL	-9	30	
Isophorone	40.00	38.24	ug/mL	-4	30	
2-Nitrophenol	40.00	36.04	ug/mL	-10	20	
2,4-Dimethylphenol	40.00	38.84	ug/mL	-3	30	
bis(2-Chloroethoxy)methane	40.00	37.72	ug/mL	-6	30	
Benzoic acid	100.0	92.55	ug/mL	-7	40	
2,4-Dichlorophenol	40.00	38.96	ug/mL	-3	20	
1,2,4-Trichlorobenzene	40.00	39.47	ug/mL	-1	30	
4-Chloroaniline	40.00	39.85	ug/mL	0	30	
Hexachlorobutadiene	40.00	41.11	ug/mL	3	20	
4-Chloro-3-methylphenol	40.00	39.27	ug/mL	-2	20	
Hexachlorocyclopentadiene	40.00	30.64	ug/mL	-23	40	!v-
2,4,6-Trichlorophenol	40.00	32.88	ug/mL	-18	20	
2,4,5-Trichlorophenol	40.00	33.40	ug/mL	-17	30	
2-Chloronaphthalene	40.00	33.02	ug/mL	-17	30	
2-Nitroaniline	40.00	32.33	ug/mL	-19	30	
Dimethylphthalate	40.00	33.35	ug/mL	-17	30	
2,6-Dinitrotoluene	40.00	34.01	ug/mL	-15	30	
3-Nitroaniline	40.00	33.47	ug/mL	-16	30	m
2,4-Dinitrophenol	40.00	34.46	ug/mL	-14	40	
4-Nitrophenol	40.00	32.45	ug/mL	-19	40	
Dibenzofuran	40.00	33.82	ug/mL	-15	30	
2,4-Dinitrotoluene	40.00	34.15	ug/mL	-15	30	
2,3,4,6-Tetrachlorophenol	40.00	34.87	ug/mL	-13	30	
Diethylphthalate	40.00	32.08	ug/mL	-20	30	
4-Chlorophenyl-phenylether	40.00	32.42	ug/mL	-19	40	
4-Nitroaniline	40.00	32.97	ug/mL	-18	30	
4,6-Dinitro-2-methylphenol	40.00	36.12	ug/mL	-10	30	
N-Nitrosodiphenylamine	40.00	42.07	ug/mL	5	20	
Azobenzene	40.00	36.56	ug/mL	-9	30	
4-Bromophenyl-phenylether	40.00	36.69	ug/mL	-8	30	
Hexachlorobenzene	40.00	37.17	ug/mL	-7	30	
Pentachlorophenol	40.00	34.37	ug/mL	-14	20	
Carbazole	40.00	39.37	ug/mL	-2	30	
Di-n-butylphthalate	40.00	36.61	ug/mL	-8	30	
Butylbenzylphthalate	40.00	35.89	ug/mL	-10	30	

Analyte	Spiked	Quant	Units	%D	Max	Flags
3,3'-Dichlorobenzidine	60.00	53.07	ug/mL	-12	40	
bis(2-Ethylhexyl)phthalate	40.00	34.88	ug/mL	-13	30	
Di-n-octylphthalate	40.00	35.91	ug/mL	-10	20	

Analyst: NPM Date: 02/11/15 Reviewer: LW Date: 02/12/15

!=warning -=low bias m=manual integration v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 MSBNA Water
EPA 8270C

Inst : MSBNA09
Seqnum : 585160700003
Cal : 585053925002
Standards: S26477

File : rdl03
Caldate : 06-FEB-2015

IDF : 1.0
Time : 21-APR-2015 15:50

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
N-Nitrosodimethylamine	0.6143	0.7496	32.00	39.05	ug/mL	22	30	0.0500	!c+
Phenol	1.4887	1.5831	32.00	34.03	ug/mL	6	20	0.0500	
bis(2-Chloroethyl)ether	1.1557	1.2535	32.00	34.71	ug/mL	8	30	0.0500	
2-Chlorophenol	1.3624	1.3459	32.00	31.61	ug/mL	-1	30	0.0500	
1,3-Dichlorobenzene	1.5713	1.5507	32.00	31.58	ug/mL	-1	30	0.0500	
1,4-Dichlorobenzene	1.5932	1.6132	32.00	32.40	ug/mL	1	20	0.0500	
Benzyl alcohol	0.7552	0.8527	32.00	36.13	ug/mL	13	30	0.0500	
1,2-Dichlorobenzene	1.4539	1.4520	32.00	31.96	ug/mL	0	30	0.0500	
2-Methylphenol	0.9755	1.0666	32.00	34.99	ug/mL	9	30	0.0500	
bis(2-Chloroisopropyl) ether	1.3341	1.5175	32.00	36.40	ug/mL	14	30	0.0500	
4-Methylphenol	1.4417	1.6654	32.00	36.97	ug/mL	16	30	0.0500	!v-
N-Nitroso-di-n-propylamine	0.7671	0.9803	32.00	38.54	ug/mL	20	30	0.0500	
Hexachloroethane	0.5683	0.6122	32.00	34.47	ug/mL	8	30	0.0500	
Nitrobenzene	0.3530	0.3659	32.00	33.17	ug/mL	4	30	0.0500	
Isophorone	0.8127	0.6658	32.00	26.21	ug/mL	-18	30	0.0500	
2-Nitrophenol	0.2060	0.1870	32.00	29.05	ug/mL	-9	20	0.0500	
2,4-Dimethylphenol	0.3866	0.3232	32.00	26.75	ug/mL	-16	30	0.0500	
bis(2-Chloroethoxy)methane	0.4339	0.3687	16.00	14.18	ug/mL	-11	30	0.0500	
Benzoic acid	0.2644	0.1688	80.00	59.52	ug/mL	-26	40	0.0500	!c-
2,4-Dichlorophenol	0.3349	0.3015	32.00	28.81	ug/mL	-10	20	0.0500	
1,2,4-Trichlorobenzene	0.3523	0.3356	32.00	30.49	ug/mL	-5	30	0.0500	
4-Chloroaniline	0.5086	0.4058	32.00	24.75	ug/mL	-23	30	0.0500	!c-
Hexachlorobutadiene	0.2042	0.2102	32.00	32.94	ug/mL	3	20	0.0500	
4-Chloro-3-methylphenol	0.4028	0.3255	32.00	25.86	ug/mL	-19	20	0.0500	
Hexachlorocyclopentadiene	0.3838	0.3512	32.00	29.29	ug/mL	-8	40	0.0500	!v-
2,4,6-Trichlorophenol	0.4350	0.4310	32.00	31.70	ug/mL	-1	20	0.0500	
2,4,5-Trichlorophenol	0.4654	0.4671	32.00	32.12	ug/mL	0	30	0.0500	
2-Chloronaphthalene	1.2724	1.1815	16.00	14.86	ug/mL	-7	30	0.0500	
2-Nitroaniline	0.3700	0.3923	32.00	33.92	ug/mL	6	30	0.0500	
Dimethylphthalate	1.4964	1.5016	32.00	32.11	ug/mL	0	30	0.0500	
2,6-Dinitrotoluene	0.3593	0.3414	32.00	30.41	ug/mL	-5	30	0.0500	
3-Nitroaniline	0.3693	0.3263	32.00	28.27	ug/mL	-12	30	0.0500	
2,4-Dinitrophenol	0.2246	0.1765	32.00	29.16	ug/mL	-9	40	0.0500	
4-Nitrophenol	0.1687	0.2056	32.00	39.02	ug/mL	22	40	0.0500	!c+
Dibenzofuran	1.8442	1.7925	16.00	15.55	ug/mL	-3	30	0.0500	
2,4-Dinitrotoluene	0.4732	0.4955	32.00	33.51	ug/mL	5	30	0.0500	
2,3,4,6-Tetrachlorophenol	0.4078	0.3892	32.00	30.54	ug/mL	-5	30	0.0500	
Diethylphthalate	1.4948	1.5298	16.00	16.37	ug/mL	2	30	0.0500	
4-Chlorophenyl-phenylether	0.7828	0.7857	16.00	16.06	ug/mL	0	40	0.0500	
4-Nitroaniline	0.3752	0.2985	32.00	25.46	ug/mL	-20	30	0.0500	
4,6-Dinitro-2-methylphenol	0.1644	0.1408	32.00	27.41	ug/mL	-14	30	0.0500	
N-Nitrosodiphenylamine	0.5976	0.5359	16.00	14.35	ug/mL	-10	20	0.0500	
Azobenzene	0.6931	0.7294	16.00	16.84	ug/mL	5	30	0.0500	
4-Bromophenyl-phenylether	0.2489	0.2185	16.00	14.04	ug/mL	-12	30	0.0500	
Hexachlorobenzene	0.2534	0.2519	32.00	31.81	ug/mL	-1	30	0.0500	
Pentachlorophenol	0.1756	0.1569	32.00	28.60	ug/mL	-11	20	0.0500	
Carbazole	0.9844	0.9889	32.00	32.15	ug/mL	0	30	0.0500	
Di-n-butylphthalate	1.2737	1.3147	16.00	16.51	ug/mL	3	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Butylbenzylphthalate	0.5013	0.5168	16.00	16.49	ug/mL	3	30	0.0500	
3,3'-Dichlorobenzidine	0.4545	0.4173	32.00	29.38	ug/mL	-8	40	0.0500	
bis(2-Ethylhexyl)phthalate	0.7038	0.8210	16.00	18.66	ug/mL	17	30	0.0500	
Di-n-octylphthalate	1.2834	1.5453	16.00	19.27	ug/mL	20	20	0.0500	
2-Fluorophenol	1.2757	1.1646	16.00	14.61	ug/mL	-9	30	0.0500	
Phenol-d5	1.4728	1.5204	16.00	16.52	ug/mL	3	30	0.0500	
Nitrobenzene-d5	0.3914	0.3998	16.00	16.34	ug/mL	2	30	0.0500	
2-Fluorobiphenyl	1.6889	1.6040	16.00	15.20	ug/mL	-5	30	0.0500	
2,4,6-Tribromophenol	0.2228	0.2214	16.00	15.90	ug/mL	-1	30	0.0500	
Terphenyl-d14	1.0430	1.0407	16.00	15.96	ug/mL	0	30	0.0500	

NPM 04/21/15 [Aniline]: Picked or reassigned peak.

Analyst: NPM Date: 04/21/15 Reviewer: LW Date: 04/23/15

!=warning +=high bias -=low bias c=CCV v=ICV

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 MSBNA Water
EPA 8270C

Inst : MSBNA09
Seqnum : 585161912003
Cal : 585053925002
Standards: S26478

File : rdm03
Caldate : 06-FEB-2015

IDF : 1.0
Time : 22-APR-2015 11:15

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
N-Nitrosodimethylamine	0.6143	0.7793	40.00	50.75	ug/mL	27	30	0.0500	!c+
Phenol	1.4887	1.5958	40.00	42.88	ug/mL	7	20	0.0500	
bis(2-Chloroethyl)ether	1.1557	1.2585	40.00	43.56	ug/mL	9	30	0.0500	
2-Chlorophenol	1.3624	1.3777	40.00	40.45	ug/mL	1	30	0.0500	
1,3-Dichlorobenzene	1.5713	1.5828	40.00	40.29	ug/mL	1	30	0.0500	
1,4-Dichlorobenzene	1.5932	1.6394	40.00	41.16	ug/mL	3	20	0.0500	
Benzyl alcohol	0.7552	0.8377	40.00	44.37	ug/mL	11	30	0.0500	
1,2-Dichlorobenzene	1.4539	1.4846	40.00	40.84	ug/mL	2	30	0.0500	
2-Methylphenol	0.9755	1.0563	40.00	43.31	ug/mL	8	30	0.0500	
bis(2-Chloroisopropyl) ether	1.3341	1.4862	40.00	44.56	ug/mL	11	30	0.0500	
4-Methylphenol	1.4417	1.6630	40.00	46.14	ug/mL	15	30	0.0500	!v-
N-Nitroso-di-n-propylamine	0.7671	1.0126	40.00	47.67	ug/mL	19	30	0.0500	
Hexachloroethane	0.5683	0.6231	40.00	43.86	ug/mL	10	30	0.0500	
Nitrobenzene	0.3530	0.3806	40.00	43.13	ug/mL	8	30	0.0500	
Isophorone	0.8127	0.7280	40.00	35.83	ug/mL	-10	30	0.0500	
2-Nitrophenol	0.2060	0.1979	40.00	38.43	ug/mL	-4	20	0.0500	
2,4-Dimethylphenol	0.3866	0.3697	40.00	38.25	ug/mL	-4	30	0.0500	
bis(2-Chloroethoxy)methane	0.4339	0.3911	20.00	18.11	ug/mL	-9	30	0.0500	
Benzoic acid	0.2644	0.2196	90.00	72.58	ug/mL	-19	40	0.0500	
2,4-Dichlorophenol	0.3349	0.3199	40.00	38.22	ug/mL	-4	20	0.0500	
1,2,4-Trichlorobenzene	0.3523	0.3484	40.00	39.55	ug/mL	-1	30	0.0500	
4-Chloroaniline	0.5086	0.4421	40.00	33.10	ug/mL	-17	30	0.0500	
Hexachlorobutadiene	0.2042	0.2194	40.00	42.99	ug/mL	7	20	0.0500	
4-Chloro-3-methylphenol	0.4028	0.3517	40.00	34.93	ug/mL	-13	20	0.0500	
Hexachlorocyclopentadiene	0.3838	0.3908	40.00	40.73	ug/mL	2	40	0.0500	!v-
2,4,6-Trichlorophenol	0.4350	0.4639	40.00	42.66	ug/mL	7	20	0.0500	
2,4,5-Trichlorophenol	0.4654	0.4796	40.00	41.23	ug/mL	3	30	0.0500	
2-Chloronaphthalene	1.2724	1.2277	20.00	19.30	ug/mL	-4	30	0.0500	
2-Nitroaniline	0.3700	0.4165	40.00	45.03	ug/mL	13	30	0.0500	
Dimethylphthalate	1.4964	1.7610	40.00	47.07	ug/mL	18	30	0.0500	
2,6-Dinitrotoluene	0.3593	0.3537	40.00	39.38	ug/mL	-2	30	0.0500	
3-Nitroaniline	0.3693	0.3520	40.00	38.13	ug/mL	-5	30	0.0500	
2,4-Dinitrophenol	0.2246	0.1738	40.00	33.78	ug/mL	-16	40	0.0500	
4-Nitrophenol	0.1687	0.2245	40.00	53.23	ug/mL	33	40	0.0500	!c+
Dibenzofuran	1.8442	1.8862	20.00	20.46	ug/mL	2	30	0.0500	
2,4-Dinitrotoluene	0.4732	0.5163	40.00	43.65	ug/mL	9	30	0.0500	
2,3,4,6-Tetrachlorophenol	0.4078	0.4205	40.00	41.25	ug/mL	3	30	0.0500	
Diethylphthalate	1.4948	1.6034	20.00	21.45	ug/mL	7	30	0.0500	
4-Chlorophenyl-phenylether	0.7828	0.8348	20.00	21.33	ug/mL	7	40	0.0500	
4-Nitroaniline	0.3752	0.3357	40.00	35.78	ug/mL	-11	30	0.0500	
4,6-Dinitro-2-methylphenol	0.1644	0.1422	40.00	34.61	ug/mL	-13	30	0.0500	
N-Nitrosodiphenylamine	0.5976	0.5413	20.00	18.12	ug/mL	-9	20	0.0500	
Azobenzene	0.6931	0.7312	20.00	21.10	ug/mL	6	30	0.0500	
4-Bromophenyl-phenylether	0.2489	0.2246	20.00	18.05	ug/mL	-10	30	0.0500	
Hexachlorobenzene	0.2534	0.2543	40.00	40.14	ug/mL	0	30	0.0500	
Pentachlorophenol	0.1756	0.1646	40.00	37.50	ug/mL	-6	20	0.0500	
Carbazole	0.9844	1.0252	40.00	41.66	ug/mL	4	30	0.0500	
Di-n-butylphthalate	1.2737	1.3137	20.00	20.63	ug/mL	3	30	0.0500	

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
Butylbenzylphthalate	0.5013	0.4995	20.00	19.93	ug/mL	0	30	0.0500	
3,3'-Dichlorobenzidine	0.4545	0.4455	40.00	39.21	ug/mL	-2	40	0.0500	
bis(2-Ethylhexyl)phthalate	0.7038	0.8009	20.00	22.76	ug/mL	14	30	0.0500	
Di-n-octylphthalate	1.2834	1.4863	20.00	23.16	ug/mL	16	20	0.0500	
2-Fluorophenol	1.2757	1.2045	20.00	18.88	ug/mL	-6	30	0.0500	
Phenol-d5	1.4728	1.5230	20.00	20.68	ug/mL	3	30	0.0500	
Nitrobenzene-d5	0.3914	0.4117	20.00	21.04	ug/mL	5	30	0.0500	
2-Fluorobiphenyl	1.6889	1.6505	20.00	19.54	ug/mL	-2	30	0.0500	
2,4,6-Tribromophenol	0.2228	0.2416	20.00	21.68	ug/mL	8	30	0.0500	
Terphenyl-d14	1.0430	0.9965	20.00	19.11	ug/mL	-4	30	0.0500	

KMH 04/22/15 [Aniline]: Picked or reassigned peak.

Analyst: KMH Date: 04/22/15 Reviewer: LW Date: 04/23/15

!=warning +=high bias -=low bias c=CCV v=ICV

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 565160694

Date : 04/21/15
 Sequence : MSBNA07 zdl

Reference : zdl03
 Analyzed : 04/21/15 15:12

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
	CCV+CCV/BS+CCV/LCS+ICV/BS+ICV/ICV/CCV+ICV/LCS+RCCV+R1CV STD		461479	6.02	1883542	7.51	931244	9.67	1616411	11.51	1490583	14.89	1337807	17.74
	LOWER LIMIT		230740	5.52	941771	7.01	465622	9.17	808206	11.01	745292	14.39	668904	17.24
	UPPER LIMIT		922958	6.52	3767084	8.01	1862488	10.17	3232822	12.01	2981166	15.39	2675614	18.24
003	CCV		461479	6.02	1883542	7.51	931244	9.67	1616411	11.51	1490583	14.89	1337807	17.74
004	BLANK QC784902		377731	6.02	1527763	7.51	733015	9.66	1314841	11.51	1263729	14.88	1245520	17.73

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 585160700

Date : 04/21/15
 Sequence : MSBNA09 rdl

Reference : rdl03
 Analyzed : 04/21/15 15:50

#	Type	Sample ID	DCEZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+R1CV STD	694684	5.64	2769917	7.11	1525554	9.25	3071489	11.08	3216872	14.38	2470981	16.85
	LOWER LIMIT		347342	5.14	1384959	6.61	762777	8.75	1535745	10.58	1608436	13.88	1235491	16.35
	UPPER LIMIT		1389368	6.14	5539834	7.61	3051108	9.75	6142978	11.58	6433744	14.88	4941962	17.35
003	CCV		694684	5.64	2769917	7.11	1525554	9.25	3071489	11.08	3216872	14.38	2470981	16.85
004	BLANK	QC784902	558907	5.63	2189544	7.10	1189803	9.25	2322807	11.08	2579262	14.37	2154243	16.84
005	LCS	QC784903	594856	5.64	2341843	7.11	1322117	9.25	2769389	11.08	3018117	14.38	2515904	16.85
006	MSS	266161-007	575156	5.63	2226209	7.10	1246300	9.25	2488245	11.08	2705694	14.37	2285221	16.85
007	SAMPLE	266161-009	565871	5.63	2241604	7.10	1233814	9.25	2392743	11.08	2645709	14.37	2280948	16.84
008	SAMPLE	266161-011	584377	5.63	2326748	7.10	1288940	9.25	2520988	11.08	2693941	14.37	2315866	16.84
009	SAMPLE	266161-012	561287	5.63	2195762	7.10	1222829	9.25	2388793	11.08	2567337	14.37	2235139	16.84
010	SAMPLE	266161-025	569347	5.63	2250793	7.10	1242943	9.25	2431735	11.08	2716626	14.37	2337980	16.84
011	SAMPLE	266161-026	543555	5.63	2152684	7.10	1197338	9.25	2309279	11.08	2537052	14.37	2198963	16.84
012	SAMPLE	266150-013	588323	5.63	2292695	7.10	1270048	9.25	2518763	11.08	2629767	14.37	2279575	16.84
013	SAMPLE	266176-001	579598	5.63	2285995	7.10	1268006	9.25	2532262	11.08	2535754	14.37	2105192	16.85
014	SAMPLE	266176-003	552151	5.63	2148365	7.10	1193790	9.25	2383535	11.08	2485378	14.37	2171644	16.84

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 585161912

Date : 04/22/15
 Sequence : MSBNA09 rdm

Reference : rdm03
 Analyzed : 04/22/15 11:15

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT	
			CCV+CCV/BS+CCV/LCS+ICV/BS+ICV/CCV+ICV/LCS+RCCV+RICV STD	599324	5.64	2276070	7.11	1319380	9.25	2770517	11.08	3182213	14.37	2558965	16.84
	LOWER LIMIT			299662	5.14	1138035	6.61	659690	8.75	1385259	10.58	1591107	13.87	1279483	16.34
	UPPER LIMIT			1198648	6.14	4552140	7.61	2638760	9.75	5541034	11.58	6364426	14.87	5117930	17.34
003	CCV			599324	5.64	2276070	7.11	1319380	9.25	2770517	11.08	3182213	14.37	2558965	16.84
004	BLANK		QC785016	587500	5.63	2281198	7.10	1265961	9.25	2483346	11.07	3014550	14.37	2641919	16.83
005	BS		QC785017	564309	5.64	2203585	7.11	1292133	9.25	2725691	11.08	3235868	14.38	2800801	16.85
006	BSD		QC785018	583797	5.64	2230994	7.11	1315952	9.25	2750683	11.08	3209234	14.38	2795678	16.84
007	MS		QC784904	579202	5.64	2235384	7.11	1301794	9.25	2747254	11.08	3221429	14.37	2752676	16.85
008	MSD		QC784905	628651	5.64	2417462	7.11	1404107	9.25	2882497	11.08	3426210	14.38	2945893	16.85
009	SAMPLE		266231-001	555539	5.63	2147307	7.10	1241438	9.25	2510381	11.08	2832297	14.37	2528352	16.83
010	SAMPLE		266177-001	542972	5.63	2129844	7.10	1188551	9.25	2328096	11.08	2672293	14.37	2327652	16.83
011	SAMPLE		266177-002	517184	5.64	1923328	7.10	1195044	9.25	2447358	11.08	2755637	14.37	2506708	16.83
012	SAMPLE		266177-003	472703	5.64	1862782	7.16	1097276	9.25	2156263	11.08	2607988	14.37	2363062	16.83
013	SAMPLE		266177-007	551650	5.63	2139001	7.10	1249062	9.25	2561076	11.08	2797436	14.37	2543740	16.84
014	SAMPLE		266177-010	570985	5.63	2217167	7.10	1270241	9.25	2638065	11.08	2862884	14.37	2527887	16.84
015	SAMPLE		266207-008	609519	5.64	2263827	7.10	1410254	9.25	2901007	11.08	3169475	14.38	2536245	16.85
016	SAMPLE		266210-007	651671	5.63	2505684	7.10	1399180	9.25	2720820	11.08	3199342	14.37	2785551	16.84
017	SAMPLE		266210-008	598924	5.63	2338504	7.10	1298564	9.25	2527015	11.08	2981588	14.37	2574354	16.84
018	SAMPLE		266220-004	563684	5.63	2207984	7.10	1238865	9.25	2455603	11.07	2771201	14.37	2401131	16.83
019	SAMPLE		266150-010	608252	5.63	2321693	7.10	1346935	9.25	2746522	11.08	3094766	14.37	2559026	16.85
020	SAMPLE		266150-011	651005	5.63	2463503	7.10	1456046	9.25	2950593	11.09	2956021	14.39	1643752	16.85
021	SAMPLE		266150-012	615705	5.63	2384769	7.10	1356229	9.25	2790596	11.08	2998655	14.37	2166971	16.85
022	SAMPLE		266150-014	659664	5.63	2562964	7.10	1448876	9.25	2952427	11.08	3214592	14.37	2593496	16.85
023	SAMPLE		266177-003	530492	5.64	2147286	7.12	1142433	9.25	2282258	11.08	2664516	14.37	2030724	16.84

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 565160694

Instrument : MSBNA07 Begun : 04/21/15 14:14
 Method : EPA 8270C SOP Version : bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	zdl01	IB	IB			04/21/15 14:14	1.0		?t
002	zdl02	TUN	DFTPP/PEM			04/21/15 14:53	1.0	1	
003	zdl03	CCV				04/21/15 15:12	1.0	2	
004	zdl04	BLANK	QC784902	Water	222409	04/21/15 17:55	1.0	3	

Standards used: 1=S26814 2=S26477 3=S26428

Flags used: ?t=missing tune

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CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 585053925

Instrument : MSBNA09 Begun : 02/06/15 10:45
 Method : EPA 8270C SOP Version : bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	rb601	IB	IB			02/06/15 10:45	1.0		?t
002	rb602	TUN	DFTPP			02/06/15 11:12	1.0	1	
003	rb603	CCV				02/06/15 11:28	1.0	2	cc+
004	rb604	CCV				02/06/15 12:09	1.0	2	cc+
005	rb605	CCV	RFCHECK			02/06/15 12:45	1.0	3	cc- cc+
006	rb606	TUN	DFTPP			02/06/15 13:30	1.0	1	
007	rb607	ICAL	ICAL			02/06/15 13:54	1.0	4	
008	rb608	ICAL	ICAL			02/06/15 14:23	1.0	5	
009	rb609	ICAL	ICAL			02/06/15 14:54	1.0	3	
010	rb610	ICAL	ICAL			02/06/15 15:24	1.0	6	
011	rb611	ICAL	ICAL			02/06/15 15:54	1.0	2	
012	rb612	ICAL	ICAL			02/06/15 16:25	1.0	7	
013	rb613	ICAL	ICAL			02/06/15 16:55	1.0	8	
014	rb614	ICAL	ICAL			02/06/15 17:25	1.0	9	
015	rb615	ICAL	ICAL			02/06/15 17:55	1.0	10	
016	rb616	ICV	ICV			02/06/15 18:25	1.0	11	

NPM 02/09/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 16.

Standards used: 1=S26170 2=S26478 3=S26476 4=S26474 5=S26475 6=S26477 7=S26479 8=S26480 9=S26481 10=S26482 11=S25418

Flags used: +=high bias -=low bias ?t=missing tune cc=CCV CCC failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 585160700

Instrument : MSBNA09 Begun : 04/21/15 14:20
 Method : EPA 8270C SOP Version : bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	rdl01	IB	IB			04/21/15 14:20	1.0		?t
002	rdl02	TUN	DFTPP			04/21/15 15:35	1.0	1	
003	rdl03	CCV				04/21/15 15:50	1.0	2	
004	rdl04	BLANK	QC784902	Water	222409	04/21/15 16:20	1.0	3	
005	rdl05	LCS	QC784903	Water	222409	04/21/15 16:52	1.0	3	
006	rdl06	MSS	266161-007	Water	222409	04/21/15 17:29	1.0	3	
007	rdl07	SAMPLE	266161-009	Water	222409	04/21/15 18:00	1.0	3	
008	rdl08	SAMPLE	266161-011	Water	222409	04/21/15 18:31	1.0	3	
009	rdl09	SAMPLE	266161-012	Water	222409	04/21/15 19:02	1.0	3	
010	rdl10	SAMPLE	266161-025	Water	222409	04/21/15 19:32	1.0	3	
011	rdl11	SAMPLE	266161-026	Water	222409	04/21/15 20:03	1.0	3	
012	rdl12	SAMPLE	266150-013	Water	222409	04/21/15 20:34	1.0	3	
013	rdl13	SAMPLE	266176-001	Water	222409	04/21/15 21:05	1.0	3	
014	rdl14	SAMPLE	266176-003	Water	222409	04/21/15 21:36	1.0	3	

KMH 04/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 14.

Standards used: 1=S26814 2=S26477 3=S26428

Flags used: ?t=missing tune

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CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 585161912

Instrument : MSBNA09
 Method : EPA 8270C

Begun : 04/22/15 10:32
 SOP Version : bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	rdm01	IB	IB			04/22/15 10:32	1.0		?t
002	rdm02	TUN	DFTPP			04/22/15 10:58	1.0	1	
003	rdm03	CCV				04/22/15 11:15	1.0	2	
004	rdm04	BLANK	QC785016	Water	222443	04/22/15 11:45	1.0	3	
005	rdm05	BS	QC785017	Water	222443	04/22/15 12:16	1.0	3	
006	rdm06	BSD	QC785018	Water	222443	04/22/15 12:46	1.0	3	
007	rdm07	MS	QC784904	Water	222409	04/22/15 13:16	1.0	3	
008	rdm08	MSD	QC784905	Water	222409	04/22/15 13:47	1.0	3	
009	rdm09	SAMPLE	266231-001	Water	222443	04/22/15 14:17	150.0	3	high NT
010	rdm10	SAMPLE	266177-001	Water	222443	04/22/15 14:48	10.0	3	diluted (client history)
011	rdm11	SAMPLE	266177-002	Water	222443	04/22/15 15:19	10.0	3	diluted (client history)
012	rdm12	SAMPLE	266177-003	Water	222443	04/22/15 15:50	10.0	3	diluted (client history), 1:NNSPR=1400
013	rdm13	SAMPLE	266177-007	Water	222443	04/22/15 16:20	10.0	3	diluted (client history)
014	rdm14	SAMPLE	266177-010	Water	222443	04/22/15 16:50	10.0	3	diluted (client history)
015	rdm15	SAMPLE	266207-008	Water	222443	04/22/15 17:22	1.0	3	
016	rdm16	SAMPLE	266210-007	Water	222443	04/22/15 17:52	1.0	3	
017	rdm17	SAMPLE	266210-008	Water	222443	04/22/15 18:23	1.0	3	
018	rdm18	SAMPLE	266220-004	Water	222443	04/22/15 18:54	50.0	3	high NT
019	rdm19	SAMPLE	266150-010	Water	222409	04/22/15 19:24	1.0	3	
020	rdm20	SAMPLE	266150-011	Water	222409	04/22/15 19:55	1.0	3	
021	rdm21	SAMPLE	266150-012	Water	222409	04/22/15 20:26	1.0	3	
022	rdm22	SAMPLE	266150-014	Water	222409	04/22/15 20:57	1.0	3	
023	rdm23	SAMPLE	266177-003	Water	222443	04/22/15 21:29	100.0	3	high NT

KMH 04/23/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 23.

Standards used: 1=S26814 2=S26478 3=S26428

Flags used: ?t=missing tune

SAMPLE PREPARATION SUMMARY

Batch # : 222409
 Started By : KKL
 Method : 3520C
 Spike #1 ID : S26606

Prep Date : 20-APR-2015 14:35
 SOP Version : 8270_3520_rv20
 Spike #2 ID : S26837

Analysis : 8270-1
 Finished By : JCD
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266150-010		Water	1020	1	1	0.0009804	7	.4				8270-1	
266150-011		Water	1040	1	1	0.0009615	7	.4				8270-1	
266150-012		Water	1060	1	1	0.0009434	7	.4				8270-1	
266150-013		Water	1000	1	1	0.001	7	.4				8270-1	
266150-014		Water	1000	1	1	0.001	7	.4				8270-1	
266161-007		Water	1060	1	1	0.0009434	7	.4				8270-1	
266161-009		Water	960	1	1	0.001042	5	.4				8270-1	
266161-011		Water	1040	1	1	0.0009615	7	.4				8270-1	
266161-012		Water	1020	1	1	0.0009804	7	.4				8270-1	
266161-025		Water	1070	1	1	0.0009346	7	.4				8270-1	
266161-026		Water	1070	1	1	0.0009346	5	.4				8270-1	
266176-001		Water	1040	1	1	0.0009615	7	.4				8270-1	
266176-002		Water	1040	1	1	0.0009615	7	.4				8270-1	
266176-003		Water	1020	1	1	0.0009804	7	.4				8270-1	
266176-004		Water	980	1	1	0.00102	5	.4				8270-1	
266176-005		Water	1020	1	1	0.0009804	7	.4				8270-1	
266176-006		Water	1060	1	1	0.0009434	7	.4				8270-1	
266176-007		Water	1020	1	1	0.0009804	7	.4				8270-1	
266176-008		Water	1070	1	1	0.0009346	7	.4				8270-1	
266176-009		Water	1020	1	1	0.0009804	7	.4				8270-1	
QC784902	BLANK	Water	1000	1	1	0.001		.4				8270-1	
QC784903	LCS	Water	1000	1	1	0.001		.4	1			8270-1	
QC784904	MS	Water	1070	1	1	0.0009346	7	.4	1			8270-1	
QC784905	MSD	Water	1060	1	1	0.0009434	7	.4	1			8270-1	

Analyst: NPM

Date: 04/23/15

Reviewer: LW

Date: 04/23/15

LIMS Batch No: 222409
 LIMS Analysis: 8270 - 1
 Date Extracted: 4/20/15

Extraction Method:
 EPA 3520c cont. L/L

LII
 LI
 Da

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Confirmed pH < 2	Comments	Sample
266150 - 010	E	1020	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		266
11	G	1040	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		
12	↓	1060	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		266
13	F	1000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		
14	G	1000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		
266161 - 007	M	1060	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2	MSS	
9	F	960	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		26
11	D	1040	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		261
12	E	1020	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		
25	F	1070	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		
26	↓	1070	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		MB
266176 - 001	E	1040	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		BS
2	↓	1040	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		BSD
3	↓	1020	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		266
4	↓	980	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		266
5	↓	1020	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		
6	D	1060	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		
7	F	1020	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		
8	E	1070	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		
9	↓	1020	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		
MB 00784902	N/A	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> NA	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2		
LCS	3	↓	1000	<input type="checkbox"/> 7 <input checked="" type="checkbox"/> NA	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2	
M3	4	N	1070	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2	
MSD	5	0	1060	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> 1.0	<input checked="" type="checkbox"/> < 2	

MS/MSD not included due to: insufficient volume, or other (reason)

APM/ML/15

0.4 mL of surrogate solution was added to all samples
 1.0 mL of matrix spiking solution was added to all spikes
 pH of all samples adjusted to pH ≤ 2 with H₂SO₄
 Cont. L/L extracted with 450mL of CH₂Cl₂
 Extraction Start Time:
 Extraction End Time:
 pH of all samples adjusted to pH ≥ 11 with 10 N NaOH
 Extraction Start Time:
 Extraction End Time:

Lot# / LIMS # / Time	Date / Initials
3266068	KKL 4/20/15
326837 A	
F3140656	
EM54351	
14 35	
0835	WJ 4/21/15
NA	JCO 4/21/15
↓	
EMXF27F	
70	
✓	

Extracts filtered through baked, CH₂Cl₂-rinsed granular Na₂SO₄
 Concentrated to final volume at temperature (degrees C)
 Relinquished to BNA department

Kristin Low 4/20/15
 Extraction Chemist Date

Continued from Page _____
 Continued on Page _____

Ami Q. Uey 4/21/15
 Reviewed by Date

Exti



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266161

ANALYTICAL REPORT


Semivolatile Organics by GC/MS SIM

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

<u>Sample ID</u>	<u>Lab ID</u>
20150415CCC2	266161-007
20150415ER	266161-009
20150417EPA	266161-011
20150417B280A	266161-012
20150417CTP	266161-025
20150417ER	266161-026

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 05/01/2015

**CASE NARRATIVE
SEMIVOLATILE ORGANICS BY GC/MS SIM (EPA 8270C-SIM)**

Laboratory number: 266161
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/17/15
Samples Received: 04/17/15

This data package contains sample and QC results for six water samples, requested for the above referenced project on 04/17/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Semivolatile Organics by GC/MS SIM (EPA 8270C-SIM):

High surrogate recovery was observed for 2-fluorobiphenyl in the method blank for batch 222401; no target analytes were detected in the sample.

No other analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266161

Chain of Custody Record No. 6878

Project name:	Lab PO#:	Lab:	Field samplers:		MS / MSD		No./Container Types					Analysis Required					Preservative Added								
2015 Grandwater	150AK32	C+T	TIEMI technical contact:	TIEMI project manager:	Sample Location (Pt. ID)	Date	Time	Matrix	40 ml VOA	1 liter Amber	500 ml Poly	Sleeve	Glass Jar	VOA	SVOA	Pest/PCBs	Metals - <i>distilled</i>	TPH Purgeables	TPH Extractables	PAHs	HCL	HVO	None	None	
Project (CTO) number: 1035225323.05	Sara Weadley	Danya Aragon, Karl Han J	Jason Brodersen		4/15/15	0900	water		2					X											
20150415TB						0915			3					X											
20150415CCCT						1000			3					X											
20150415B175W						1045			3					X											
20150415B175S						1155			3					X											
20150415B150						1200			3					X											
20150415B150D						1315			9					X											
20150415CCC2						1530			6					X											
20150415CCC3						1530			3					X											
20150415ER						1435	water		3					X											
20150416GEO						935			3					X											
20150417EPA									3					X											
20150417B280A									3					X											

Relinquished by:	Name (print)	Company Name	Date	Time
Tracy Babin	Mark Duthy	Tetra Tech	4-17-15	12:55
	Tracy Babin	CBT	4-17-15	12:55
Received by:				
Relinquished by:				
Received by:				
Turnaround time/remarks: * Metals were field filtered - STD TAT Cold & heavy				

Fed Ex #: N/A



Tetra Tech EM Inc.
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San Francisco, CA 94105
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266161

Chain of Custody Record No. 6085

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Lab PO#: 15 OAK 32
Lab: C+T

Project name: 2015 Ground water
Project (CTO) number: 1035225323.05

TEMI technical contact: Sara Woodley
TEMI project manager: Jason Broderick

Field samplers: Dupe Argen, Mark Doffy
Field samplers' signatures: *[Signatures]*

Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	No./Container Types									
						40 ml VOA	1 liter Amber	500 ml Poly	Sleeve	Glass Jar	VOA	SVOA	Pest/PCBs	Metals	TPH Purgeables
20150416EERC		4/16/15	0950	water		3	1				X				
20150416EF P289			1040			3					X				
20150416B473			1140			3					X				
20150416FG			1245				1				X				
20150416B158			1400				1				X				
20150416ER			1430			3					X				
20150416S08			1440			3					X				
20150416FB			0900			2					X				
20150416B474		4/14/15	1025	water			1				X				
20150416P211			1020			3	1				X				
20150416NRLF			1235				1				X				
20150416B277			1355			3					X				

Relinquished by:	Received by:	Relinquished by:	Received by:	Relinquished by:	Received by:
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>

Turnaround time/remarks: *field filtered -std. TAF Cold data

Company Name	Date	Time
Tetra Tech	4-17-15	1255
CAT	4-17-15	1255



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266161

Chain of Custody Record No. 6086

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No./Container Types

VOA	X
SVOA	X
Pest/PCBs	X
Metals	X
TPH Purgeables	X
TPH Extractables	X
PAHs	X

Analysis Required

HCl	None
NDOS	None
Preservative Added	None

Lab PO#: 150AK 32	Lab: C T I		
TIEMI technical contact: Sara Woolley	Field samplers: Daym Aragon - Mark Duff		
TIEMI project manager: Jason Brodergen	Field samplers' signatures: <i>[Signature]</i>		
Sample Location (Pt. ID)	MS / MSD		
Sample ID	Date	Time	Matrix
20150417 B480 B480	4/17/15	0910	Water
20150417 B278	↓	1015	↓
20150417 CTP	↓	1145	↓
20150417 ER EPA	↓	1115	↓

40 ml VOA	3	1						
1 liter Amber	3	2	1					
500 ml Poly	3	2	1					
Sieve								
Glass Jar								

Relinquished by: <i>[Signature]</i>	Name (print): Mark Duff	Company Name: Tetra Tech	Date: 4-17-15	Time: 1255
Received by: <i>[Signature]</i>	Tracy Babja	CAI	4-17-15	1255
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: Metals
* Field filtered
- STD TAJ
Cold on lead
Fed Ex #: Hand-delivered

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 266161 Date Received 4/17/15 Number of coolers 3
 Client Tetra Tech Project 2015 Groundwater

Date Opened 4/17 By (print) SL (sign) [Signature]
 Date Logged in 4/17 By (print) SL (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) _____ YES NO
 Shipping info _____

2A. Were custody seals present? YES (circle) on cooler on samples NO
 How many _____ Name _____ Date _____

2B. Were custody seals intact upon arrival? _____ YES NO N/A

3. Were custody papers dry and intact when received? _____ YES NO

4. Were custody papers filled out properly (ink, signed, etc)? _____ YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) _____ YES NO

6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap Foam blocks Bags None
- Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 3.5, 3.7, 3.1

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES NO
 If YES, what time were they transferred to freezer? _____

9. Did all bottles arrive unbroken/unopened? _____ YES NO

10. Are there any missing / extra samples? _____ YES NO

11. Are samples in the appropriate containers for indicated tests? _____ YES NO

12. Are sample labels present, in good condition and complete? _____ YES NO

13. Do the sample labels agree with custody papers? _____ YES NO

14. Was sufficient amount of sample sent for tests requested? _____ YES NO

15. Are the samples appropriately preserved? _____ YES NO N/A

16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A

17. Did you document your preservative check? _____ YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A

21. Was the client contacted concerning this sample delivery? _____ YES NO

If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Curtis & Tompkins Sample Preservation for 266161

Sample	pH: <2	>9	>12	Other
-004a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-005a	X	[]	[]	[]
-006a	X	[]	[]	[]
-007a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	[]	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
g	[]	[]	[]	[]
h	[]	[]	[]	[]
i	[]	[]	[]	[]
j	X	[]	[]	[]
k	X	[]	[]	[]
l	X	[]	[]	[]
m	[]	[]	[]	[]
n	[]	[]	[]	[]
o	[]	[]	[]	[]
p	[]	[]	[]	[]
q	[]	[]	[]	[]
r	[]	[]	[]	[]

Sample	pH: <2	>9	>12	Other
-008a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-009a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
-013a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-016a	X	[]	[]	[]
-017a	X	[]	[]	[]
-018a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]

Sample	pH: <2	>9	>12	Other
-019a	X	[]	[]	[]
-020a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-021a	X	[]	[]	[]
-023a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-025a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
-026a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]

Analyst: SL
 Date: 4/17/15
 Page 1 of 1

Results & QC Summary

Semivolatile Organics by GC/MS SIM

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	20150415CCC2	Batch#:	222401
Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	1.0	0.03
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.02
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.02
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.02
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	61	45-120
2-Fluorobiphenyl	84	46-120
Terphenyl-d14	80	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	20150415ER	Batch#:	222401
Lab ID:	266161-009	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	1.0	0.07
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.03
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.03
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.03
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	83	45-120
2-Fluorobiphenyl	91	46-120
Terphenyl-d14	100	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	20150417EPA	Batch#:	222401
Lab ID:	266161-011	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	1.0	0.07
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.03
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.03
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.03
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.03

Surrogate	%REC	Limits
Nitrobenzene-d5	70	45-120
2-Fluorobiphenyl	80	46-120
Terphenyl-d14	78	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	20150417B280A	Batch#:	222401
Lab ID:	266161-012	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
1,4-Dioxane	0.2 J	1.0	0.03
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.02
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.02
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.02
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	63	45-120
2-Fluorobiphenyl	87	46-120
Terphenyl-d14	84	30-120

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	20150417CTP	Batch#:	222401
Lab ID:	266161-025	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	1.0	0.07
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.03
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.03
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.03
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	86	45-120
2-Fluorobiphenyl	96	46-120
Terphenyl-d14	95	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS SIM

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	20150417ER	Batch#:	222401
Lab ID:	266161-026	Sampled:	04/17/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	0.9	0.07
Naphthalene	ND	0.09	0.02
1-Methylnaphthalene	ND	0.09	0.02
2-Methylnaphthalene	ND	0.09	0.03
Acenaphthylene	ND	0.09	0.02
Acenaphthene	ND	0.09	0.02
Fluorene	ND	0.09	0.02
Phenanthrene	ND	0.09	0.02
Anthracene	ND	0.09	0.03
Fluoranthene	ND	0.09	0.02
Pyrene	ND	0.09	0.02
Benzo(a)anthracene	ND	0.09	0.02
Chrysene	ND	0.09	0.03
Benzo(b)fluoranthene	ND	0.09	0.02
Benzo(k)fluoranthene	ND	0.09	0.02
Benzo(a)pyrene	ND	0.09	0.02
Indeno(1,2,3-cd)pyrene	ND	0.09	0.02
Dibenz(a,h)anthracene	ND	0.09	0.02
Benzo(g,h,i)perylene	ND	0.09	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	67	45-120
2-Fluorobiphenyl	80	46-120
Terphenyl-d14	84	30-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC784869	Batch#:	222401
Matrix:	Water	Prepared:	04/20/15
Units:	ug/L	Analyzed:	04/21/15

Analyte	Result	RL	MDL
1,4-Dioxane	ND	1.0	0.03
Naphthalene	ND	0.1	0.02
1-Methylnaphthalene	ND	0.1	0.02
2-Methylnaphthalene	ND	0.1	0.02
Acenaphthylene	ND	0.1	0.02
Acenaphthene	ND	0.1	0.02
Fluorene	ND	0.1	0.02
Phenanthrene	ND	0.1	0.02
Anthracene	ND	0.1	0.02
Fluoranthene	ND	0.1	0.02
Pyrene	ND	0.1	0.02
Benzo(a)anthracene	ND	0.1	0.02
Chrysene	ND	0.1	0.02
Benzo(b)fluoranthene	ND	0.1	0.02
Benzo(k)fluoranthene	ND	0.1	0.02
Benzo(a)pyrene	ND	0.1	0.02
Indeno(1,2,3-cd)pyrene	ND	0.1	0.02
Dibenz(a,h)anthracene	ND	0.1	0.02
Benzo(g,h,i)perylene	ND	0.1	0.02

Surrogate	%REC	Limits
Nitrobenzene-d5	91	45-120
2-Fluorobiphenyl	121 *	46-120
Terphenyl-d14	114	30-120

*= Value outside of QC limits; see narrative

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Matrix:	Water	Batch#:	222401
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Type: BS Lab ID: QC784870

Analyte	Spiked	Result	%REC	Limits
1,4-Dioxane	3.000	2.595	86	44-120
Naphthalene	1.000	0.8451	85	59-120
1-Methylnaphthalene	1.000	0.9285	93	62-120
2-Methylnaphthalene	1.000	0.9132	91	62-120
Acenaphthylene	1.000	0.9217	92	60-120
Acenaphthene	1.000	0.9166	92	61-120
Fluorene	1.000	0.8394	84	63-120
Phenanthrene	1.000	0.8853	89	60-120
Anthracene	1.000	0.8686	87	58-120
Fluoranthene	1.000	0.8642	86	60-120
Pyrene	1.000	0.9434	94	53-120
Benzo(a)anthracene	1.000	0.8479	85	57-120
Chrysene	1.000	0.7404	74	54-120
Benzo(b)fluoranthene	1.000	0.9115	91	54-120
Benzo(k)fluoranthene	1.000	0.9108	91	50-120
Benzo(a)pyrene	1.000	0.8939	89	53-120
Indeno(1,2,3-cd)pyrene	1.000	0.8805	88	49-120
Dibenz(a,h)anthracene	1.000	0.8548	85	47-120
Benzo(g,h,i)perylene	1.000	0.8447	84	48-120

Surrogate	%REC	Limits
Nitrobenzene-d5	70	45-120
2-Fluorobiphenyl	90	46-120
Terphenyl-d14	88	30-120

RPD= Relative Percent Difference

Batch QC Report
Semivolatile Organics by GC/MS SIM

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Matrix:	Water	Batch#:	222401
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Type: BSD Lab ID: QC784871

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,4-Dioxane	3.000	2.745	91	44-120	6	43
Naphthalene	1.000	0.9009	90	59-120	6	37
1-Methylnaphthalene	1.000	0.9960	100	62-120	7	35
2-Methylnaphthalene	1.000	0.9680	97	62-120	6	37
Acenaphthylene	1.000	0.9896	99	60-120	7	32
Acenaphthene	1.000	0.9814	98	61-120	7	30
Fluorene	1.000	0.9044	90	63-120	7	27
Phenanthrene	1.000	0.9577	96	60-120	8	24
Anthracene	1.000	0.9257	93	58-120	6	25
Fluoranthene	1.000	0.9386	94	60-120	8	25
Pyrene	1.000	1.009	101	53-120	7	27
Benzo(a)anthracene	1.000	0.9207	92	57-120	8	25
Chrysene	1.000	0.7837	78	54-120	6	26
Benzo(b)fluoranthene	1.000	0.9920	99	54-120	8	27
Benzo(k)fluoranthene	1.000	0.9799	98	50-120	7	32
Benzo(a)pyrene	1.000	0.9613	96	53-120	7	28
Indeno(1,2,3-cd)pyrene	1.000	0.9618	96	49-120	9	27
Dibenz(a,h)anthracene	1.000	0.9365	94	47-120	9	28
Benzo(g,h,i)perylene	1.000	0.9413	94	48-120	11	27

Surrogate	%REC	Limits
Nitrobenzene-d5	75	45-120
2-Fluorobiphenyl	96	46-120
Terphenyl-d14	96	30-120

RPD= Relative Percent Difference

Batch QC Report
Semivolatile Organics by GC/MS SIM

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	20150415CCC2	Batch#:	222401
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Type: MS Lab ID: QC784875

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,4-Dioxane	<0.02663	2.941	2.230	76	32-120
Naphthalene	<0.01961	0.9804	0.7820	80	52-120
1-Methylnaphthalene	<0.01961	0.9804	0.8581	88	60-120
2-Methylnaphthalene	<0.01961	0.9804	0.8467	86	61-120
Acenaphthylene	<0.01961	0.9804	0.8487	87	54-120
Acenaphthene	<0.01961	0.9804	0.8365	85	52-120
Fluorene	<0.01961	0.9804	0.7786	79	59-120
Phenanthrene	<0.01961	0.9804	0.8292	85	49-120
Anthracene	<0.01961	0.9804	0.7919	81	42-120
Fluoranthene	<0.01961	0.9804	0.8245	84	55-120
Pyrene	<0.01961	0.9804	0.8975	92	38-120
Benzo(a)anthracene	<0.01961	0.9804	0.7879	80	48-120
Chrysene	<0.01961	0.9804	0.6919	71	45-120
Benzo(b)fluoranthene	<0.01961	0.9804	0.8446	86	51-120
Benzo(k)fluoranthene	<0.01961	0.9804	0.8427	86	48-120
Benzo(a)pyrene	<0.01961	0.9804	0.8105	83	41-120
Indeno(1,2,3-cd)pyrene	<0.01961	0.9804	0.8282	84	39-121
Dibenz(a,h)anthracene	<0.01961	0.9804	0.8045	82	40-120
Benzo(g,h,i)perylene	<0.01961	0.9804	0.7988	81	34-122

Surrogate	%REC	Limits
Nitrobenzene-d5	67	45-120
2-Fluorobiphenyl	86	46-120
Terphenyl-d14	79	30-120

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	EPA 3520C
Project#:	103S225323.05	Analysis:	EPA 8270C-SIM
Field ID:	20150415CCC2	Batch#:	222401
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Water	Received:	04/17/15
Units:	ug/L	Prepared:	04/20/15
Diln Fac:	1.000	Analyzed:	04/21/15

Type: MSD Lab ID: QC784876

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,4-Dioxane	2.941	2.368	81	32-120	6	40
Naphthalene	0.9804	0.7829	80	52-120	0	34
1-Methylnaphthalene	0.9804	0.8510	87	60-120	1	32
2-Methylnaphthalene	0.9804	0.8461	86	61-120	0	32
Acenaphthylene	0.9804	0.8385	86	54-120	1	29
Acenaphthene	0.9804	0.8465	86	52-120	1	34
Fluorene	0.9804	0.7888	80	59-120	1	26
Phenanthrene	0.9804	0.8244	84	49-120	1	30
Anthracene	0.9804	0.7822	80	42-120	1	57
Fluoranthene	0.9804	0.8036	82	55-120	3	33
Pyrene	0.9804	0.8827	90	38-120	2	62
Benzo(a)anthracene	0.9804	0.7709	79	48-120	2	58
Chrysene	0.9804	0.6799	69	45-120	2	56
Benzo(b)fluoranthene	0.9804	0.8383	86	51-120	1	55
Benzo(k)fluoranthene	0.9804	0.8598	88	48-120	2	58
Benzo(a)pyrene	0.9804	0.8069	82	41-120	0	60
Indeno(1,2,3-cd)pyrene	0.9804	0.8178	83	39-121	1	58
Dibenz(a,h)anthracene	0.9804	0.7990	82	40-120	1	58
Benzo(g,h,i)perylene	0.9804	0.7974	81	34-122	0	59

Surrogate	%REC	Limits
Nitrobenzene-d5	71	45-120
2-Fluorobiphenyl	92	46-120
Terphenyl-d14	77	30-120

RPD= Relative Percent Difference

CURTIS & TOMPKINS DFTPP TUNE FOR 266161 MSSIM Water
EPA 8270C

Inst : MSBNA02 Run Name : DFTPP IDF : 1.0
Seqnum : 515131754007 File : ud107 Time : 01-APR-2015 15:20

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	30774	38.97	
68	< 2% of mass 69	458	1.27	
69		36138	100.00	
70	< 2% of mass 69	0	0.00	
127	40% - 60% of mass 198	33957	43.00	
197	< 1% of mass 198	0	0.00	
198		78978	100.00	
199	5% - 9% of mass 198	5332	6.75	
275	10% - 30% of mass 198	13586	17.20	
365	> 1% of mass 198	1381	1.75	
441	Present, < mass 443	8525	75.01	
442	> 40% and < 100% of mass 198	58274	73.79	
443	17% - 23% of mass 442	11365	19.50	

Analyst: KMH Date: 04/02/15 Reviewer: LW Date: 04/03/15

CURTIS & TOMPKINS DFTPP TUNE FOR 266161 MSSIM Water
EPA 8270C

Inst : MSBNA02 Run Name : DFTPP IDF : 1.0
Seqnum : 515160408002 File : ud102 Time : 21-APR-2015 09:55

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	35785	37.87	
68	< 2% of mass 69	0	0.00	
69		45333	100.00	
70	< 2% of mass 69	213	0.47	
127	40% - 60% of mass 198	41832	44.26	
197	< 1% of mass 198	0	0.00	
198		94506	100.00	
199	5% - 9% of mass 198	6682	7.07	
275	10% - 30% of mass 198	15865	16.79	
365	> 1% of mass 198	1457	1.54	
441	Present, < mass 443	9051	75.22	
442	> 40% and < 100% of mass 198	60906	64.45	
443	17% - 23% of mass 442	12033	19.76	

Analyst: KMH Date: 04/21/15 Reviewer: LW Date: 04/22/15

CURTIS & TOMPKINS DFTPP TUNE FOR 266161 MSSIM Water
EPA 8270C

Inst : MSBNA03 Run Name : DFTPP IDF : 1.0
Seqnum : 525131701005 File : vd105 Time : 01-APR-2015 12:58

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	144572	42.83	
68	< 2% of mass 69	0	0.00	
69		166261	100.00	
70	< 2% of mass 69	1218	0.73	
127	40% - 60% of mass 198	186729	55.32	
197	< 1% of mass 198	0	0.00	
198		337514	100.00	
199	5% - 9% of mass 198	24104	7.14	
275	10% - 30% of mass 198	74893	22.19	
365	> 1% of mass 198	12658	3.75	
441	Present, < mass 443	47405	74.51	
442	> 40% and < 100% of mass 198	315029	93.34	
443	17% - 23% of mass 442	63621	20.20	

Analyst: KMH Date: 04/01/15 Reviewer: LW Date: 04/02/15

CURTIS & TOMPKINS DFTPP TUNE FOR 266161 MSSIM Water
EPA 8270C

Inst : MSBNA03 Run Name : DFTPP IDF : 1.0
Seqnum : 525160441002 File : vd102 Time : 21-APR-2015 10:26

Standards: S26814

Mass	Ion Abundance Criteria	Abundance	% Relative Abundance	Q
51	30% - 60% of mass 198	88706	43.16	
68	< 2% of mass 69	460	0.45	
69		102816	100.00	
70	< 2% of mass 69	584	0.57	
127	40% - 60% of mass 198	119233	58.01	
197	< 1% of mass 198	736	0.36	
198		205546	100.00	
199	5% - 9% of mass 198	15074	7.33	
275	10% - 30% of mass 198	47885	23.30	
365	> 1% of mass 198	7000	3.41	
441	Present, < mass 443	24890	81.84	
442	> 40% and < 100% of mass 198	157802	76.77	
443	17% - 23% of mass 442	30413	19.27	

Analyst: KMH Date: 04/21/15 Reviewer: LW Date: 04/22/15

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 MSSIM Water: EPA 8270C-SIM

Inst : MSBNA02
 Calnum : 515131754001
 Units : ug/mL

Name : 2PAHSIM
 Date : 01-APR-2015 16:46
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Std	L1	L2	L3	L4	L5	L6	L7	Type	a0	a1	a2	Avg	r^2	Max	Min	Min	Flg
L1	ud108	515131754008	ICAL	01-APR-2015 16:46	S26126							AVRG	1.69032			0.5916	7	15	0.05	0.99	
L2	ud109	515131754009	ICAL	01-APR-2015 17:19	S26127							AVRG	0.92655			1.0793	3	15	0.05	0.99	
L3	ud110	515131754010	ICAL	01-APR-2015 17:54	S26919							AVRG	1.59896			0.6254	3	15	0.05	0.99	
L4	ud111	515131754011	ICAL	01-APR-2015 18:28	S26920							AVRG	1.68484			0.5935	3	15	0.05	0.99	
L5	ud112	515131754012	ICAL	01-APR-2015 19:02	S26130							AVRG	0.56907			1.7573	9	15	0.05	0.99	
L6	ud113	515131754013	ICAL	01-APR-2015 19:36	S26131							AVRG	0.86193			1.1602	7	15	0.05	0.99	
L7	ud114	515131754014	ICAL	01-APR-2015 20:10	S26132							AVRG	0.82428			1.2132	8	15	0.05	0.99	
												AVRG	0.84170			1.1881	4	15	0.05	0.99	
												AVRG	0.91647			1.0911	6	15	0.05	0.99	
												AVRG	0.81088			1.2332	7	15	0.05	0.99	
												AVRG	0.65178			1.5343	3	15	0.05	0.99	
												AVRG	0.77541			1.2896	4	15	0.05	0.99	
												AVRG	0.82683			1.2094	3	15	0.05	0.99	
												AVRG	0.70383			1.4208	4	15	0.05	0.99	
												AVRG	0.72484			1.3796	7	15	0.05	0.99	
												AVRG	0.87981			1.1366	11	15	0.05	0.99	
												AVRG	0.78758			1.2697	13	15	0.05	0.99	
												AVRG	1.00458			0.9954	15	15	0.05	0.99	
												AVRG	0.87054			1.1487	7	15	0.05	0.99	
												AVRG	2.44969			0.4082	3	15	0.05	0.99	
												AVRG	0.63571			1.5730	8	15	0.05	0.99	
												AVRG	0.92785			1.0778	7	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D
1,4-Dioxane	0.5000	9	1.0000	5	2.5000	6	5.0000	2	10.0000	-5	25.0000	-9	50.0000	-9
Naphthalene	0.1000	0	0.2000	-1	0.5000	4	1.0000	5	2.0000	0	5.0000	-5	10.0000	-3
2-Methylnaphthalene	0.1000	-2	0.2000	0	0.5000	4	1.0000	4	2.0000	0	5.0000	-4	10.0000	-2
1-Methylnaphthalene	0.1000	-3	0.2000	1	0.5000	2	1.0000	4	2.0000	1	5.0000	-4	10.0000	-1
Acenaphthylene	0.1000	-9	0.2000	-5	0.5000	10	1.0000	14	2.0000	0	5.0000	-4	10.0000	-5
Acenaphthene	0.1000	-4	0.2000	-4	0.5000	9	1.0000	12	2.0000	-2	5.0000	-7	10.0000	-4
Fluorene	0.1000	-9	0.2000	-5	0.5000	11	1.0000	12	2.0000	-1	5.0000	-5	10.0000	-3
Phenanthrene	0.1000	-7	0.2000	-3	0.5000	2	1.0000	3	2.0000	3	5.0000	0	10.0000	2
Anthracene	0.1000	-11	0.2000	-5	0.5000	2	1.0000	4	2.0000	3	5.0000	2	10.0000	6
Fluoranthene	0.1000	-15	0.2000	-2	0.5000	3	1.0000	4	2.0000	5	5.0000	0	10.0000	4
Pyrene	0.1000	4	0.2000	2	0.5000	0	1.0000	1	2.0000	0	5.0000	-5	10.0000	-1
Benzo(a)anthracene	0.1000	-7	0.2000	-3	0.5000	-2	1.0000	3	2.0000	5	5.0000	3	10.0000	1
Chrysene	0.1000	-4	0.2000	-3	0.5000	-1	1.0000	1	2.0000	2	5.0000	2	10.0000	3
Benzo(b)fluoranthene	0.1000	-5	0.2000	-5	0.5000	3	1.0000	0	2.0000	0	5.0000	4	10.0000	4
Benzo(k)fluoranthene	0.1000	-10	0.2000	-7	0.5000	0	1.0000	3	2.0000	3	5.0000	0	10.0000	12
Benzo(a)pyrene	0.1000	-14	0.2000	-11	0.5000	-5	1.0000	1	2.0000	5	5.0000	8	10.0000	15
Indeno(1,2,3-cd)pyrene	0.1000	-17	0.2000	-12	0.5000	-4	1.0000	2	2.0000	3	5.0000	9	10.0000	21
Dibenz(a,h)anthracene	0.1000	-21	0.2000	-13	0.5000	-5	1.0000	2	2.0000	3	5.0000	10	10.0000	23
Benzo(g,h,i)perylene	0.1000	-10	0.2000	-8	0.5000	-3	1.0000	1	2.0000	2	5.0000	5	10.0000	12
Nitrobenzene-d5	0.1000	-3	0.2000	-4	0.5000	0	1.0000	5	2.0000	2	5.0000	1	10.0000	-1
2-Fluorobiphenyl	0.1000	-4	0.2000	-3	0.5000	11	1.0000	11	2.0000	-2	5.0000	-8	10.0000	-6
Terphenyl-d14	0.1000	7	0.2000	6	0.5000	5	1.0000	2	2.0000	-1	5.0000	-9	10.0000	-9

KMH 04/02/15 [1,4-Dioxane]: Corrected automatically drawn baseline in multiple levels.

KMH 04/02/15 [Nitrobenzene-d5]: Corrected automatically drawn baseline in ICAL (ud108).

KMH 04/02/15 [Acenaphthylene]: Corrected automatically drawn baseline in multiple levels.

KMH 04/02/15 [Anthracene]: Corrected automatically drawn baseline in multiple levels.

KMH 04/02/15 [Fluoranthene]: Corrected automatically drawn baseline in ICAL (ud108).

KMH 04/02/15 [Chrysene]: Corrected automatically drawn baseline in all levels.

KMH 04/02/15 [Benzo(k)fluoranthene]: Corrected automatically drawn baseline in all levels.

KMH 04/02/15 [Benzo(a)pyrene]: Corrected automatically drawn baseline in multiple levels.

KMH 04/03/15 [Dibenz(a,h)anthracene]: Corrected automatically drawn baseline in ICAL (ud114).

Analyst: KMH

m>manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVRG=Average response factor

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Date: 04/02/15

Reviewer: IW

Date: 04/03/15

515131754001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 MSSIM Water
EPA 8270C-SIM

Inst : MSBNA02
Calnum : 515131754001

Name : 2PAHSIM
Cal Date : 01-APR-2015

ICV 515131754015 (ud115 01-APR-2015) stds: S26530

Analyte	Spiked	Quant	Units	%D	Max	Flags
1,4-Dioxane	10.00	9.771	ug/mL	-2	30	m
Naphthalene	1.000	0.9230	ug/mL	-8	30	
2-Methylnaphthalene	1.000	0.9755	ug/mL	-2	30	
1-Methylnaphthalene	1.000	0.9668	ug/mL	-3	30	
Acenaphthylene	1.000	0.9724	ug/mL	-3	30	
Acenaphthene	1.000	0.8986	ug/mL	-10	20	
Fluorene	1.000	0.9098	ug/mL	-9	30	
Phenanthrene	1.000	1.000	ug/mL	0	30	
Anthracene	1.000	1.015	ug/mL	2	30	
Fluoranthene	1.000	1.044	ug/mL	4	20	
Pyrene	1.000	1.006	ug/mL	1	30	
Benzo(a)anthracene	1.000	0.9505	ug/mL	-5	30	
Chrysene	1.000	0.9656	ug/mL	-3	30	
Benzo(b)fluoranthene	1.000	0.9204	ug/mL	-8	30	
Benzo(k)fluoranthene	1.000	0.9122	ug/mL	-9	30	m
Benzo(a)pyrene	1.000	1.001	ug/mL	0	20	
Indeno(1,2,3-cd)pyrene	1.000	0.9533	ug/mL	-5	30	
Dibenz(a,h)anthracene	1.000	0.9693	ug/mL	-3	30	
Benzo(g,h,i)perylene	1.000	0.9454	ug/mL	-5	30	

Analyst: KMH

Date: 04/02/15

Reviewer: LW

Date: 04/03/15

m=manual integration

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 MSSIM Water: EPA 8270C-SIM

Inst : MSBNA03
 Calnum : 525131701001
 Units : ug/mL

Name : 3PAHSIM
 Date : 01-APR-2015 13:17
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Std	L1	L2	L3	L4	L5	L6	L7	Type	a0	a1	a2	Avg	r^2	Max %RSD	Min RF	Min r^2	Flg
L1	vd106	525131701006	ICAL	01-APR-2015 13:17	S26126	0.3884m	0.3959m	0.4095m	0.4030m	0.3911	0.4012	AVRG	0.4179	0.4012	2.49376	0.4010	3	15	0.05	0.99	
L2	vd107	525131701007	ICAL	01-APR-2015 13:50	S26127	1.0149	1.0289	1.0641	1.0871	1.0618	1.0776	AVRG	1.1597	0.93405		1.0706	4	15	0.05	0.99	
L3	vd108	525131701008	ICAL	01-APR-2015 14:24	S26919	0.6287	0.6326	0.6663	0.6791	0.6667	0.6827	AVRG	0.7441	1.48929		0.6715	6	15	0.05	0.99	
L4	vd109	525131701009	ICAL	01-APR-2015 14:57	S26920	0.6083	0.6009	0.6337	0.6524	0.6379	0.6566	AVRG	0.7009	1.55872		0.6416	5	15	0.05	0.99	
L5	vd110	525131701010	ICAL	01-APR-2015 15:30	S26130	1.7445	1.7619	2.0357	2.0852	1.8385	1.8877	AVRG	2.0244	0.52325		1.9111	7	15	0.05	0.99	
L6	vd111	525131701011	ICAL	01-APR-2015 16:03	S26131	1.1518	1.1546	1.3343	1.3635	1.2251	1.2296	AVRG	1.3413	0.79544		1.2572	7	15	0.05	0.99	
L7	vd112	525131701012	ICAL	01-APR-2015 16:36	S26132	1.2852	1.3126	1.5176	1.5180	1.3771	1.4726	AVRG	1.6612	0.69005		1.4492	9	15	0.05	0.99	
						1.0751	1.0919	1.1075	1.1303	1.1292	1.1693	AVRG	1.2351	0.88179		1.1341	5	15	0.05	0.99	
						1.0472	1.0715	1.0845	1.0926	1.1015	1.1636	AVRG	1.2267	0.89886		1.1125	6	15	0.05	0.99	
						1.2044	1.2242	1.2327	1.2515	1.2696	1.3195	AVRG	1.4104	0.78542		1.2732	6	15	0.05	0.99	
						1.2698	1.2713	1.3017	1.2862	1.2973	1.2606	AVRG	1.3668	0.77316		1.2934	3	15	0.05	0.99	
						1.1612	1.1342	1.1513	1.1677	1.1912	1.2423	AVRG	1.3566	0.83290		1.2006	6	15	0.05	0.99	
						1.0584	1.0738	1.0954	1.1042	1.1142	1.1056	AVRG	1.1762	0.90581		1.1040	3	15	0.05	0.99	
						1.0931	1.1271	1.1614	1.1894	1.2318	1.3145	AVRG	1.4314	0.81883		1.2213	10	15	0.05	0.99	
						1.0825	1.1143	1.1019	1.2027	1.2171	1.2750	AVRG	1.4384	0.83017		1.2046	10	15	0.05	0.99	
						0.9393	0.9772	1.0307	1.0484	1.0950	1.1681	AVRG	1.2650	0.93039		1.0748	10	15	0.05	0.99	
						1.1076	1.1400	1.1697	1.2539	1.3238	1.4807	AVRG		0.80260		1.2459	11	15	0.05	0.99	
						0.8945	0.9304	0.9427	1.0116	1.0792	1.2108	AVRG		0.98859		1.0115	12	15	0.05	0.99	
						0.9997	1.0119	1.0071	1.0727	1.1105	1.1724	AVRG	1.2619	0.91668		1.0909	9	15	0.05	0.99	
						0.2927	0.2862	0.3037	0.3172	0.3142	0.3243	AVRG	0.3460	3.20468		0.3120	6	15	0.05	0.99	
						1.5354	1.5623	1.8123	1.8183	1.6439	1.6800	AVRG	1.8067	0.59027		1.6941	7	15	0.05	0.99	
						0.9490	0.9736	0.9598	0.9801	0.9874	0.9955	AVRG	1.0694	1.01233		0.9878	4	15	0.05	0.99	

Spiked Amounts / Drifts	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D	L7	%D
1,4-Dioxane	0.5000	-3	1.0000	-1	2.5000	2	5.0000	1	10.0000	-2	25.0000	0	50.0000	4
Naphthalene	0.1000	-5	0.2000	-4	0.5000	-1	1.0000	2	2.0000	-1	5.0000	1	10.0000	8
2-Methylnaphthalene	0.1000	-6	0.2000	-6	0.5000	-1	1.0000	1	2.0000	-1	5.0000	2	10.0000	11
1-Methylnaphthalene	0.1000	-5	0.2000	-6	0.5000	-1	1.0000	2	2.0000	-1	5.0000	2	10.0000	9
Acenaphthylene	0.1000	-9	0.2000	-8	0.5000	7	1.0000	9	2.0000	-4	5.0000	-1	10.0000	6
Acenaphthene	0.1000	-8	0.2000	-8	0.5000	6	1.0000	8	2.0000	-3	5.0000	-2	10.0000	7
Fluorene	0.1000	-11	0.2000	-9	0.5000	5	1.0000	5	2.0000	-5	5.0000	2	10.0000	15
Phenanthrene	0.1000	-5	0.2000	-4	0.5000	-2	1.0000	0	2.0000	0	5.0000	3	10.0000	9
Anthracene	0.1000	-6	0.2000	-4	0.5000	-3	1.0000	-2	2.0000	-1	5.0000	5	10.0000	10
Fluoranthene	0.1000	-5	0.2000	-4	0.5000	-3	1.0000	-2	2.0000	0	5.0000	4	10.0000	11
Pyrene	0.1000	-2	0.2000	-2	0.5000	1	1.0000	-1	2.0000	0	5.0000	-3	10.0000	6
Benzo(a)anthracene	0.1000	-3	0.2000	-6	0.5000	-4	1.0000	-3	2.0000	-1	5.0000	3	10.0000	13
Chrysene	0.1000	-4	0.2000	-3	0.5000	-1	1.0000	0	2.0000	1	5.0000	0	10.0000	7
Benzo(b)fluoranthene	0.1000	-10	0.2000	-8	0.5000	-5	1.0000	-3	2.0000	1	5.0000	8	10.0000	17
Benzo(k)fluoranthene	0.1000	-10	0.2000	-7	0.5000	-9	1.0000	0	2.0000	1	5.0000	6	10.0000	19
Benzo(a)pyrene	0.1000	-13	0.2000	-9	0.5000	-4	1.0000	-2	2.0000	2	5.0000	9	10.0000	18
Indeno(1,2,3-cd)pyrene	0.1000	-11	0.2000	-9	0.5000	-6	1.0000	1	2.0000	6	5.0000	19		
Dibenz(a,h)anthracene	0.1000	-12	0.2000	-8	0.5000	-7	1.0000	0	2.0000	7	5.0000	20		
Benzo(g,h,i)perylene	0.1000	-8	0.2000	-7	0.5000	-8	1.0000	-2	2.0000	2	5.0000	7	10.0000	16
Nitrobenzene-d5	0.1000	-6	0.2000	-8	0.5000	-3	1.0000	2	2.0000	1	5.0000	4	10.0000	11
2-Fluorobiphenyl	0.1000	-9	0.2000	-8	0.5000	7	1.0000	7	2.0000	-3	5.0000	-1	10.0000	7
Terphenyl-d14	0.1000	-4	0.2000	-1	0.5000	-3	1.0000	-1	2.0000	0	5.0000	1	10.0000	8

KMH 04/02/15 [1,4-Dioxane]: Corrected automatically drawn baseline in multiple levels.

Analyst: KMH

Date: 04/01/15

Reviewer: LW

Date: 04/02/15

m=manual integration

Instrument amount = a0 + response * a1 + response^2 * a2; AVG=Average response factor

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525131701001

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 MSSIM Water
EPA 8270C-SIM

Inst : MSBNA03
Calnum : 525131701001

Name : 3PAHSIM
Cal Date : 01-APR-2015

ICV 525131701013 (vd113 01-APR-2015) stds: S26530

Analyte	Spiked	Quant	Units	%D	Max	Flags
1,4-Dioxane	10.00	10.24	ug/mL	2	30	
Naphthalene	1.000	0.8880	ug/mL	-11	30	
2-Methylnaphthalene	1.000	0.9439	ug/mL	-6	30	
1-Methylnaphthalene	1.000	0.9391	ug/mL	-6	30	
Acenaphthylene	1.000	0.9299	ug/mL	-7	30	
Acenaphthene	1.000	0.8706	ug/mL	-13	20	
Fluorene	1.000	0.8700	ug/mL	-13	30	
Phenanthrene	1.000	0.9112	ug/mL	-9	30	
Anthracene	1.000	0.9398	ug/mL	-6	30	
Fluoranthene	1.000	0.9169	ug/mL	-8	20	
Pyrene	1.000	1.016	ug/mL	2	30	
Benzo(a)anthracene	1.000	0.8835	ug/mL	-12	30	
Chrysene	1.000	0.9391	ug/mL	-6	30	
Benzo(b)fluoranthene	1.000	0.9116	ug/mL	-9	30	
Benzo(k)fluoranthene	1.000	0.8596	ug/mL	-14	30	
Benzo(a)pyrene	1.000	0.9589	ug/mL	-4	20	
Indeno(1,2,3-cd)pyrene	1.000	0.9374	ug/mL	-6	30	
Dibenz(a,h)anthracene	1.000	0.9568	ug/mL	-4	30	
Benzo(g,h,i)perylene	1.000	0.9333	ug/mL	-7	30	

Analyst: KMH

Date: 04/01/15

Reviewer: LW

Date: 04/02/15

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 MSSIM Water
EPA 8270C-SIM

Inst : MSBNA02 Run Name : PAHDIOX IDF : 1.0
 Seqnum : 515160408003 File : udl03 Time : 21-APR-2015 10:16
 Cal : 515131754001 Caldate : 01-APR-2015
 Standards: S26920

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,4-Dioxane	0.5916	0.6020	5.000	5.088	ug/mL	2	30	0.0500	m
Naphthalene	1.0793	1.1312	1.000	1.048	ug/mL	5	30	0.0500	
2-Methylnaphthalene	0.6254	0.6594	1.000	1.054	ug/mL	5	30	0.0500	
1-Methylnaphthalene	0.5935	0.6099	1.000	1.028	ug/mL	3	30	0.0500	
Acenaphthylene	1.7573	2.0593	1.000	1.172	ug/mL	17	30	0.0500	
Acenaphthene	1.1602	1.3344	1.000	1.150	ug/mL	15	20	0.0500	
Fluorene	1.2132	1.4424	1.000	1.189	ug/mL	19	30	0.0500	
Phenanthrene	1.1881	1.2904	1.000	1.086	ug/mL	9	30	0.0500	
Anthracene	1.0911	1.2121	1.000	1.111	ug/mL	11	30	0.0500	
Fluoranthene	1.2332	1.4264	1.000	1.157	ug/mL	16	20	0.0500	
Pyrene	1.5343	1.6049	1.000	1.046	ug/mL	5	30	0.0500	
Benzo(a)anthracene	1.2896	1.3889	1.000	1.077	ug/mL	8	30	0.0500	
Chrysene	1.2094	1.2714	1.000	1.051	ug/mL	5	30	0.0500	m
Benzo(b)fluoranthene	1.4208	1.4790	1.000	1.041	ug/mL	4	30	0.0500	
Benzo(k)fluoranthene	1.3796	1.4550	1.000	1.055	ug/mL	5	30	0.0500	m
Benzo(a)pyrene	1.1366	1.1731	1.000	1.032	ug/mL	3	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.2697	1.2589	1.000	0.9915	ug/mL	-1	30	0.0500	
Dibenz(a,h)anthracene	0.9954	0.9793	1.000	0.9838	ug/mL	-2	30	0.0500	
Benzo(g,h,i)perylene	1.1487	1.1101	1.000	0.9664	ug/mL	-3	30	0.0500	
Nitrobenzene-d5	0.4082	0.4334	1.000	1.062	ug/mL	6	30	0.0500	
2-Fluorobiphenyl	1.5730	1.7607	1.000	1.119	ug/mL	12	30	0.0500	
Terphenyl-d14	1.0778	1.0761	1.000	0.9985	ug/mL	0	30	0.0500	

KMH 04/21/15 [1,4-Dioxane]: Corrected automatically drawn baseline.

KMH 04/21/15 [Chrysene]: Corrected automatically drawn baseline.

KMH 04/21/15 [Benzo(k)fluoranthene]: Corrected automatically drawn baseline.

Analyst: KMH Date: 04/21/15 Reviewer: LW Date: 04/22/15

m=manual integration

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 MSSIM Water
EPA 8270C-SIM

Inst : MSBNA03 Run Name : DFTPP IDF : 1.0
 Seqnum : 525160441003 File : vdl03 Time : 21-APR-2015 10:47
 Cal : 525131701001 Caldate : 01-APR-2015
 Standards: S26920

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Min RF	Flags
1,4-Dioxane	0.4010	0.4112	5.000	5.127	ug/mL	3	30	0.0500	m
Naphthalene	1.0706	1.0661	1.000	0.9958	ug/mL	0	30	0.0500	
2-Methylnaphthalene	0.6715	0.6629	1.000	0.9873	ug/mL	-1	30	0.0500	
1-Methylnaphthalene	0.6416	0.6302	1.000	0.9823	ug/mL	-2	30	0.0500	
Acenaphthylene	1.9111	2.0514	1.000	1.073	ug/mL	7	30	0.0500	
Acenaphthene	1.2572	1.3739	1.000	1.093	ug/mL	9	20	0.0500	
Fluorene	1.4492	1.4173	1.000	0.9780	ug/mL	-2	30	0.0500	
Phenanthrene	1.1341	1.1615	1.000	1.024	ug/mL	2	30	0.0500	
Anthracene	1.1125	1.1015	1.000	0.9901	ug/mL	-1	30	0.0500	
Fluoranthene	1.2732	1.2586	1.000	0.9885	ug/mL	-1	20	0.0500	
Pyrene	1.2934	1.3702	1.000	1.059	ug/mL	6	30	0.0500	
Benzo(a)anthracene	1.2006	1.1760	1.000	0.9795	ug/mL	-2	30	0.0500	
Chrysene	1.1040	1.1349	1.000	1.028	ug/mL	3	30	0.0500	
Benzo(b)fluoranthene	1.2213	1.2447	1.000	1.019	ug/mL	2	30	0.0500	
Benzo(k)fluoranthene	1.2046	1.2361	1.000	1.026	ug/mL	3	30	0.0500	
Benzo(a)pyrene	1.0748	1.0925	1.000	1.016	ug/mL	2	20	0.0500	
Indeno(1,2,3-cd)pyrene	1.2459	1.2112	1.000	0.9721	ug/mL	-3	30	0.0500	
Dibenz(a,h)anthracene	1.0115	1.0166	1.000	1.005	ug/mL	1	30	0.0500	
Benzo(g,h,i)perylene	1.0909	1.0165	1.000	0.9318	ug/mL	-7	30	0.0500	
Nitrobenzene-d5	0.3120	0.2537	1.000	0.8130	ug/mL	-19	30	0.0500	
2-Fluorobiphenyl	1.6941	1.8669	1.000	1.102	ug/mL	10	30	0.0500	
Terphenyl-d14	0.9878	0.9700	1.000	0.9819	ug/mL	-2	30	0.0500	

KMH 04/21/15 [1,4-Dioxane]: Corrected automatically drawn baseline.

Analyst: KMH Date: 04/21/15 Reviewer: LW Date: 04/22/15

m=manual integration

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 515160408

Date : 04/21/15
 Sequence : MSBNA02 udl

Reference : udl03
 Analyzed : 04/21/15 10:16

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+RICV STD	17301	8.22	63641	9.79	28919	12.07	48471	14.02	37994	17.60	27567	19.60
	LOWER LIMIT		8651	7.72	31821	9.29	14460	11.57	24236	13.52	18997	17.10	13784	19.10
	UPPER LIMIT		34602	8.72	127282	10.29	57838	12.57	96942	14.52	75988	18.10	55134	20.10
003	CCV	PAHDIOX	17301	8.22	63641	9.79	28919	12.07	48471	14.02	37994	17.60	27567	19.60
004	BLANK	QC784939	13314	8.22	48623	9.79	22183	12.07	36703	14.02	24947	17.60	16854	19.60
005	LCS	QC784940	13937	8.22	50429	9.79	23038	12.07	39156	14.02	29258	17.61	20505	19.60
006	MSS	266175-001	14253	8.22	51286	9.79	23550	12.07	37982	14.02	26264	17.60	18936	19.60
007	MS	QC784941	13812	8.22	50118	9.79	23247	12.07	38566	14.02	28903	17.60	20821	19.60
008	MSD	QC784942	14459	8.22	52258	9.79	23816	12.07	40498	14.02	29876	17.60	21458	19.60
009	SAMPLE	266175-002	14614	8.22	51323	9.79	24239	12.07	39226	14.02	27573	17.60	19229	19.60
010	SAMPLE	266175-003	14009	8.22	50367	9.79	23460	12.07	36464	14.02	26160	17.60	18172	19.60
011	SAMPLE	266175-004	13940	8.22	49738	9.79	23261	12.07	37436	14.02	27233	17.60	18980	19.60
012	SAMPLE	266175-005	14586	8.22	51571	9.79	24161	12.07	38758	14.02	28147	17.60	20833	19.60
013	SAMPLE	266175-006	14717	8.22	52983	9.79	24681	12.07	39401	14.02	28784	17.60	20553	19.60
014	SAMPLE	266175-007	14492	8.22	52704	9.79	24454	12.07	39460	14.02	28712	17.61	20613	19.60
015	SAMPLE	266175-008	14550	8.22	52920	9.79	24971	12.07	40066	14.02	29527	17.60	22547	19.59
016	SAMPLE	266161-026	17856	8.22	66144	9.79	31375	12.07	51679	14.02	37029	17.60	27199	19.60
017	SAMPLE	266172-008	17544	8.22	64139	9.79	30964	12.07	51043	14.02	36345	17.60	25839	19.60
018	SAMPLE	266161-025	17055	8.22	60437	9.79	29325	12.07	47445	14.02	34175	17.60	24646	19.59
019	SAMPLE	266161-009	17159	8.22	63696	9.79	30174	12.07	50196	14.02	36598	17.60	26498	19.59
020	SAMPLE	266161-011	17954	8.22	65913	9.79	31333	12.07	52018	14.02	37167	17.61	27550	19.60

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 525160441

Date : 04/21/15
 Sequence : MSBNA03 vdl

Reference : vdl103
 Analyzed : 04/21/15 10:47

#	Type	Sample ID	DCBZ14D4	RT	NAPHD8	RT	ACEND10	RT	PHEND10	RT	CHYD12	RT	PERYD12	RT
		CCV+CCV/BS+CCV/LCS+ICV+ICV/BS+ICV/CCV+ICV/LCS+RCCV+RICV	STD											
	LOWER LIMIT		21146	7.30	83359	8.92	37970	11.22	76077	13.16	74355	16.61	65211	18.33
	UPPER LIMIT		10573	6.80	41680	8.42	18985	10.72	38039	12.66	37178	16.11	32606	17.83
			42292	7.80	166718	9.42	75940	11.72	152154	13.66	148710	17.11	130422	18.83
003	CCV	DFTPP	21146	7.30	83359	8.92	37970	11.22	76077	13.16	74355	16.61	65211	18.33
004	BLANK	QC784869	13672	7.30	54467	8.93	24499	11.22	50850	13.16	48291	16.61	42002	18.33
005	BS	QC784870	19412	7.30	76396	8.92	34998	11.22	71376	13.16	68000	16.61	59738	18.34
006	BSD	QC784871	19463	7.30	77059	8.92	35258	11.22	70964	13.16	68737	16.61	60036	18.33
007	MSS	266161-007	18989	7.30	75318	8.92	34105	11.22	69977	13.16	63351	16.61	55621	18.34
008	MS	QC784875	18759	7.30	73906	8.92	33722	11.22	67869	13.16	63960	16.61	55940	18.34
009	MSD	QC784876	18674	7.30	74099	8.92	33217	11.22	68324	13.17	64093	16.61	54462	18.33
010	SAMPLE	266172-001	18845	7.30	75095	8.92	34406	11.22	68984	13.16	65586	16.61	57561	18.34
011	SAMPLE	266172-002	18987	7.30	75794	8.92	34159	11.22	68368	13.16	64500	16.61	57700	18.33
012	SAMPLE	266172-003	18585	7.30	72566	8.93	33334	11.22	67382	13.16	64062	16.61	55794	18.33
013	SAMPLE	266172-004	19529	7.30	77540	8.92	35558	11.22	71053	13.16	69424	16.61	59716	18.33
014	SAMPLE	266172-005	19968	7.30	78577	8.92	35419	11.22	71992	13.16	68807	16.61	60257	18.33
015	SAMPLE	266172-006	18632	7.30	73931	8.92	33284	11.22	67138	13.16	63871	16.61	56288	18.33
016	SAMPLE	266172-007	19095	7.30	74904	8.92	34292	11.22	68854	13.16	65854	16.61	57183	18.34
017	SAMPLE	266161-012	18905	7.30	75112	8.92	34283	11.22	69346	13.16	65615	16.61	57488	18.33

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 515131754

Instrument : MSBNA02 Begun : 04/01/15 11:54
 Method : EPA 8270C, EPA 8270C-SIM SOP Version : 8270-SIM_OBPA_rv1, bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	ud101	IB	IB			04/01/15 11:54	1.0		?t
002	ud102	TUN	DFTPP			04/01/15 12:20	1.0	1	
003	ud103	CCV	PAHDIOX			04/01/15 12:41	1.0	2	
004	ud104	CCV	PAHDIOX			04/01/15 13:17	1.0	3	cc+
005	ud105	TUN	DFTPP			04/01/15 13:50	1.0	1	
006	ud106	CCV	PAHDIOX			04/01/15 14:10	1.0	4	
007	ud107	TUN	DFTPP			04/01/15 15:20	1.0	1	
008	ud108	ICAL	ICAL			04/01/15 16:46	1.0	5	
009	ud109	ICAL	ICAL			04/01/15 17:19	1.0	6	
010	ud110	ICAL	ICAL			04/01/15 17:54	1.0	7	
011	ud111	ICAL	ICAL			04/01/15 18:28	1.0	3	
012	ud112	ICAL	ICAL			04/01/15 19:02	1.0	4	
013	ud113	ICAL	ICAL			04/01/15 19:36	1.0	8	
014	ud114	ICAL	ICAL			04/01/15 20:10	1.0	9	
015	ud115	ICV	ICV			04/01/15 20:45	1.0	10	

KMH 04/02/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 15.

Standards used: 1=S26814 2=S26129 3=S26920 4=S26130 5=S26126 6=S26127 7=S26919 8=S26131 9=S26132 10=S26530

Flags used: +=high bias ?t=missing tune cc=CCV CCC failure

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 515160408

Instrument : MSBNA02 Begun : 04/21/15 09:28
 Method : EPA 8270C, EPA 8270C-SIM SOP Version : 8270-SIM_OBPA_rv1, bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	udl01	IB	IB			04/21/15 09:28	1.0		?t
002	udl02	TUN	DFTPP			04/21/15 09:55	1.0	1	
003	udl03	CCV	PAHDIOX			04/21/15 10:16	1.0	2	
004	udl04	BLANK	QC784939	Soil	222417	04/21/15 10:53	1.0	3	
005	udl05	LCS	QC784940	Soil	222417	04/21/15 11:29	1.0	3	
006	udl06	MSS	266175-001	Soil	222417	04/21/15 12:06	1.0	3	
007	udl07	MS	QC784941	Soil	222417	04/21/15 12:41	1.0	3	
008	udl08	MSD	QC784942	Soil	222417	04/21/15 13:17	1.0	3	
009	udl09	SAMPLE	266175-002	Soil	222417	04/21/15 13:54	1.0	3	
010	udl10	SAMPLE	266175-003	Soil	222417	04/21/15 14:28	1.0	3	
011	udl11	SAMPLE	266175-004	Soil	222417	04/21/15 15:05	1.0	3	
012	udl12	SAMPLE	266175-005	Soil	222417	04/21/15 15:40	1.0	3	
013	udl13	SAMPLE	266175-006	Soil	222417	04/21/15 16:15	1.0	3	
014	udl14	SAMPLE	266175-007	Soil	222417	04/21/15 16:52	1.0	3	
015	udl15	SAMPLE	266175-008	Soil	222417	04/21/15 17:28	1.0	3	
016	udl16	SAMPLE	266161-026	Water	222401	04/21/15 18:03	1.0	3	
017	udl17	SAMPLE	266172-008	Water	222401	04/21/15 19:08	1.0	3	
018	udl18	SAMPLE	266161-025	Water	222401	04/21/15 19:44	1.0	3	
019	udl19	SAMPLE	266161-009	Water	222401	04/21/15 20:18	1.0	3	
020	udl20	SAMPLE	266161-011	Water	222401	04/21/15 20:55	1.0	3	

KMH 04/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 20.

Standards used: 1=S26814 2=S26920 3=S26588

Flags used: ?t=missing tune

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 525131701

Instrument : MSBNA03 Begun : 04/01/15 11:01
 Method : EPA 8270C, EPA 8270C-SIM SOP Version : 8270-SIM_OBPA_rv1, bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
001	vd101	TUN	DFTPP			04/01/15 11:01	1.0	1
002	vd102	TUN	DFTPP			04/01/15 11:35	1.0	1
003	vd103	CCV	RTCHECK			04/01/15 11:55	1.0	2
004	vd104	IB	IB			04/01/15 12:32	1.0	
005	vd105	TUN	DFTPP			04/01/15 12:58	1.0	1
006	vd106	ICAL	ICAL			04/01/15 13:17	1.0	3
007	vd107	ICAL	ICAL			04/01/15 13:50	1.0	4
008	vd108	ICAL	ICAL			04/01/15 14:24	1.0	5
009	vd109	ICAL	ICAL			04/01/15 14:57	1.0	6
010	vd110	ICAL	ICAL			04/01/15 15:30	1.0	7
011	vd111	ICAL	ICAL			04/01/15 16:03	1.0	8
012	vd112	ICAL	ICAL			04/01/15 16:36	1.0	9
013	vd113	ICV	ICV			04/01/15 17:08	1.0	10
014	vd114	CCV	PAHDIOX			04/01/15 17:42	1.0	6
015	vd115	LOD	209076-066	Soil	221583	04/01/15 18:14	1.0	11
016	vd116	LOD	209076-067	Soil	221583	04/01/15 18:47	1.0	11
017	vd117	LOD	209076-068	Soil	221583	04/01/15 19:21	1.0	11

KMH 04/02/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 17.

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 525160441

Instrument : MSBNA03 Begun : 04/21/15 10:01
 Method : EPA 8270C, EPA 8270C-SIM SOP Version : 8270-SIM_OBPA_rv1, bna_rv13

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	vd101	IB	IB			04/21/15 10:01	1.0		?t
002	vd102	TUN	DFTPP			04/21/15 10:26	1.0	1	
003	vd103	CCV	DFTPP			04/21/15 10:47	1.0	2	
004	vd104	BLANK	QC784869	Water	222401	04/21/15 11:22	1.0	3	
005	vd105	BS	QC784870	Water	222401	04/21/15 11:56	1.0	3	
006	vd106	BSD	QC784871	Water	222401	04/21/15 12:32	1.0	3	
007	vd107	MSS	266161-007	Water	222401	04/21/15 13:07	1.0	3	
008	vd108	MS	QC784875	Water	222401	04/21/15 13:41	1.0	3	
009	vd109	MSD	QC784876	Water	222401	04/21/15 14:17	1.0	3	
010	vd110	SAMPLE	266172-001	Water	222401	04/21/15 14:51	1.0	3	
011	vd111	SAMPLE	266172-002	Water	222401	04/21/15 15:26	1.0	3	
012	vd112	SAMPLE	266172-003	Water	222401	04/21/15 16:01	1.0	3	
013	vd113	SAMPLE	266172-004	Water	222401	04/21/15 19:12	1.0	3	
014	vd114	SAMPLE	266172-005	Water	222401	04/21/15 19:46	1.0	3	
015	vd115	SAMPLE	266172-006	Water	222401	04/21/15 20:19	1.0	3	
016	vd116	SAMPLE	266172-007	Water	222401	04/21/15 20:54	1.0	3	
017	vd117	SAMPLE	266161-012	Water	222401	04/21/15 21:27	1.0	3	

KMH 04/22/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 17.

Standards used: 1=S26814 2=S26920 3=S26588

Flags used: ?t=missing tune

SAMPLE PREPARATION SUMMARY

Batch # : 222401
 Started By : ARW
 Method : 3520C
 Spike #1 ID : S26499

Prep Date : 20-APR-2015 13:00
 Spike #2 ID : S26609

Analysis : 14DIOXANE
 Finished By : LEB
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266161-007		Water	1020	1	1	0.0009804	7	1				8270-SIM	
266161-009		Water	1040	1	1	0.0009615	7	1				8270-SIM	
266161-011		Water	1000	1	1	0.001	7	1				8270-SIM	
266161-012		Water	1000	1	1	0.001	7	1				8270-SIM	
266161-025		Water	1040	1	1	0.0009615	7	1				8270-SIM	
266161-026		Water	1060	1	1	0.0009434	7	1				8270-SIM	
266172-001		Water	1000	1	1	0.001	7	1				14DIOXANE	
266172-002		Water	1000	1	1	0.001	7	1				14DIOXANE	
266172-003		Water	1000	1	1	0.001	7	1				14DIOXANE	
266172-004		Water	1000	1	1	0.001	7	1				14DIOXANE	
266172-005		Water	1000	1	1	0.001	7	1				14DIOXANE	
266172-006		Water	1000	1	1	0.001	7	1				14DIOXANE	
266172-007		Water	1020	1	1	0.0009804	7	1				14DIOXANE	
266172-008		Water	1040	1	1	0.0009615	7	1				14DIOXANE	
QC784869	BLANK	Water	1000	1	1	0.001		1				8270-SIM	
QC784870	BS	Water	1000	1	1	0.001		1	1			8270-SIM	
QC784871	BSD	Water	1000	1	1	0.001		1	1			8270-SIM	
QC784875	MS	Water	1020	1	1	0.0009804	7	1	1			14DIOXANE	Prepped 20-APR-2015 13:15
QC784876	MSD	Water	1020	1	1	0.0009804	7	1	1			14DIOXANE	Prepped 20-APR-2015 13:15

Analyst: KMH

Date: 04/22/15

Reviewer: LW

Date: 04/22/15

BNA (8270 & 625) Water Prep Log

Curtis & Tompkins, Ltd.

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LIMS Batch No: 222401 Extraction Method: EPA 3520c cont. L/L
 LIMS Analysis: 8270 SIMM
 Date Extracted: 4/20/2019

Sample #	Container ID	Volume of Sample (mL)	Sample pH	Final Volume (mL)	Confirmed pH <= 2	Comments
206114-007	Q	1020	7	1.0	<=2	MSJ
9	E	1040	7	1.0	<=2	
11	E	1000	7	1.0	<=2	
12	D	1000	7	1.0	<=2	
25	E	1040	7	1.0	<=2	
26	E	1060	7	1.0	<=2	
206172-001	B	1000	7	1.0	<=2	
2	B	1000	7	1.0	<=2	
3	A	1000	7	1.0	<=2	
4	B	1000	7	1.0	<=2	
5	A	1000	7	1.0	<=2	
6	A	1000	7	1.0	<=2	
7	A	1020	7	1.0	<=2	
8	B	1040	7	1.0	<=2	
MSB Q.C. 184869	MA	1000	7	1.0	<=2	
BS 70		1000	7	1.0	<=2	
BSD 71		1000	7	1.0	<=2	
MS 75		1020	7	1.0	<=2	MS @ B15
MSD 76	0	1020	7	1.0	<=2	L
			7	1.0	<=2	
			7	1.0	<=2	
			7	1.0	<=2	
			7	1.0	<=2	
			7	1.0	<=2	
			7	1.0	<=2	
			7	1.0	<=2	
			7	1.0	<=2	

MS/MSD not included due to: insufficient volume, or other (reason)

ARB 4/21/15

1.0 mL of surrogate solution was added to all samples
1.0 mL of matrix spiking solution was added to all spikes
 pH of all samples adjusted to pH ≤ 2 with H₂SO₄
 Cont. L/L extracted with 450mL of CH₂Cl₂
 Extraction Start Time:
 Extraction End Time:
 pH of all samples adjusted to pH ≥ 11 with 10 N NaOH
 Extraction Start Time:
 Extraction End Time:
 Extracts filtered through baked, CH₂Cl₂-rinsed granular Na₂SO₄
 Concentrated to final volume at temperature (degrees C)
 Relinquished to BNA department

Lot# / LIMS # / Time	Date/ Initials
S26499C	ARB 4/20/19
S26609D	
FS1106150	
EMSY1351	
1300/1315	
700/715	LEB 4/21/15
N/A	
↓	
EMXF27F	
70	
↓	

Am R. Wey
 Extraction Chemist Date

4/20/2019
 Contined from Page
 Continued on Page

[Signature]
 Reviewed by Date



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 266161

ANALYTICAL REPORT


Metals

Tetra Tech EMI
1999 Harrison Street
Oakland, CA 94612

Project : 103S225323.05
Location : 2015 Groundwater
Level : IV

<u>Sample ID</u>	<u>Lab ID</u>
20150415B175S	266161-004
20150415B150	266161-005
20150415B150D	266161-006
20150415CCC2	266161-007
20150415CCC3	266161-008
20150415ER	266161-009
20150416EERC	266161-013
20150416FG	266161-016
20150416B158	266161-017
20150416ER	266161-018
20150416B474	266161-019
20150416PZ11	266161-020
20150416NRLF	266161-021
20150417B480	266161-023
20150417CTP	266161-025
20150417ER	266161-026

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Mike J. Dahlquist
Project Manager
mike.dahlquist@ctberk.com

Date: 05/01/2015

**CASE NARRATIVE
METALS (EPA 6020 AND EPA 7470A)**

Laboratory number: 266161
Client: Tetra Tech EMI
Project: 103S225323.05
Location: 2015 Groundwater
Request Date: 04/17/15
Samples Received: 04/17/15

This data package contains sample and QC results for sixteen water samples, requested for the above referenced project on 04/17/15. See attached cooler receipt form for any sample receipt problems or discrepancies.

Metals (EPA 6020 and EPA 7470A):

High recovery was observed for calcium in the post digest spike of 20150415CCC2 (lab # 266161-007); the BS/BSD were within limits.

Responses exceeding the instrument's linear range were observed for sodium in the MS/MSD of 20150415CCC2 (lab # 266161-007).

High % differences were observed for chromium, potassium, and sodium in the serial dilution of 20150415CCC2 (lab # 266161-007).

Silver, molybdenum, and vanadium were detected between the MDL and the RL in the method blank for batch 222621.

No other analytical problems were encountered.

Chain of Custody



Tetra Tech EM Inc.
San Francisco Office

135 Main St. Suite 1800
San Francisco, CA 94105
415-543-4880
Fax 415-543-5480

266161

Chain of Custody Record No. 6085

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6085

Lab PO#: 15 OAK 32
Lab: C+T
Project name: 2015 Ground water
Project (CTO) number: 1035225323.05
TEMI technical contact: Sara Woodley
TEMI project manager: Jason Broderson
Field samplers: Dupe Argen, Mark Doffy
Field samplers' signatures: [Signatures]

Sample ID	Sample Location (Pt. ID)	Date	Time	Matrix	MS / MSD	No./Container Types										
						40 ml VOA	1 liter Amber	500 ml Poly	Sleeve	Glass Jar	VOA	SVOA	Pest/PCBs	Metals	TPH Purgeables	TPH Extractables
20150416EERC		4/16/15	0950	water		3	1				X					
20150416EF P289			1040			3					X					
20150416B473			1140			3					X					
20150416FG			1245				1				X					
20150416B158			1400				1				X					
20150416ER			1430			3					X					
20150416S08			1440			3					X					
20150416FB			0900			2					X					
20150416B474		4/14/15	1025	water			1				X					
20150416P211			1020				1				X					
20150416NRLF			1235			3					X					
20150416B277			1355			3					X					

Relinquished by: [Signature]
Received by: Tracy Burden
Relinquished by:
Received by:
Relinquished by:
Received by:

Turnaround time/remarks: field filtered -std. TAF
Cold data

Name (print)	Company Name	Date	Time
Mark Duffly Tracy Burden	Tetra Tech CAT	4-17-15 4-17-15	1255 1255



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266161

Chain of Custody Record No. 6086

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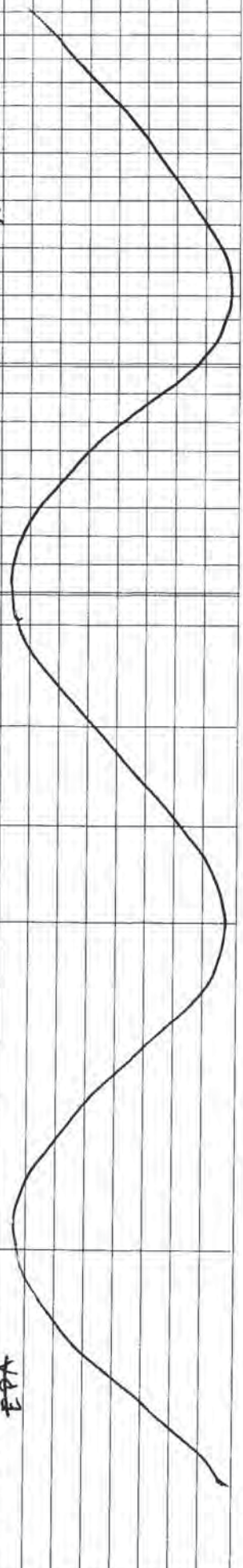
6086

Preservative Added	None
HCl	None
HAOS	None

No./Container Types	Analysis Required
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Lab PO#: 150AK 32	Lab: C T I	Field samplers: Dayon Aragon - Mark Duffy
TIEMI technical contact: Sara Wesley	TIEMI project manager: Jason Brodergen	MS / MSD
Project name: 2015 Groundwater	Project (CTO) number: 103S22532305	Sample ID
		20150417 B480 B480
		20150417 B278
		20150417 CTP
		20150417 ER EPA
		4/17/15 0910 water
		↓ 1015 ↓
		↓ 1145 ↓
		↓ 1115 ↓

40 ml VOA	X	VOA	X
1 liter Amber	X	Res/PCBs	X
500 ml Poly	X	Metals	X
Sieve	X	TPH Purgeables	X
Glass Jar	X	TPH Extractables	X
		PAHs	X



Relinquished by: M. Duffy	Name (print): Mark Duffy	Company Name: Tetra Tech	Date: 4-17-15	Time: 1255
Received by: Troy Bobja	Name (print): Troy Bobja	Company Name: C T I	Date: 4-17-15	Time: 1255
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Turnaround time/remarks: Metals
* Field filtered
Celd on seal
- STD TAJ

COOLER RECEIPT CHECKLIST



Login # 266161 Date Received 4/17/15 Number of coolers 3
 Client Tetra Tech Project 2015 Groundwater

Date Opened 4/17 By (print) SL (sign) [Signature]
 Date Logged in 4/17 By (print) SL (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) _____ YES NO
 Shipping info _____

2A. Were custody seals present? YES (circle) on cooler on samples NO
 How many _____ Name _____ Date _____

2B. Were custody seals intact upon arrival? _____ YES NO N/A

3. Were custody papers dry and intact when received? _____ YES NO

4. Were custody papers filled out properly (ink, signed, etc)? _____ YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) _____ YES NO

6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap Foam blocks Bags None
- Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) 3.5, 3.7, 3.1

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES NO
 If YES, what time were they transferred to freezer? _____

9. Did all bottles arrive unbroken/unopened? _____ YES NO

10. Are there any missing / extra samples? _____ YES NO

11. Are samples in the appropriate containers for indicated tests? _____ YES NO

12. Are sample labels present, in good condition and complete? _____ YES NO

13. Do the sample labels agree with custody papers? _____ YES NO

14. Was sufficient amount of sample sent for tests requested? _____ YES NO

15. Are the samples appropriately preserved? _____ YES NO N/A

16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A

17. Did you document your preservative check? _____ YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A

21. Was the client contacted concerning this sample delivery? _____ YES NO

If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Curtis & Tompkins Sample Preservation for 266161

Sample	pH: <2	>9	>12	Other
-004a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-005a	X	[]	[]	[]
-006a	X	[]	[]	[]
-007a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	[]	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
g	[]	[]	[]	[]
h	[]	[]	[]	[]
i	[]	[]	[]	[]
j	X	[]	[]	[]
k	X	[]	[]	[]
l	X	[]	[]	[]
m	[]	[]	[]	[]
n	[]	[]	[]	[]
o	[]	[]	[]	[]
p	[]	[]	[]	[]
q	[]	[]	[]	[]
r	[]	[]	[]	[]

Sample	pH: <2	>9	>12	Other
-008a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-009a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
-013a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-016a	X	[]	[]	[]
-017a	X	[]	[]	[]
-018a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]

Sample	pH: <2	>9	>12	Other
-019a	X	[]	[]	[]
-020a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-021a	X	[]	[]	[]
-023a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
-025a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]
-026a	[]	[]	[]	[]
b	[]	[]	[]	[]
c	[]	[]	[]	[]
d	X	[]	[]	[]
e	[]	[]	[]	[]
f	[]	[]	[]	[]

Analyst: SL
 Date: 4/17/15
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Results & QC Summary

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150415B175S	Units:	ug/L
Lab ID:	266161-004	Sampled:	04/15/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	2.0	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	1.2	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	52	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	52,000	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	0.77 J	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	0.33 J	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	19 J	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	0.088 J	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	42,000	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	3.7	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	0.033 J	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	1.6	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	1.4	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	500	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	1.2	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	82,000	75	24	5.000	222621	04/27/15	04/28/15	EPA 6020
Thallium	0.12 J	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	3.3	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150415B150	Units:	ug/L
Lab ID:	266161-005	Sampled:	04/15/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	13 J	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	0.74 J	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	0.70 J	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	49	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	18,000	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	4.7	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	0.46 J	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	42 J	110	38	5.000	222621	04/27/15	04/27/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	14,000	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	0.16 J	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	0.56 J	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	3.9	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	170	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	36	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	31,000	75	24	5.000	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	3.0	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150415B150D	Units:	ug/L
Lab ID:	266161-006	Sampled:	04/15/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	20 J	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	0.38 J	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	0.45 J	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	45	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	16,000	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	4.3	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	0.89 J	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	ND	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	0.10 J	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	12,000	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	0.16 J	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	0.52 J	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	3.3	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	140	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	31	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	27,000	75	24	5.000	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	2.8	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150415CCC2	Units:	ug/L
Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	9.7	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	ND	1.0	0.23	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	1.6	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	45	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.16	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	65,000	60	20	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	26	1.0	0.15	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	ND	1.0	0.13	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	0.68 J	1.0	0.26	5.000	222621	04/27/15	04/28/15	EPA 6020
Iron	ND	110	38	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	ND	1.0	0.075	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	50,000	50	12	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	35	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	0.93 J	1.0	0.23	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	5.4	1.0	0.17	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	2,100	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	3.7	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.094	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	92,000	50,000	1,200	500.0	222621	04/27/15	04/28/15	EPA 6020
Thallium	0.042 J	1.0	0.033	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	1.5	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	5.0	1.3	5.000	222621	04/27/15	04/28/15	EPA 6020

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RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150415CCC3	Units:	ug/L
Lab ID:	266161-008	Sampled:	04/15/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	0.22 J	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	2.7	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	15	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	50,000	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	ND	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	0.15 J	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	0.63 J	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	ND	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	38,000	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	47	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	1.1	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	1.8	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	1,200	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	90,000	75	24	5.000	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	4.3	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150415ER	Units:	ug/L
Lab ID:	266161-009	Sampled:	04/15/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	9.7 J	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	ND	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	ND	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	0.15 J	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	0.58 J	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	ND	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	0.091 J	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	27 J	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	0.33 J	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	ND	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	0.40 J	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	ND	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	ND	75	24	5.000	222621	04/27/15	04/29/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	1.2	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150416EERC	Units:	ug/L
Lab ID:	266161-013	Sampled:	04/16/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	24 J	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	0.14 J	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	4.2	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	30	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	310,000	5,000	1,300	500.0	222621	04/27/15	04/28/15	EPA 6020
Chromium	ND	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	5.1	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	0.49 J	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	960	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	250,000	5,000	660	500.0	222621	04/27/15	04/28/15	EPA 6020
Manganese	1,800	50	11	500.0	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	1.0	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	7.6	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	1,800	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	350,000	7,500	2,400	500.0	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	1.2	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150416FG	Units:	ug/L
Lab ID:	266161-016	Sampled:	04/16/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	45 J	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	0.16 J	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	1.7	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	31	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	26,000	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	0.41 J	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	0.36 J	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	50 J	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	0.11 J	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	28,000	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	3.1	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	0.45 J	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	2.3	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	520	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	90,000	75	24	5.000	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	3.8	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150416B158	Units:	ug/L
Lab ID:	266161-017	Sampled:	04/16/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	9.0 J	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	4.7	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	9.8	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	3,200	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	1.3	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	0.074 J	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	0.32 J	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	ND	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	0.092 J	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	2,200	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	54	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	0.61 J	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	2.2	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	170	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	49,000	75	24	5.000	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	7.1	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150416ER	Units:	ug/L
Lab ID:	266161-018	Sampled:	04/16/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	ND	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	ND	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	ND	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	0.42 J	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	ND	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	0.12 J	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	22 J	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	2.1	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	ND	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	0.42 J	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	42 J	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	590	75	24	5.000	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	ND	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150416B474	Units:	ug/L
Lab ID:	266161-019	Sampled:	04/16/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	16 J	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	0.41 J	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	3.8	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	52	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	25,000	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	1.5	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	0.55 J	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	0.90 J	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	220	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	0.14 J	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	13,000	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	43	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	0.022 J	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	14	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	5.2	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	2,100	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	20,000	75	24	5.000	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	2.9	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150416PZ11	Units:	ug/L
Lab ID:	266161-020	Sampled:	04/16/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	0.13 J	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	1.7	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	17	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	4.9	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	190,000	5,000	1,300	500.0	222621	04/27/15	04/28/15	EPA 6020
Chromium	ND	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	2.6	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	8.4	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	29 J	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	250,000	5,000	660	500.0	222621	04/27/15	04/28/15	EPA 6020
Manganese	8,300	50	11	500.0	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	5.6	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	300	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	790	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	170,000	7,500	2,400	500.0	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	5.5	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	880	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150416NRLF	Units:	ug/L
Lab ID:	266161-021	Sampled:	04/16/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	4.5	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	87	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	51,000	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	ND	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	0.33 J	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	900	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	0.085 J	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	25,000	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	160	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	0.42 J	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	1.3	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	970	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	55,000	75	24	5.000	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	1.5	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	6.3 J	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150417B480	Units:	ug/L
Lab ID:	266161-023	Sampled:	04/17/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	2.1	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	140	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	54,000	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	1.5	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	ND	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	ND	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	48,000	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	0.43 J	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	0.022 J	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	0.35 J	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	1.5	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	1,000	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	93,000	75	24	5.000	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	6.3	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150417CTP	Units:	ug/L
Lab ID:	266161-025	Sampled:	04/17/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	1.2	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	80	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	2.6	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	58,000	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	1.4	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	0.32 J	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	28 J	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	0.088 J	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	31,000	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	100	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	0.60 J	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	1.4	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	690	50	15	5.000	222621	04/27/15	04/28/15	EPA 6020
Selenium	0.26 J	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	73,000	75	24	5.000	222621	04/27/15	04/28/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	4.0	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	44	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05		
Field ID:	20150417ER	Units:	ug/L
Lab ID:	266161-026	Sampled:	04/17/15
Matrix:	Filtrate	Received:	04/17/15

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Analysis
Aluminum	ND	50	8.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Antimony	ND	1.0	0.12	5.000	222621	04/27/15	04/28/15	EPA 6020
Arsenic	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Barium	ND	1.0	0.18	5.000	222621	04/27/15	04/28/15	EPA 6020
Beryllium	ND	1.0	0.091	5.000	222621	04/27/15	04/28/15	EPA 6020
Cadmium	ND	1.0	0.14	5.000	222621	04/27/15	04/28/15	EPA 6020
Calcium	ND	50	13	5.000	222621	04/27/15	04/28/15	EPA 6020
Chromium	ND	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Cobalt	ND	1.0	0.056	5.000	222621	04/27/15	04/28/15	EPA 6020
Copper	ND	1.0	0.26	5.000	222621	04/27/15	04/30/15	EPA 6020
Iron	ND	50	16	5.000	222621	04/27/15	04/28/15	EPA 6020
Lead	0.078 J	1.0	0.074	5.000	222621	04/27/15	04/28/15	EPA 6020
Magnesium	17 J	50	6.6	5.000	222621	04/27/15	04/28/15	EPA 6020
Manganese	0.29 J	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Mercury	ND	0.20	0.021	1.000	222510	04/22/15	04/23/15	EPA 7470A
Molybdenum	ND	1.0	0.27	5.000	222621	04/27/15	04/28/15	EPA 6020
Nickel	0.46 J	1.0	0.34	5.000	222621	04/27/15	04/28/15	EPA 6020
Potassium	ND	50	15	5.000	222621	04/27/15	04/29/15	EPA 6020
Selenium	ND	1.0	0.20	5.000	222621	04/27/15	04/28/15	EPA 6020
Silver	ND	1.0	0.040	5.000	222621	04/27/15	04/28/15	EPA 6020
Sodium	ND	75	24	5.000	222621	04/27/15	04/29/15	EPA 6020
Thallium	ND	1.0	0.020	5.000	222621	04/27/15	04/28/15	EPA 6020
Vanadium	ND	1.0	0.11	5.000	222621	04/27/15	04/28/15	EPA 6020
Zinc	ND	12	4.1	5.000	222621	04/27/15	04/28/15	EPA 6020

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	222510
Lab ID:	QC785259	Prepared:	04/22/15
Matrix:	Filtrate	Analyzed:	04/23/15
Units:	ug/L		

Result	RL	MDL
ND	0.20	0.021

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	222510
Matrix:	Filtrate	Prepared:	04/22/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC785260	2.500	2.693	108	80-120		
BSD	QC785261	2.500	2.482	99	80-120	8	24

RPD= Relative Percent Difference

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	222510
Field ID:	20150415CCC2	Sampled:	04/15/15
MSS Lab ID:	266161-007	Received:	04/17/15
Matrix:	Filtrate	Prepared:	04/22/15
Units:	ug/L	Analyzed:	04/23/15
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC785262	<0.02080	2.500	2.619	105	60-130		
MSD	QC785263		2.500	2.651	106	60-130	1	34

RPD= Relative Percent Difference

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 7470A
Analyte:	Mercury	Units:	ug/L
Field ID:	20150415CCC2	Diln Fac:	5.000
Type:	Serial Dilution	Batch#:	222510
MSS Lab ID:	266161-007	Sampled:	04/15/15
Lab ID:	QC785264	Received:	04/17/15
Matrix:	Filtrate	Analyzed:	04/23/15

MSS Result	MSS RL	Result	RL	% Diff	Lim
ND	0.2000	ND	1.000	NC	10

NC= Not Calculated
 ND= Not Detected at or above MDL
 RL= Reporting Limit

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Type:	BLANK	Diln Fac:	5.000
Lab ID:	QC785676	Batch#:	222621
Matrix:	Filtrate	Prepared:	04/27/15
Units:	ug/L		

Analyte	Result	RL	MDL	Analyzed
Aluminum	ND	50	9.7	04/28/15
Antimony	ND	1.0	0.23	04/27/15
Arsenic	ND	1.0	0.18	04/28/15
Barium	ND	1.0	0.18	04/28/15
Beryllium	ND	1.0	0.16	04/27/15
Cadmium	ND	1.0	0.12	04/27/15
Calcium	ND	60	20	04/27/15
Chromium	ND	1.0	0.15	04/28/15
Cobalt	ND	1.0	0.13	04/27/15
Copper	ND	1.0	0.26	04/28/15
Iron	ND	110	38	04/27/15
Lead	ND	1.0	0.075	04/28/15
Magnesium	ND	50	12	04/28/15
Manganese	ND	1.0	0.20	04/27/15
Molybdenum	0.51 J	1.0	0.23	04/27/15
Nickel	ND	1.0	0.17	04/27/15
Potassium	ND	50	15	04/29/15
Selenium	ND	1.0	0.11	04/28/15
Silver	0.23 J	1.0	0.094	04/27/15
Sodium	ND	500	12	04/28/15
Thallium	ND	1.0	0.033	04/27/15
Vanadium	0.33 J	1.0	0.14	04/27/15
Zinc	ND	5.0	1.3	04/28/15

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Dissolved Target Analyte List Metals			
Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Matrix:	Filtrate	Batch#:	222621
Units:	ug/L	Prepared:	04/27/15
Diln Fac:	5.000	Analyzed:	04/28/15

Type: BS Lab ID: QC785677

Analyte	Spiked	Result	%REC	Limits
Aluminum	10,000	10,330	103	80-124
Antimony	100.0	99.70	100	80-120
Arsenic	100.0	100.8	101	80-120
Barium	100.0	102.9	103	80-120
Beryllium	100.0	104.0	104	80-120
Cadmium	100.0	103.0	103	80-120
Calcium	10,000	10,260	103	80-124
Chromium	100.0	99.65	100	80-121
Cobalt	100.0	100.7	101	80-123
Copper	100.0	107.0	107	80-130
Iron	10,000	10,090	101	80-133
Lead	100.0	106.6	107	80-122
Magnesium	10,000	10,450	105	80-123
Manganese	100.0	100.8	101	80-125
Molybdenum	100.0	101.3	101	80-120
Nickel	100.0	102.9	103	80-129
Potassium	10,000	10,220	102	80-123
Selenium	100.0	103.4	103	80-126
Silver	100.0	102.6	103	79-120
Sodium	10,000	9,060	91	80-126
Thallium	50.00	49.57	99	80-120
Vanadium	100.0	98.70	99	80-120
Zinc	100.0	104.2	104	80-130

Type: BSD Lab ID: QC785678

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aluminum	10,000	10,380	104	80-124	0	20
Antimony	100.0	99.55	100	80-120	0	20
Arsenic	100.0	103.4	103	80-120	3	20
Barium	100.0	102.4	102	80-120	1	20
Beryllium	100.0	104.0	104	80-120	0	20
Cadmium	100.0	101.8	102	80-120	1	20
Calcium	10,000	10,320	103	80-124	1	20
Chromium	100.0	104.0	104	80-121	4	20
Cobalt	100.0	104.8	105	80-123	4	20
Copper	100.0	108.0	108	80-130	1	20
Iron	10,000	10,340	103	80-133	2	20
Lead	100.0	106.1	106	80-122	0	20
Magnesium	10,000	10,520	105	80-123	1	20
Manganese	100.0	104.7	105	80-125	4	20
Molybdenum	100.0	101.2	101	80-120	0	20
Nickel	100.0	106.9	107	80-129	4	23
Potassium	10,000	10,270	103	80-123	1	20
Selenium	100.0	104.1	104	80-126	1	20
Silver	100.0	102.7	103	79-120	0	20
Sodium	10,000	9,520	95	80-126	5	20
Thallium	50.00	49.52	99	80-120	0	20
Vanadium	100.0	101.9	102	80-120	3	20
Zinc	100.0	104.4	104	80-130	0	20

RPD= Relative Percent Difference

Batch QC Report
Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150415CCC2	Batch#:	222621
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Filtrate	Received:	04/17/15
Units:	ug/L	Prepared:	04/27/15
Diln Fac:	5.000	Analyzed:	04/28/15

Type: MS Lab ID: QC785679

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aluminum	<9.723	10,000	9,820	98	80-123
Antimony	<0.2260	100.0	95.95	96	75-120
Arsenic	1.608	100.0	100.5	99	80-120
Barium	44.84	100.0	145.2	100	80-122
Beryllium	<0.1601	100.0	99.10	99	80-121
Cadmium	<0.1171	100.0	99.65	100	80-120
Calcium	64,950	10,000	70,500	56 NM	65-136
Chromium	26.23	100.0	111.5	85	80-122
Cobalt	<0.1315	100.0	100.6	101	80-121
Copper	0.6760	100.0	104.0	103	76-124
Iron	<37.68	10,000	9,570	96	80-132
Lead	<0.07454	100.0	97.95	98	80-120
Magnesium	50,250	10,000	56,850	66 NM	74-129
Manganese	35.31	100.0	133.5	98	80-125
Molybdenum	0.9280	100.0	99.90	99	80-120
Nickel	5.350	100.0	105.7	100	79-126
Potassium	2,136	10,000	11,760	96	80-124
Selenium	3.728	100.0	105.2	101	77-125
Silver	<0.09399	100.0	95.60	96	66-120
Sodium	92,400	10,000	111,700 >LR	193 NM	71-129
Thallium	0.04150	50.00	47.42	95	80-120
Vanadium	1.499	100.0	100.7	99	80-121
Zinc	<1.273	100.0	105.3	105	75-126

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150415CCC2	Batch#:	222621
MSS Lab ID:	266161-007	Sampled:	04/15/15
Matrix:	Filtrate	Received:	04/17/15
Units:	ug/L	Prepared:	04/27/15
Diln Fac:	5.000	Analyzed:	04/28/15

Type: MSD Lab ID: QC785680

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aluminum	10,000	10,080	101	80-123	3	22
Antimony	100.0	95.95	96	75-120	0	20
Arsenic	100.0	107.0	105	80-120	6	26
Barium	100.0	145.9	101	80-122	0	28
Beryllium	100.0	101.8	102	80-121	3	23
Cadmium	100.0	101.6	102	80-120	2	21
Calcium	10,000	71,850	69 NM	65-136	2	37
Chromium	100.0	115.9	90	80-122	4	30
Cobalt	100.0	106.1	106	80-121	5	25
Copper	100.0	106.8	106	76-124	3	29
Iron	10,000	10,400	104	80-132	8	27
Lead	100.0	96.95	97	80-120	1	20
Magnesium	10,000	57,300	71 NM	74-129	1	27
Manganese	100.0	140.3	105	80-125	5	25
Molybdenum	100.0	100.6	100	80-120	1	20
Nickel	100.0	110.9	106	79-126	5	30
Potassium	10,000	12,060	99	80-124	3	35
Selenium	100.0	111.2	107	77-125	6	28
Silver	100.0	95.40	95	66-120	0	29
Sodium	10,000	114,900 >LR	225 NM	71-129	NC	28
Thallium	50.00	48.44	97	80-120	2	20
Vanadium	100.0	105.5	104	80-121	5	31
Zinc	100.0	107.7	108	75-126	2	27

NC= Not Calculated

NM= Not Meaningful: Sample concentration > 4X spike concentration

>LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150415CCC2	Units:	ug/L
Type:	Serial Dilution	Batch#:	222621
MSS Lab ID:	266161-007	Sampled:	04/15/15
Lab ID:	QC785681	Received:	04/17/15
Matrix:	Filtrate	Analyzed:	04/28/15

Analyte	MSS Result	MSS RL	Result	RL	% Diff	Lim	Diln	Fac
Aluminum	ND	50.00	66.23 J	250.0	NC	10	25.00	
Antimony	ND	1.000	ND	2.500	NC	10	25.00	
Arsenic	1.608	1.000	1.478 J	2.500	NC	10	25.00	
Barium	44.84	1.000	44.83	2.628	0	10	25.00	
Beryllium	ND	1.000	ND	2.500	NC	10	25.00	
Cadmium	ND	1.000	ND	2.500	NC	10	25.00	
Calcium	64,950	60.11	63,830	250.0	2	10	25.00	
Chromium	26.23	1.000	10.11	2.500	61 *	10	25.00	
Cobalt	ND	1.000	ND	2.500	NC	10	25.00	
Copper	0.6760	1.000	ND	18.54	NC	10	25.00	
Iron	ND	113.0	ND	250.0	NC	10	25.00	
Lead	ND	1.000	0.4475 J	2.500	NC	10	25.00	
Magnesium	50,250	50.00	48,080	250.0	4	10	25.00	
Manganese	35.31	1.000	35.08	2.500	1	10	25.00	
Molybdenum	0.9280	1.000	1.575 J	5.000	NC	10	25.00	
Nickel	5.350	1.000	5.318	5.078	NC	10	25.00	
Potassium	2,136	50.00	1,543	250.0	28 *	10	25.00	
Selenium	3.728	1.000	3.868	2.980	NC	10	25.00	
Silver	ND	1.000	ND	2.500	NC	10	25.00	
Sodium	92,400	50,000	107,200	37,500	16 *	10	2,500	
Thallium	0.04150	1.000	ND	1.250	NC	10	25.00	
Vanadium	1.499	1.000	1.155 J	2.500	NC	10	25.00	
Zinc	ND	5.000	ND	61.03	NC	10	25.00	

*= Value outside of QC limits; see narrative

J= Estimated value

NC= Not Calculated

ND= Not Detected at or above MDL

RL= Reporting Limit

Batch QC Report

Dissolved Target Analyte List Metals

Lab #:	266161	Location:	2015 Groundwater
Client:	Tetra Tech EMI	Prep:	METHOD
Project#:	103S225323.05	Analysis:	EPA 6020
Field ID:	20150415CCC2	Units:	ug/L
Type:	Post Digest Spike	Batch#:	222621
MSS Lab ID:	266161-007	Sampled:	04/15/15
Lab ID:	QC785682	Received:	04/17/15
Matrix:	Filtrate		

Analyte	MSS Result	Spiked	Result	%REC	Limits	Diln	Fac	Analyzed
Aluminum	<9.723	25,000	25,210	101	75-125	5.000		04/27/15
Antimony	<0.2260	250.0	264.2	106	75-125	5.000		04/27/15
Arsenic	1.608	250.0	273.3	109	75-125	5.000		04/27/15
Barium	44.84	250.0	339.2	118	75-125	5.000		04/28/15
Beryllium	<0.1601	250.0	254.3	102	75-125	5.000		04/27/15
Cadmium	<0.1171	250.0	252.4	101	75-125	5.000		04/27/15
Calcium	64,950	25,000	96,500	126 *	75-125	5.000		04/27/15
Chromium	26.23	250.0	262.6	95	75-125	5.000		04/27/15
Cobalt	<0.1315	250.0	251.3	101	75-125	5.000		04/27/15
Copper	0.6760	250.0	283.3	113	75-125	5.000		04/28/15
Iron	<37.68	25,000	26,540	106	75-125	5.000		04/27/15
Lead	<0.07454	250.0	254.0	102	75-125	5.000		04/27/15
Magnesium	50,250	25,000	75,150	100	75-125	5.000		04/27/15
Manganese	35.31	250.0	293.4	103	75-125	5.000		04/27/15
Molybdenum	0.9280	250.0	265.5	106	75-125	5.000		04/27/15
Nickel	5.350	250.0	256.9	101	75-125	5.000		04/27/15
Potassium	2,136	25,000	30,700	114	75-125	5.000		04/28/15
Selenium	3.728	250.0	286.6	113	75-125	5.000		04/28/15
Silver	<0.09399	250.0	260.2	104	75-125	5.000		04/27/15
Sodium	92,400	2,500,000	2,748,000	106	75-125	500.0		04/28/15
Thallium	0.04150	125.0	131.3	105	75-125	5.000		04/27/15
Vanadium	1.499	250.0	262.1	104	75-125	5.000		04/27/15
Zinc	<1.273	250.0	284.7	114	75-125	5.000		04/28/15

*= Value outside of QC limits; see narrative

REPORTING SUMMARY FOR 266161 METALS Filtrate
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	A	S	A	B	B	C	C	C	C	C	F	P	M	M	H	M	N	K	S	A	N	T	V	Z	
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	O	I	E	G	A	L	N			
266161-004	MET54	04/23/15	14:27	1.0															+									
266161-004	MET16	04/27/15	23:16	5.0																								
266161-004	MET26	04/28/15	18:05	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-004	MET16	04/30/15	12:01	5.0										+														
266161-005	MET54	04/23/15	14:28	1.0																+								
266161-005	MET16	04/27/15	23:22	5.0											+													
266161-005	MET26	04/28/15	18:10	5.0	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-005	MET16	04/30/15	12:07	5.0											+													
266161-006	MET54	04/23/15	14:30	1.0																+								
266161-006	MET16	04/27/15	23:28	5.0																								
266161-006	MET26	04/28/15	18:14	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-006	MET16	04/30/15	12:13	5.0											+													
266161-007	MET54	04/23/15	14:23	1.0																+								
266161-007	MET16	04/27/15	19:51	5.0																								
266161-007	MET16	04/28/15	11:52	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-007	MET16	04/28/15	12:11	500.0																						+		
266161-007	MET26	04/28/15	12:27	5.0																	+							
266161-007	MET26	04/28/15	12:41	500.0																								
266161-007	MET26	04/28/15	16:56	500.0																								
266161-007	MET26	04/28/15	17:44	5.0																								
266161-007	MET16	04/30/15	12:20	5.0											+													
266161-008	MET54	04/23/15	14:33	1.0																+								
266161-008	MET16	04/27/15	23:35	5.0																								
266161-008	MET26	04/28/15	18:19	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-008	MET16	04/30/15	12:26	5.0												+												
266161-009	MET54	04/23/15	14:34	1.0																+								
266161-009	MET16	04/27/15	23:41	5.0																								
266161-009	MET26	04/28/15	17:20	500.0																								
266161-009	MET26	04/28/15	18:23	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-009	MET26	04/29/15	09:09	5.0																						+		
266161-009	MET26	04/29/15	09:14	500.0																								
266161-009	MET16	04/30/15	12:32	5.0											+													
266161-013	MET54	04/23/15	14:35	1.0																+								
266161-013	MET16	04/27/15	23:47	5.0																								
266161-013	MET26	04/28/15	20:12	500.0									+													+		
266161-013	MET26	04/28/15	20:16	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-013	MET16	04/30/15	12:39	5.0												+												
266161-016	MET54	04/23/15	14:36	1.0																+								
266161-016	MET16	04/27/15	23:54	5.0																								
266161-016	MET26	04/28/15	18:28	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-016	MET16	04/30/15	12:45	5.0												+												
266161-017	MET54	04/23/15	14:38	1.0																+								
266161-017	MET16	04/28/15	00:00	5.0																								
266161-017	MET26	04/28/15	18:33	5.0																								
266161-017	MET26	04/28/15	19:25	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

REPORTING SUMMARY FOR 266161 METALS Filtrate
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	A	S	A	B	B	C	C	C	C	C	F	P	M	M	H	M	N	K	S	A	N	T	V	Z	
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	O	I	E	G	A	L	N			
266161-017	MET16	04/30/15	12:51	5.0										+														
266161-018	MET54	04/23/15	14:39	1.0															+									
266161-018	MET16	04/28/15	00:06	5.0																								
266161-018	MET26	04/28/15	18:52	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-018	MET16	04/30/15	12:58	5.0										+														
266161-019	MET54	04/23/15	14:40	1.0															+									
266161-019	MET16	04/28/15	00:13	5.0																								
266161-019	MET26	04/28/15	18:56	5.0																								
266161-019	MET26	04/28/15	19:10	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-019	MET16	04/30/15	13:24	5.0										+														
266161-020	MET54	04/23/15	14:41	1.0															+									
266161-020	MET16	04/28/15	00:45	5.0																								
266161-020	MET26	04/28/15	17:25	500.0								+					+	+						+				
266161-020	MET26	04/28/15	19:01	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-020	MET16	04/30/15	13:30	5.0										+														
266161-021	MET54	04/23/15	14:42	1.0															+									
266161-021	MET16	04/28/15	00:52	5.0																								
266161-021	MET26	04/28/15	19:29	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-021	MET16	04/30/15	13:36	5.0										+														
266161-023	MET54	04/23/15	14:43	1.0															+									
266161-023	MET16	04/28/15	00:58	5.0																								
266161-023	MET26	04/28/15	19:34	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-023	MET16	04/30/15	13:43	5.0										+														
266161-025	MET54	04/23/15	14:47	1.0															+									
266161-025	MET16	04/28/15	01:04	5.0																								
266161-025	MET26	04/28/15	19:39	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-025	MET16	04/30/15	13:49	5.0										+														
266161-026	MET54	04/23/15	14:48	1.0															+									
266161-026	MET16	04/28/15	01:11	5.0																								
266161-026	MET26	04/28/15	19:43	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
266161-026	MET26	04/29/15	09:18	5.0																		+		+		+	+	+
266161-026	MET16	04/30/15	13:55	5.0										+														
QC785259	MET54	04/23/15	14:20	1.0															+									
QC785260	MET54	04/23/15	14:21	1.0															+									
QC785261	MET54	04/23/15	14:22	1.0															+									
QC785262	MET54	04/23/15	14:24	1.0															+									
QC785263	MET54	04/23/15	14:25	1.0															+									
QC785264	MET54	04/23/15	14:26	5.0															+									
QC785676	MET16	04/27/15	19:31	5.0		+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

REPORTING SUMMARY FOR 266161 METALS Filtrate
Curtis & Tompkins Laboratories

Lab ID	Inst ID	Analyzed	IDF	A	S	A	B	B	C	C	C	C	F	P	M	M	H	M	N	K	S	A	N	T	V	Z	
				L	B	S	A	E	D	A	R	O	U	E	B	G	N	G	O	I	E	G	A	L	N		
QC785676	MET16	04/28/15 11:33	5.0	+		+	+				+		+		+	+					+		+			+	
QC785676	MET26	04/28/15 12:14	5.0																								
QC785676	MET26	04/29/15 09:04	5.0																		+						
QC785677	MET16	04/27/15 19:38	5.0																								
QC785677	MET16	04/28/15 11:39	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
QC785677	MET26	04/28/15 12:18	5.0																		+						
QC785678	MET16	04/27/15 19:44	5.0																								
QC785678	MET16	04/28/15 11:46	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
QC785678	MET26	04/28/15 12:23	5.0																		+						
QC785679	MET16	04/27/15 19:57	5.0																								
QC785679	MET16	04/28/15 11:58	5.0																								
QC785679	MET26	04/28/15 12:32	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
QC785680	MET16	04/27/15 20:03	5.0																								
QC785680	MET16	04/28/15 12:05	5.0																								
QC785680	MET26	04/28/15 12:36	5.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
QC785681	MET16	04/27/15 20:15	25.0																								
QC785681	MET26	04/28/15 17:11	2500																				+				
QC785681	MET26	04/28/15 17:48	25.0	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
QC785682	MET16	04/27/15 20:21	5.0	+	+	+		+	+	+	+	+		+	+	+	+	+	+	+	+		+		+	+	
QC785682	MET26	04/28/15 17:15	500.0																				+				
QC785682	MET26	04/28/15 18:00	5.0				+						+								+	+					+

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895168934

Instrument : MET16
 Method : EPA 6020

Begun : 04/27/15 07:34
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d27h00001	X	RINSE			04/27/15 07:34	1.0	1	
002	15d27h00002	TUN				04/27/15 07:40	1.0	2	
003	15d27h00003	X	RINSE			04/27/15 07:45	1.0	1	
004	15d27h00004	ICALBLK	CALBLANK			04/27/15 07:51	1.0	1	
005	15d27h00005	ICAL				04/27/15 07:58	1.0	3 1	
006	15d27h00006	ICAL				04/27/15 08:04	1.0	4 1	
007	15d27h00007	ICAL				04/27/15 08:10	1.0	5 1	
008	15d27h00008	ICAL				04/27/15 08:17	1.0	6 1	
009	15d27h00009	ICAL				04/27/15 08:23	1.0	7 1	
010	15d27h00010	ICAL				04/27/15 08:29	1.0	8 1	
011	15d27h00011	X	RINSE			04/27/15 08:36	1.0	1	
012	15d27h00012	ICV				04/27/15 08:45	1.0	9 1	
013	15d27h00013	XCRI				04/27/15 08:51	1.0	10 1	
014	15d27h00014	XCRI				04/27/15 08:57	1.0	10 1	
015	15d27h00015	ICB				04/27/15 09:04	1.0	1	
016	15d27h00016	CRI				04/27/15 09:10	1.0	10 1	
017	15d27h00017	ICSA				04/27/15 09:17	1.0	11 1	8:CA=300000
018	15d27h00018	ICSAB				04/27/15 09:23	1.0	12 1	9:CA=310000
019	15d27h00019	X	RINSE			04/27/15 09:30	1.0	1	
020	15d27h00020	X	RINSE			04/27/15 09:37	1.0	1	
021	15d27h00021	X	RINSE			04/27/15 09:43	1.0	1	
022	15d27h00022	X	RINSE			04/27/15 09:50	1.0	1	
023	15d27h00023	X	RINSE			04/27/15 09:56	1.0	1	
024	15d27h00024	BLANK	QC785236	Water	222504	04/27/15 10:03	1.0	1	
025	15d27h00025	LOD	256092-048	Water	222504	04/27/15 10:09	1.0	1	
026	15d27h00026	LOD	256092-050	Water	222504	04/27/15 10:15	1.0	1	
027	15d27h00027	XCCV				04/27/15 10:22	1.0	13 1	
028	15d27h00028	CCV				04/27/15 10:28	1.0	13 1	
029	15d27h00029	X	XCCB			04/27/15 10:35	1.0	1	
030	15d27h00030	CCB				04/27/15 10:41	1.0	1	
031	15d27h00031	BLANK	QC785469	Filtrate	222567	04/27/15 10:48	5.0	1	
032	15d27h00032	BS	QC785470	Filtrate	222567	04/27/15 10:54	5.0	1	
033	15d27h00033	BSD	QC785471	Filtrate	222567	04/27/15 11:00	5.0	1	
034	15d27h00034	CCV				04/27/15 11:07	1.0	13 1	
035	15d27h00035	X	XCCB			04/27/15 11:13	1.0	1	
036	15d27h00036	CCB				04/27/15 11:20	1.0	1	
037	15d27h00037	MSS	266234-001	Filtrate	222567	04/27/15 11:26	5.0	1	
038	15d27h00038	MS	QC785472	Filtrate	222567	04/27/15 11:32	5.0	1	1:NA=23000
039	15d27h00039	MSD	QC785473	Filtrate	222567	04/27/15 11:39	5.0	1	
040	15d27h00040	SER	QC785474	Filtrate	222567	04/27/15 11:45	25.0	1	
041	15d27h00041	PDS	QC785475	Filtrate	222567	04/27/15 11:52	5.0	14 15 16 1	2:NA=24000
042	15d27h00042	MSS	266234-001	Filtrate	222567	04/27/15 11:58	500.0	1	
043	15d27h00043	CCV				04/27/15 12:04	1.0	13 1	
044	15d27h00044	XCCV				04/27/15 12:11	1.0	13 1	
045	15d27h00045	X	XCCB			04/27/15 12:18	1.0	1	
046	15d27h00046	CCB				04/27/15 12:24	1.0	1	
047	15d27h00047	BLANK	QC785469	Filtrate	222567	04/27/15 12:31	5.0	1	
048	15d27h00048	SAMPLE	266241-005	Filtrate	222567	04/27/15 12:37	5.0	1	5:NA=490000
049	15d27h00049	SAMPLE	266241-006	Filtrate	222567	04/27/15 12:44	5.0	1	6:NA=670000
050	15d27h00050	SAMPLE	266241-010	Filtrate	222567	04/27/15 12:50	5.0	1	5:NA=500000
051	15d27h00051	SAMPLE	266241-005	Filtrate	222567	04/27/15 12:57	50.0	1	1:NA=49000
052	15d27h00052	SAMPLE	266241-006	Filtrate	222567	04/27/15 13:03	50.0	1	1:NA=63000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895168934

Instrument : MET16
 Method : EPA 6020

Begun : 04/27/15 07:34
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d27h00053	SAMPLE	266241-010	Filtrate	222567	04/27/15 13:09	50.0	1	1:NA=48000
054	15d27h00054	CCV				04/27/15 13:16	1.0	13 1	
055	15d27h00055	X	XCCB			04/27/15 13:22	1.0	1	
056	15d27h00056	CCB				04/27/15 13:29	1.0	1	
057	15d27h00057	ICSA				04/27/15 13:35	1.0	11 1	8:CA=290000
058	15d27h00058	ICSAB				04/27/15 13:42	1.0	12 1	8:CA=300000
059	15d27h00059	X	RINSE			04/27/15 13:49	1.0	1	
060	15d27h00060	X	RINSE			04/27/15 13:55	1.0	1	
061	15d27h00061	BLANK	QC785469	Filtrate	222567	04/27/15 14:25	5.0	1	
062	15d27h00062	X	RINSE			04/27/15 14:32	1.0	1	
063	15d27h00063	X	RINSE			04/27/15 14:38	1.0	1	
064	15d27h00064	X	RINSENEW			04/27/15 15:27	1.0	1	
065	15d27h00065	X	RINSE2			04/27/15 15:34	1.0	1	
066	15d27h00066	SAMPLE	266150-002	Filtrate	222567	04/27/15 15:40	5.0	1	5:NA=2900000
067	15d27h00067	SAMPLE	266150-003	Filtrate	222567	04/27/15 15:47	5.0	1	5:NA=2800000
068	15d27h00068	SAMPLE	266150-004	Filtrate	222567	04/27/15 15:54	5.0	1	5:NA=2700000
069	15d27h00069	SAMPLE	266150-005	Filtrate	222567	04/27/15 16:00	5.0	1	5:NA=2900000
070	15d27h00070	SAMPLE	266150-006	Filtrate	222567	04/27/15 16:07	5.0	1	5:NA=2900000
071	15d27h00071	SAMPLE	266150-007	Filtrate	222567	04/27/15 16:14	5.0	1	5:NA=3100000
072	15d27h00072	SAMPLE	266150-008	Filtrate	222567	04/27/15 16:20	5.0	1	5:NA=2800000
073	15d27h00073	CCV				04/27/15 16:27	1.0	13 1	
074	15d27h00074	X	XCCB			04/27/15 16:34	1.0	1	
075	15d27h00075	CCB				04/27/15 16:40	1.0	1	
076	15d27h00076	SAMPLE	266150-009	Filtrate	222567	04/27/15 16:46	5.0	1	5:NA=3100000
077	15d27h00077	SAMPLE	266150-010	Filtrate	222567	04/27/15 16:53	5.0	1	5:NA=2500000
078	15d27h00078	SAMPLE	266150-011	Filtrate	222567	04/27/15 17:00	5.0	1	3:NA=730000
079	15d27h00079	SAMPLE	266150-012	Filtrate	222567	04/27/15 17:06	5.0	1	4:NA=4000000
080	15d27h00080	SAMPLE	266150-013	Filtrate	222567	04/27/15 17:13	5.0	1	5:NA=2600000
081	15d27h00081	SAMPLE	266150-014	Filtrate	222567	04/27/15 17:20	5.0	1	5:NA=2800000
082	15d27h00082	SAMPLE	266234-003	Filtrate	222567	04/27/15 17:26	5.0	1	
083	15d27h00083	SAMPLE	266234-006	Filtrate	222567	04/27/15 17:33	5.0	1	1:NA=22000
084	15d27h00084	CCV				04/27/15 17:39	1.0	13 1	
085	15d27h00085	X	XCCB			04/27/15 17:46	1.0	1	
086	15d27h00086	CCB				04/27/15 17:52	1.0	1	
087	15d27h00087	ICSA				04/27/15 17:59	1.0	11 1	8:CA=280000
088	15d27h00088	XICSAB				04/27/15 18:06	1.0	12 1	8:CA=290000
089	15d27h00089	ICSAB				04/27/15 18:12	1.0	12 1	8:CA=290000
090	15d27h00090	X	RINSE			04/27/15 18:19	1.0	1	
091	15d27h00091	X	RINSE			04/27/15 18:26	1.0	1	
092	15d27h00092	?SAMPLE	266167-001		219962	04/27/15 18:32	5.0	1	
093	15d27h00093	X	RINSE			04/27/15 18:39	1.0	1	
094	15d27h00094	X	RINSE			04/27/15 18:45	1.0	1	
095	15d27h00095	X	RINSE			04/27/15 18:52	1.0	1	
096	15d27h00096	X	RINSE			04/27/15 18:58	1.0	1	
097	15d27h00097	CCV				04/27/15 19:05	1.0	13 1	
098	15d27h00098	X	XCCB			04/27/15 19:11	1.0	1	
099	15d27h00099	CCB				04/27/15 19:18	1.0	1	
100	15d27h00100	BLANK	QC785676	Filtrate	222621	04/27/15 19:31	5.0	1	
101	15d27h00101	BS	QC785677	Filtrate	222621	04/27/15 19:38	5.0	1	
102	15d27h00102	BSD	QC785678	Filtrate	222621	04/27/15 19:44	5.0	1	
103	15d27h00103	MSS	266161-007	Filtrate	222621	04/27/15 19:51	5.0	1	1:NA=21000
104	15d27h00104	MS	QC785679	Filtrate	222621	04/27/15 19:57	5.0	1	1:NA=23000

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895168934

Instrument : MET16
 Method : EPA 6020

Begun : 04/27/15 07:34
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d27h00105	MSD	QC785680	Filtrate	222621	04/27/15 20:03	5.0	1	1:NA=21000
106	15d27h00106	SER	QC785681	Filtrate	222621	04/27/15 20:15	25.0	1	
107	15d27h00107	PDS	QC785682	Filtrate	222621	04/27/15 20:21	5.0	14 15 16 1	
108	15d27h00108	SAMPLE	266263-002	Filtrate	222621	04/27/15 20:28	500.0	1	
109	15d27h00109	X	RINSE			04/27/15 20:34	1.0	1	
110	15d27h00110	SAMPLE	266263-002	Filtrate	222621	04/27/15 20:40	100.0	1	
111	15d27h00111	CCV				04/27/15 20:47	1.0	13 1	
112	15d27h00112	X	XCCB			04/27/15 20:53	1.0	1	
113	15d27h00113	CCB				04/27/15 21:00	1.0	1	
114	15d27h00114	X	RINSE			04/27/15 21:06	1.0	1	
115	15d27h00115	X	RINSE			04/27/15 21:13	1.0	1	
116	15d27h00116	CCV				04/27/15 21:19	1.0	13 1	
117	15d27h00117	X	XCCB			04/27/15 21:26	1.0	1	
118	15d27h00118	CCB				04/27/15 21:32	1.0	1	
119	15d27h00119	BLANK	QC785685	Soil	222622	04/27/15 21:39	25.0	1	
120	15d27h00120	BS	QC785686	Soil	222622	04/27/15 21:45	25.0	1	
121	15d27h00121	BSD	QC785687	Soil	222622	04/27/15 21:51	25.0	1	
122	15d27h00122	MSS	266350-001	Soil	222622	04/27/15 21:58	25.0	1	1:MN=350
123	15d27h00123	MS	QC785688	Soil	222622	04/27/15 22:04	25.0	1	2:FE=23000
124	15d27h00124	MSD	QC785689	Soil	222622	04/27/15 22:10	25.0	1	1:FE=24000
125	15d27h00125	SAMPLE	266363-001	Soil	222622	04/27/15 22:17	25.0	1	3:CA=38000
126	15d27h00126	SAMPLE	266363-002	Soil	222622	04/27/15 22:23	25.0	1	
127	15d27h00127	CCV				04/27/15 22:30	1.0	13 1	
128	15d27h00128	X	XCCB			04/27/15 22:36	1.0	1	
129	15d27h00129	CCB				04/27/15 22:43	1.0	1	
130	15d27h00130	ICSA				04/27/15 22:49	1.0	11 1	8:CA=280000
131	15d27h00131	ICSAB				04/27/15 22:56	1.0	12 1	8:CA=290000
132	15d27h00132	X	RINSE			04/27/15 23:03	1.0	1	
133	15d27h00133	X	RINSE			04/27/15 23:09	1.0	1	
134	15d27h00134	SAMPLE	266161-004	Filtrate	222621	04/27/15 23:16	5.0	1	
135	15d27h00135	SAMPLE	266161-005	Filtrate	222621	04/27/15 23:22	5.0	1	
136	15d27h00136	SAMPLE	266161-006	Filtrate	222621	04/27/15 23:28	5.0	1	
137	15d27h00137	SAMPLE	266161-008	Filtrate	222621	04/27/15 23:35	5.0	1	
138	15d27h00138	SAMPLE	266161-009	Filtrate	222621	04/27/15 23:41	5.0	1	
139	15d27h00139	SAMPLE	266161-013	Filtrate	222621	04/27/15 23:47	5.0	1	4:CA=71000
140	15d27h00140	SAMPLE	266161-016	Filtrate	222621	04/27/15 23:54	5.0	1	
141	15d27h00141	SAMPLE	266161-017	Filtrate	222621	04/28/15 00:00	5.0	1	
142	15d27h00142	SAMPLE	266161-018	Filtrate	222621	04/28/15 00:06	5.0	1	
143	15d27h00143	SAMPLE	266161-019	Filtrate	222621	04/28/15 00:13	5.0	1	
144	15d27h00144	XCCV				04/28/15 00:19	1.0	13 1	
145	15d27h00145	CCV				04/28/15 00:26	1.0	13 1	
146	15d27h00146	X	XCCB			04/28/15 00:32	1.0	1	
147	15d27h00147	CCB				04/28/15 00:39	1.0	1	
148	15d27h00148	SAMPLE	266161-020	Filtrate	222621	04/28/15 00:45	5.0	1	4:MG=47000
149	15d27h00149	SAMPLE	266161-021	Filtrate	222621	04/28/15 00:52	5.0	1	
150	15d27h00150	SAMPLE	266161-023	Filtrate	222621	04/28/15 00:58	5.0	1	
151	15d27h00151	SAMPLE	266161-025	Filtrate	222621	04/28/15 01:04	5.0	1	
152	15d27h00152	SAMPLE	266161-026	Filtrate	222621	04/28/15 01:11	5.0	1	
153	15d27h00153	SAMPLE	266258-001	Filtrate	222621	04/28/15 01:17	5.0	1	
154	15d27h00154	SAMPLE	266263-002	Filtrate	222621	04/28/15 01:23	5.0	1	6:NA=270000
155	15d27h00155	X	RINSE			04/28/15 01:30	1.0	1	
156	15d27h00156	X	RINSE			04/28/15 01:36	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895168934

Instrument : MET16
 Method : EPA 6020

Begun : 04/27/15 07:34
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
157	15d27h00157	X	RINSE			04/28/15 01:43	1.0	1	
158	15d27h00158	CCV				04/28/15 01:49	1.0	13 1	
159	15d27h00159	X	XCCB			04/28/15 01:56	1.0	1	
160	15d27h00160	CCB				04/28/15 02:02	1.0	1	
161	15d27h00161	ICSA				04/28/15 02:09	1.0	11 1	8:CA=280000
162	15d27h00162	ICSAB				04/28/15 02:16	1.0	12 1	8:CA=290000
163	15d27h00163	X	RINSE			04/28/15 02:22	1.0	1	
164	15d27h00164	X	RINSE			04/28/15 02:29	1.0	1	
165	15d27h00165	X	RINSE			04/28/15 02:35	1.0	1	
166	15d27h00166	X	RINSE			04/28/15 02:42	1.0	1	
167	15d27h00167	X	RINSE			04/28/15 02:48	1.0	1	
168	15d27h00168	X	RINSE			04/28/15 02:55	1.0	1	
169	15d27h00169	X	RINSE			04/28/15 03:01	1.0	1	
170	15d27h00170	X	RINSE			04/28/15 03:08	1.0	1	

CRT 04/27/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 108.

NT 04/28/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 109 through 170.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895168934

Date : 04/27/15
 Sequence : MET16 15d27h00

Reference : 15d27h00004
 Analyzed : 04/27/15 07:51

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	1450546	1001107	30167	321220	64683	15015	1545092	2827442	1349610	3455772
		LOWER LIMIT	435164	300332	9050	96366	19405	4505	463528	848233	404883	1036732
		UPPER LIMIT	1740655	1201328	36200	385464	77620	18018	1854110	3392930	1619532	4146926
015	ICB		1421232	940466	29857	322885	65856	14946	1516109	2831491	1313640	3427021
017	ICSA		1075743	712973	24229	302558	49743	10952	1051793	1902115	985959	2678429
018	ICSAB		1115237	710363	22654	254409	47673	11003	1064572	1930292	1008461	2725844
024	BLANK	QC785236	1227088	795786	25496	298805	58001	12681	1294384	2566562	1110982	3064325
025	LOD	256092-048	1231674	762656	25119	281618	57395	12796	1296933	2582384	1111193	3060380
026	LOD	256092-050	1253380	797377	25816	290390	58151	13037	1328742	2612683	1137773	3121809
028	CCV		1246903	816309	26444	289349	56723	12855	1304461	2496789	1146466	3134571
030	CCB		1235782	815139	25902	283548	57882	13129	1335568	2633033	1140613	3115299
031	BLANK	QC785469	1255666	845056	31077	280720	57686	14128	1336199	2635839	1145499	3139767
032	BS	QC785470	1236030	790244	26207	292356	57897	13016	1318773	2566654	1134338	3104888
033	BSD	QC785471	1233213	807786	28858	362798	67452	13113	1307708	2558841	1124182	3090420
034	CCV		1270058	820183	27371	307823	57603	13082	1320063	2510706	1163653	3151689
036	CCB		1240140	798165	25279	276088	57480	12934	1339146	2636149	1147061	3124299
037	MSS	266234-001	1234559	840038	30488	271630	56756	13900	1320443	2507966	1147263	3099799
038	MS	QC785472	1213704	760962	22464	300539	58196	12560	1297868	2477227	1131904	3082185
039	MSD	QC785473	1205662	821606	28824	278653	57452	13090	1290836	2465477	1125295	3086844
040	SER	QC785474	1152815	695780	26178	290923	59676	13508	1242629	2432253	1066312	2914552
041	PDS	QC785475	1207932	790359	25744	299343	58295	13081	1283281	2440601	1129967	3068403
042	MSS	266234-001	1261181	805214	26055	279974	59802	13698	1357801	2647978	1165222	3149192
043	CCV		1269683	865263	30020	313039	57698	13957	1321759	2519046	1156486	3152999
046	CCB		1268422	797986	26379	276190	56845	13552	1367923	2680361	1165128	3178646
047	BLANK	QC785469	1262809	813573	26960	287312	56992	13521	1361972	2663856	1166015	3176383
048	SAMPLE	266241-005	1380250	847792	29847	310369	55638	13848	1272223	432683 *	1176721	3002282
049	SAMPLE	266241-006	1382997	921686	28253	316172	53147	13609	1287820	2137204	1212226	3003106
050	SAMPLE	266241-010	1500404	985347	31214	298004	56947	14312	1347719	547632 *	1268548	3120052
051	SAMPLE	266241-005	1703696	1103993	34574	354172	71175	16878	1593016	1773563	1449711	3581116
052	SAMPLE	266241-006	1555859	1021527	32754	352160	69295	15959	1487812	2680824	1350908	3385691
053	SAMPLE	266241-010	1670770	1079185	33773	348898	69862	16393	1583091	1693232	1438740	3571638
054	CCV		1485025	1000913	32342	358711	66121	15144	1475913	4371731 *	1318560	3424363
056	CCB		1511986	956814	31603	344044	68751	15634	1519733	2811805	1326005	3429322
057	ICSA		1168488	778644	26993	318568	50158	11912	1122721	2498288	1059379	2864685
058	ICSAB		1165207	749246	24585	258659	47908	11518	1115061	2338940	1053203	2835672
061	BLANK	QC785469	1371215	946354	31506	390688 *	65951	14645	1410148	2737467	1228011	3244203
066	SAMPLE	266150-002	1157063	825284	29585	323862	50702	11668	1137014	1761570	1112323	2563216
067	SAMPLE	266150-003	1284795	932425	29425	311005	53808	12075	1200341	1680603	1202819	2650028
068	SAMPLE	266150-004	1291804	935498	30392	322188	56641	12516	1190949	1626001	1198924	2584649
069	SAMPLE	266150-005	1294787	974773	29862	325142	56027	12467	1228972	1633535	1241403	2650094
070	SAMPLE	266150-006	1306804	961461	30460	327661	56993	12712	1217062	1599264	1237065	2626887
071	SAMPLE	266150-007	1284984	973182	28632	327129	55423	11949	1225766	1597837	1247867	2634154
072	SAMPLE	266150-008	1306271	997169	29696	309659	55039	12679	1246921	1611129	1271083	2670474
073	CCV		1648841	1205848 *	37263 *	424065 *	82243 *	17489	1646946	2668078	1542112	3579011
075	CCB		1604762	1088108	34807	375824	79756 *	17359	1589170	2645979	1442548	3385641
076	SAMPLE	266150-009	1233089	940358	29199	322268	54891	12191	1200006	1571238	1218354	2588341
077	SAMPLE	266150-010	1305277	1010638	30504	318571	57559	12951	1249352	1641030	1285229	2684152
078	SAMPLE	266150-011	1491116	1103688	34016	369013	73123	15752	1447717	2037281	1426167	3134265
079	SAMPLE	266150-012	1200893	975468	28541	331093	54752	11529	1201330	1501209	1247983	2549101
080	SAMPLE	266150-013	1297269	1050184	31336	358112	65590	13360	1304192	1673072	1344215	2759180
081	SAMPLE	266150-014	1240509	1027935	30836	366145	63266	13018	1287707	1644709	1317160	2729863

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895168934

Date : 04/27/15
 Sequence : MET16 15d27h00

Reference : 15d27h00004
 Analyzed : 04/27/15 07:51

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
082	SAMPLE	266234-003	1519382	1141293	35151	419015 *	88750 *	17402	1595548	2569949	1482377	3431532
083	SAMPLE	266234-006	1467727	1092833	33766	391081 *	81256 *	16457	1536766	2497083	1422897	3332410
084	CCV		1437691	1103208	36258 *	423916 *	80821 *	16703	1507997	2463012	1404705	3287804
086	CCB		1471328	1049717	33241	382232	79470 *	16403	1523222	2553505	1391410	3247002
087	ICSA		1246524	970997	31263	389016 *	66327	13817	1249068	2035520	1229070	2969692
089	ICSAB		1243319	889219	28553	338567	66681	13425	1198298	1947966	1184498	2849314
097	CCV		1310776	998124	31384	368959	71506	14684	1378024	2293381	1284721	3021292
099	CCB		1382345	1042179	32610	339988	74522	15648	1466322	2448128	1338754	3091768
100	BLANK	QC785676	1359772	987086	33132	381323	75710	15914	1461485	2435602	1331026	3078784
101	BS	QC785677	1337514	1009696	32639	367922	74413	15498	1432487	2392804	1312778	3056946
102	BSD	QC785678	1342014	1005965	31110	351229	72250	15257	1435417	2404653	1319176	3084298
103	MSS	266161-007	1316398	988733	30581	339662	71175	15138	1416197	2323600	1300876	3058985
104	MS	QC785679	1357879	1033611	31993	353463	72440	15486	1451063	2367707	1351720	3140773
105	MSD	QC785680	1384915	1049260	32151	346535	72797	15754	1475477	2403783	1371269	3192264
106	SER	QC785681	1389815	1041171	33157	376639	75499	16120	1503667	2501373	1368312	3199480
107	PDS	QC785682	1358016	1048832	32817	359729	72196	15432	1470050	2413677	1373924	3215053
108	SAMPLE	266263-002	1426246	1011953	33143	364457	75604	16166	1530014	2556744	1400724	3241348
110	SAMPLE	266263-002	1385222	988659	32133	352288	72497	15877	1487218	2483962	1365263	3203884
111	CCV		1339545	1031392	32220	372959	70492	15155	1446893	2412617	1337616	3172909
113	CCB		1388442	1013591	31375	346438	72326	15493	1503302	2555048	1361135	3203925
116	CCV		1299920	1002311	31417	380813	69380	14505	1407631	2387042	1296684	3116670
118	CCB		1332956	966948	29793	329477	69851	15032	1464545	2525849	1314472	3151144
119	BLANK	QC785685	1328643	966442	29638	327503	68307	14809	1452525	2526052	1306198	3133006
120	BS	QC785686	1310188	967666	29965	329222	67595	14603	1426904	2493910	1294522	3116241
121	BSD	QC785687	1299416	959103	29120	323148	66876	14526	1426265	2500049	1290252	3119164
122	MSS	266350-001	1275941	973085	30250	337732	65987	14426	1396030	2469636	1334246	3117385
123	MS	QC785688	1276697	973033	29801	330486	65075	14184	1390112	2423307	1356653	3120718
124	MSD	QC785689	1273611	971590	29778	327709	65654	14361	1397314	2456288	1342964	3133685
125	SAMPLE	266363-001	1309434	996186	29953	322668	65281	14438	1438769	2491996	1375677	3205271
126	SAMPLE	266363-002	1306037	998991	30892	336592	67710	14853	1443932	2553556	1369548	3217442
127	CCV		1294299	974642	28995	325339	66608	14499	1436869	2473882	1318813	3217767
129	CCB		1323232	948386	29491	311481	69601	15244	1492512	2620959	1341023	3250183
130	ICSA		1157604	914361	28486	323789	56663	13256	1250842	2043515	1225655	2986903
131	ICSAB		1157736	893281	26888	294322	57486	13249	1240504	2019369	1224707	2951143
134	SAMPLE	266161-004	1297804	997598	28984	308426	67280	14991	1477740	2494460	1345616	3219299
135	SAMPLE	266161-005	1284366	974357	28997	320032	69199	14947	1481805	2542358	1341555	3224120
136	SAMPLE	266161-006	1261779	961738	28480	315407	69379	14876	1470511	2533213	1328078	3197738
137	SAMPLE	266161-008	1240325	954963	28318	317643	67591	14622	1439632	2455532	1306213	3150850
138	SAMPLE	266161-009	1314113	1006461	30085	323469	68369	15323	1521673	2596947	1377790	3259852
139	SAMPLE	266161-013	1340033	1059406	29876	319547	66971	15046	1528382	2393174	1444938	3325881
140	SAMPLE	266161-016	1295447	990724	29810	324647	68631	15267	1486594	2519703	1353938	3218738
141	SAMPLE	266161-017	1256788	957773	28002	304466	67368	14746	1462329	2518256	1324445	3159876
142	SAMPLE	266161-018	1264496	937827	28676	307013	66714	14964	1454357	2470237	1315495	3108944
143	SAMPLE	266161-019	1214108	922764	27469	296298	63894	14289	1408165	2419289	1276842	3064045
145	CCV		1157196	865331	27535	300335	61247	13981	1319159	2240427	1218398	2927937
147	CCB		1212655	900582	27031	289147	61821	13915	1410875	2434879	1275804	3042314
148	SAMPLE	266161-020	1334630	1061772	29136	300121	61777	14780	1522302	2454290	1442207	3325683
149	SAMPLE	266161-021	1270497	976697	29195	294092	64448	15192	1475013	2458628	1349815	3184940
150	SAMPLE	266161-023	1227516	941282	29156	294739	64336	15181	1426005	2373486	1303932	3092891
151	SAMPLE	266161-025	1178030	890881	26458	284953	60778	13864	1366685	2288404	1245553	2962274
152	SAMPLE	266161-026	1235038	923807	26983	287510	60980	13756	1417236	2409878	1282554	3046115
153	SAMPLE	266258-001	1158956	879143	26561	286808	61180	13935	1350397	2300569	1223419	2925167

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895168934

Date : 04/27/15
 Sequence : MET16 15d27h00

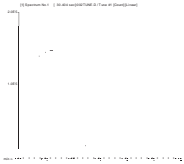
Reference : 15d27h00004
 Analyzed : 04/27/15 07:51

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
154	SAMPLE	266263-002	1141034	900464	26507	274462	55871	13240	1294008	2041312	1239788	2883129
158	CCV		1186614	954047	29251	332485	61226	14082	1375593	2304806	1274480	3030757
160	CCB		1198693	904037	26980	279844	60163	14015	1401430	2396500	1261213	2987732
161	ICSA		1108205	920741	27173	291875	51151	12679	1240899	1975344	1229775	2899201
162	ICSAB		1229634	999203	28457	290532	56940	14027	1356087	2098289	1355293	3134825

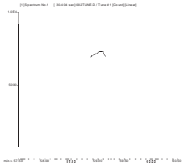
MET16 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D27h00.B\002TUNE.D
 Date Acquired: Apr 27 2015 07:40 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

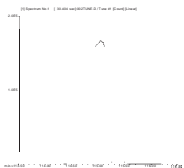
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	113050	113140	113228	113736	112880	0.67	5.00	
59 Co	39773	40261	39919	40063	40438	1.31	5.00	
115 In	895884	897047	892507	888619	898106	0.74	5.00	
205 Tl	135405	136501	135601	135626	134622	0.56	5.00	



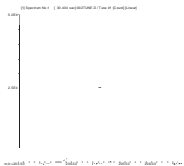
7 Li
Mass Calib.
 Actual: 7.05
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 59.00
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 204.95
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 METALS Filtrate: EPA 6020

Inst : MET16
 Calnum : 895168934001
 Units : ug/L
 Date : 27-APR-2015 07:51
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d27h00005	895168934005	27-APR-2015 07:58	S27043, S26751	
L2	15d27h00006	895168934006	27-APR-2015 08:04	S27044, S26751	
L3	15d27h00007	895168934007	27-APR-2015 08:10	S27045, S26751	
L4	15d27h00008	895168934008	27-APR-2015 08:17	S27046, S26751	
L5	15d27h00009	895168934009	27-APR-2015 08:23	S27041, S26751	
L6	15d27h00010	895168934010	27-APR-2015 08:29	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0077	0.0076	0.0070	0.0075	0.0071	0.0069	BLNK	-0.3684	143.566		0.0073	1.000	0.995	
Antimony	A	0.0032	0.0028	0.0027	0.0027	0.0027	0.0026	BLNK	-0.0354	378.245		0.0028	1.000	0.995	
Barium	A	6.1E-4	4.8E-4	4.8E-4	4.8E-4	4.6E-4	4.5E-4	BLNK	-0.0110	2196.46		4.9E-4	1.000	0.995	
Beryllium	A	0.0021	0.0019	0.0018	0.0018	0.0018	0.0017	BLNK	-0.0166	581.833		0.0018	1.000	0.995	
Cadmium	A	7.1E-4	7.1E-4	7.1E-4	7.3E-4	7.2E-4	7.0E-4	BLNK	-0.0012	1427.92		7.1E-4	1.000	0.995	
Calcium	A	6.2E-4	2.2E-4	1.9E-4	1.8E-4	1.8E-4	1.7E-4	BLNK	-5.8116	5751.79		2.6E-4	1.000	0.995	
Lead	A	0.0103	0.0086	0.0083	0.0081	0.0078	0.0074	BLNK	-0.0274	133.460		0.0084	1.000	0.995	
Magnesium	A	0.0107	0.0071	0.0065	0.0070	0.0066	0.0064	BLNK	-2.1343	155.065		0.0074	1.000	0.995	
Molybdenum	A	0.0025	0.0020	0.0019	0.0019	0.0019	0.0018	BLNK	-0.0445	545.957		0.0020	1.000	0.995	
Potassium	A	0.0644	0.0175	0.0110	0.0062	0.0054	0.0053	BLNK	-103.90	190.365		0.0183	1.000	0.995	
Silver	A	0.0030	0.0029	0.0028	0.0029	0.0028	0.0027	BLNK	-0.0068	367.543		0.0028	1.000	0.995	
Thallium	A	0.0075	0.0069	0.0067	0.0068	0.0069	0.0069	BLNK	-0.0078	145.270		0.0070	1.000	0.995	
Arsenic	E	0.0054	0.0042	0.0040	0.0039	0.0039	0.0038	BLNK	-0.0487	261.067		0.0042	1.000	0.995	
Chromium	E	0.0543	0.0394	0.0302	0.0289	0.0270	0.0267	BLNK	-0.0914	37.3833		0.0344	1.000	0.995	
Cobalt	E	0.0453	0.0501	0.0408	0.0434	0.0402	0.0396	BLNK	-0.0039	25.1580		0.0433	1.000	0.995	
Copper	E	0.2306	0.1046	0.0770	0.0633	0.0596	0.0578	BLNK	-0.2183	17.2039		0.0988	1.000	0.995	
Manganese	E	0.0182	0.0171	0.0143	0.0149	0.0141	0.0140	BLNK	-0.0063	71.5056		0.0154	1.000	0.995	
Nickel	E	0.0195	0.0147	0.0117	0.0116	0.0105	0.0103	BLNK	-0.0575	96.5778		0.0131	1.000	0.995	
Sodium	E	0.0786	0.0251	0.0151	0.0096	0.0093	0.0092	BLNK	-69.606	108.581		0.0245	1.000	0.995	
Vanadium	E	0.0437	0.0283	0.0214	0.0205	0.0194	0.0193	BLNK	-0.1134	51.7055		0.0254	1.000	0.995	
Zinc	E		0.0216	0.0154	0.0099	0.0092	0.0089	BLNK	-0.1819	111.910		0.0130	1.000	0.995	
Iron	H	0.0103	0.0080	0.0081	0.0082	0.0074	0.0071	BLNK	-3.5018	140.039		0.0082	1.000	0.995	
Selenium	H	0.0015	0.0015	0.0015	0.0015	0.0014	0.0014	BLNK	-0.0253	720.178		0.0015	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	7	50.000	8	100.00	0	1000.0	7	10000	2	20000	0
Antimony	A	0.1000	-13	0.5000	-2	1.0000	-2	10.000	1	100.00	1	200.00	0
Barium	A	0.1000	24	0.5000	3	1.0000	4	10.000	6	100.00	2	200.00	0
Beryllium	A	0.1000	7	0.5000	5	1.0000	5	10.000	5	100.00	2	200.00	-1
Cadmium	A	0.1000	1	0.5000	1	1.0000	1	10.000	5	100.00	2	200.00	-1
Calcium	A	10.000	198	50.000	16	100.00	4	1000.0	5	10000	2	20000	-1
Lead	A	0.1000	10	0.5000	9	1.0000	9	10.000	8	100.00	4	200.00	-1
Magnesium	A	10.000	45	50.000	7	100.00	-1	1000.0	8	10000	2	20000	-1
Molybdenum	A	0.1000	-8	0.5000	2	1.0000	-1	10.000	3	100.00	2	200.00	0
Potassium	A	10.000	87	50.000	25	100.00	6	1000.0	8	10000	2	20000	0
Silver	A	0.1000	3	0.5000	4	1.0000	3	10.000	6	100.00	2	200.00	-1
Thallium	A	0.0500	-6	0.2500	-3	0.5000	-4	5.0000	-1	50.000	1	100.00	0
Arsenic	E	0.1000	-8	0.5000	0	1.0000	-1	10.000	2	100.00	2	200.00	-1
Chromium	E	0.1000	11	0.5000	29	1.0000	4	10.000	7	100.00	1	200.00	0
Cobalt	E	0.1000	10	0.5000	25	1.0000	2	10.000	9	100.00	1	200.00	0
Copper	E	0.1000	78	0.5000	36	1.0000	11	10.000	7	100.00	2	200.00	-1
Manganese	E	0.1000	24	0.5000	21	1.0000	1	10.000	7	100.00	1	200.00	0
Nickel	E	0.1000	31	0.5000	31	1.0000	8	10.000	11	100.00	2	200.00	0
Sodium	E	10.000	58	50.000	33	100.00	-6	1000.0	-3	10000	1	20000	0
Vanadium	E	0.1000	12	0.5000	24	1.0000	-1	10.000	5	100.00	0	200.00	0
Zinc	E			0.5000	105	1.0000	55	10.000	9	100.00	3	200.00	-1
Iron	H	10.000	9	50.000	5	100.00	10	1000.0	15	10000	3	20000	-1
Selenium	H	0.1000	-14	0.5000	1	1.0000	6	10.000	6	100.00	2	200.00	0

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
Calnum : 895168934001

Cal Date : 27-APR-2015

ICV 895168934012 (15d27h00012 27-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10110	ug/L	1	10	
Antimony	A	100.0	103.1	ug/L	3	10	
Barium	A	100.0	101.8	ug/L	2	10	
Beryllium	A	100.0	102.4	ug/L	2	10	
Cadmium	A	100.0	102.4	ug/L	2	10	
Calcium	A	10000	10090	ug/L	1	10	
Lead	A	100.0	103.6	ug/L	4	10	
Magnesium	A	10000	10160	ug/L	2	10	
Molybdenum	A	100.0	101.8	ug/L	2	10	
Potassium	A	10000	9930	ug/L	-1	10	
Silver	A	100.0	101.5	ug/L	2	10	
Thallium	A	50.00	50.17	ug/L	0	10	
Arsenic	E	100.0	98.12	ug/L	-2	10	
Chromium	E	100.0	95.72	ug/L	-4	10	
Cobalt	E	100.0	96.11	ug/L	-4	10	
Copper	E	100.0	98.47	ug/L	-2	10	
Manganese	E	100.0	95.57	ug/L	-4	10	
Nickel	E	100.0	96.81	ug/L	-3	10	
Sodium	E	10000	9646	ug/L	-4	10	
Vanadium	E	100.0	95.33	ug/L	-5	10	
Zinc	E	100.0	99.45	ug/L	-1	10	
Iron	H	10000	9419	ug/L	-6	10	
Selenium	H	100.0	100.2	ug/L	0	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895168934015 File : 15d27h00015 Time : 27-APR-2015 09:04
 Cal : 895168934001 Caldate : 27-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	[5.884]	10.00	---	ug/L	!ICB
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1421232	-2.02
Scandium	A	1001107	940466	-6.06
Scandium	E	30167	29857	-1.03
Scandium	H	321220	322885	0.52
Germanium	H	64683	65856	1.81
Germanium	E	15015	14946	-0.46
Indium	A	1545092	1516109	-1.88
Bismuth	A	2827442	2831491	0.14
Yttrium	A	1349610	1313640	-2.67
Terbium	A	3455772	3427021	-0.83

!=warning ICB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895168934087 File : 15d27h00087 Time : 27-APR-2015 17:59
 Cal : 895168934001 Caldate : 27-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4549	0.1000	ug/L	
Barium	A	1.974	0.1000	ug/L	
Beryllium	A	[0.001800]	0.1000	ug/L	
Cadmium	A	2.875	0.1000	ug/L	
Lead	A	0.1960	0.1000	ug/L	
Silver	A	0.3479	0.1000	ug/L	
Thallium	A	[0.01680]	0.05000	ug/L	
Arsenic	E	0.6361	0.1000	ug/L	
Chromium	E	0.6897	0.1000	ug/L	
Cobalt	E	0.9614	0.1000	ug/L	
Copper	E	1.730	0.1000	ug/L	
Manganese	E	6.116	0.1000	ug/L	
Nickel	E	0.9175	0.1000	ug/L	
Vanadium	E	0.1251	0.1000	ug/L	
Zinc	E	2.207	0.5000	ug/L	
Selenium	H	0.1152	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	90990	ug/L	91
Calcium	A	300000	279200	ug/L	93
Magnesium	A	100000	87020	ug/L	87
Molybdenum	A	2000	1904	ug/L	95
Potassium	A	100000	95490	ug/L	95
Sodium	E	250000	203500	ug/L	81
Phosphorus	E	100000	91480	ug/L	91
Iron	H	250000	201500	ug/L	81

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1246524	-14.07
Scandium	A	1001107	970997	-3.01
Scandium	E	30167	31263	3.63
Scandium	H	321220	389016	21.11 *
Germanium	H	64683	66327	2.54
Germanium	E	15015	13817	-7.98
Indium	A	1545092	1249068	-19.16
Bismuth	A	2827442	2035520	-28.01
Yttrium	A	1349610	1229070	-8.93
Terbium	A	3455772	2969692	-14.07

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895168934089 File : 15d27h00089
 Cal : 895168934001 Caldate : 27-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 27-APR-2015 18:12

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	95070	ug/L	-5		
Cadmium	A	100.0	92.68	ug/L	-7	20	
Calcium	A	300000	293500	ug/L	-2		
Magnesium	A	100000	90960	ug/L	-9		
Molybdenum	A	2000	1883	ug/L	-6		
Potassium	A	100000	100800	ug/L	1		
Silver	A	50.00	45.57	ug/L	-9	20	
Arsenic	E	100.0	101.3	ug/L	1	20	
Chromium	E	200.0	182.6	ug/L	-9	20	
Cobalt	E	200.0	174.9	ug/L	-13	20	
Copper	E	200.0	167.9	ug/L	-16	20	
Manganese	E	200.0	189.7	ug/L	-5	20	
Nickel	E	200.0	169.9	ug/L	-15	20	
Sodium	E	250000	217600	ug/L	-13		
Vanadium	E	200.0	193.3	ug/L	-3	20	
Zinc	E	100.0	78.46	ug/L	-22	20	ab- ***
Iron	H	250000	230500	ug/L	-8		
Selenium	H	100.0	86.75	ug/L	-13	20	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	321220	338567	5.40
Scandium	A	1001107	889219	-11.18
Scandium	E	30167	28553	-5.35
Germanium	H	64683	66681	3.09
Germanium	E	15015	13425	-10.59
Indium	A	1545092	1198298	-22.44
Yttrium	A	1349610	1184498	-12.23

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895168934097 File : 15d27h00097 Time : 27-APR-2015 19:05
 Cal : 895168934001 Caldate : 27-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0073	0.0065	10000	9373	ug/L	-6	10	
Antimony	A	0.0028	0.0026	100.0	98.57	ug/L	-1	10	
Barium	A	4.9E-4	5.0E-4	100.0	110.6	ug/L	11	10	c+ ***
Beryllium	A	0.0018	0.0016	100.0	93.19	ug/L	-7	10	
Cadmium	A	7.1E-4	6.6E-4	100.0	94.34	ug/L	-6	10	
Calcium	A	2.6E-4	1.7E-4	10000	9731	ug/L	-3	10	
Lead	A	0.0084	0.0071	100.0	95.10	ug/L	-5	10	
Magnesium	A	0.0074	0.0059	10000	9133	ug/L	-9	10	
Molybdenum	A	0.0020	0.0017	100.0	95.48	ug/L	-5	10	
Potassium	A	0.0183	0.0054	10000	10120	ug/L	1	10	
Silver	A	0.0028	0.0026	100.0	96.76	ug/L	-3	10	
Thallium	A	0.0070	0.0067	50.00	48.38	ug/L	-3	10	
Arsenic	E	0.0042	0.0038	100.0	98.18	ug/L	-2	10	
Chromium	E	0.0344	0.0244	100.0	91.23	ug/L	-9	10	
Cobalt	E	0.0433	0.0366	100.0	92.16	ug/L	-8	10	
Copper	E	0.0988	0.0555	100.0	95.22	ug/L	-5	10	
Manganese	E	0.0154	0.0131	100.0	93.45	ug/L	-7	10	
Nickel	E	0.0131	0.0096	100.0	92.70	ug/L	-7	10	
Sodium	E	0.0245	0.0083	10000	8965	ug/L	-10	10	
Vanadium	E	0.0254	0.0184	100.0	94.85	ug/L	-5	10	
Zinc	E	0.0130	0.0082	100.0	91.26	ug/L	-9	10	
Iron	H	0.0082	0.0067	10000	9345	ug/L	-7	10	
Selenium	H	0.0015	0.0012	100.0	88.29	ug/L	-12	10	c- ***

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1310776	-9.64
Scandium	A	1001107	998124	-0.30
Scandium	E	30167	31384	4.03
Scandium	H	321220	368959	14.86
Germanium	H	64683	71506	10.55
Germanium	E	15015	14684	-2.20
Indium	A	1545092	1378024	-10.81
Bismuth	A	2827442	2293381	-18.89
Yttrium	A	1349610	1284721	-4.81
Terbium	A	3455772	3021292	-12.57

+ = high bias - = low bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
Seqnum : 895168934099
Cal : 895168934001

File : 15d27h00099
Caldate : 27-APR-2015

IDF : 1.0
Time : 27-APR-2015 19:18

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	[9.617]	10.00	5.000	ug/L	!CCB
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	[0.06140]	0.1000	0.05000	ug/L	!CCB
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	0.6755	0.1000	0.2000	ug/L	CCB ***
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	283.4	10.00	100.0	ug/L	CCB ***
Vanadium	E	0.1085	0.1000	0.05000	ug/L	CCB ***
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1382345	-4.70
Scandium	A	1001107	1042179	4.10
Scandium	E	30167	32610	8.10
Scandium	H	321220	339988	5.84
Germanium	H	64683	74522	15.21
Germanium	E	15015	15648	4.22
Indium	A	1545092	1466322	-5.10
Bismuth	A	2827442	2448128	-13.42
Yttrium	A	1349610	1338754	-0.80
Terbium	A	3455772	3091768	-10.53

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895168934111 File : 15d27h00111 Time : 27-APR-2015 20:47
 Cal : 895168934001 Caldate : 27-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0073	0.0066	10000	9489	ug/L	-5	10	
Antimony	A	0.0028	0.0026	100.0	99.79	ug/L	0	10	
Barium	A	4.9E-4	5.1E-4	100.0	111.0	ug/L	11	10	c+ ***
Beryllium	A	0.0018	0.0016	100.0	95.49	ug/L	-5	10	
Cadmium	A	7.1E-4	6.7E-4	100.0	96.06	ug/L	-4	10	
Calcium	A	2.6E-4	1.7E-4	10000	9876	ug/L	-1	10	
Lead	A	0.0084	0.0073	100.0	96.88	ug/L	-3	10	
Magnesium	A	0.0074	0.0060	10000	9269	ug/L	-7	10	
Molybdenum	A	0.0020	0.0018	100.0	97.74	ug/L	-2	10	
Potassium	A	0.0183	0.0054	10000	10220	ug/L	2	10	
Silver	A	0.0028	0.0027	100.0	98.76	ug/L	-1	10	
Thallium	A	0.0070	0.0068	50.00	49.14	ug/L	-2	10	
Arsenic	E	0.0042	0.0037	100.0	97.11	ug/L	-3	10	
Chromium	E	0.0344	0.0245	100.0	91.44	ug/L	-9	10	
Cobalt	E	0.0433	0.0367	100.0	92.35	ug/L	-8	10	
Copper	E	0.0988	0.0548	100.0	94.09	ug/L	-6	10	
Manganese	E	0.0154	0.0130	100.0	92.99	ug/L	-7	10	
Nickel	E	0.0131	0.0095	100.0	92.12	ug/L	-8	10	
Sodium	E	0.0245	0.0082	10000	8814	ug/L	-12	10	c- ***
Vanadium	E	0.0254	0.0184	100.0	94.95	ug/L	-5	10	
Zinc	E	0.0130	0.0082	100.0	91.61	ug/L	-8	10	
Iron	H	0.0082	0.0066	10000	9254	ug/L	-7	10	
Selenium	H	0.0015	0.0013	100.0	90.11	ug/L	-10	10	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1339545	-7.65
Scandium	A	1001107	1031392	3.03
Scandium	E	30167	32220	6.81
Scandium	H	321220	372959	16.11
Germanium	H	64683	70492	8.98
Germanium	E	15015	15155	0.93
Indium	A	1545092	1446893	-6.36
Bismuth	A	2827442	2412617	-14.67
Yttrium	A	1349610	1337616	-0.89
Terbium	A	3455772	3172909	-8.19

+ = high bias - = low bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895168934113 File : 15d27h00113 Time : 27-APR-2015 21:00
 Cal : 895168934001 Caldate : 27-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	[8.253]	10.00	5.000	ug/L	!CCB
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	[0.06620]	0.1000	0.05000	ug/L	!CCB
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	0.3765	0.1000	0.2000	ug/L	CCB ***
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	118.8	10.00	100.0	ug/L	CCB ***
Vanadium	E	[0.09060]	0.1000	0.05000	ug/L	!CCB
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1388442	-4.28
Scandium	A	1001107	1013591	1.25
Scandium	E	30167	31375	4.00
Scandium	H	321220	346438	7.85
Germanium	H	64683	72326	11.82
Germanium	E	15015	15493	3.18
Indium	A	1545092	1503302	-2.70
Bismuth	A	2827442	2555048	-9.63
Yttrium	A	1349610	1361135	0.85
Terbium	A	3455772	3203925	-7.29

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895168934127 File : 15d27h00127
 Cal : 895168934001 Caldate : 27-APR-2015
 Standards: S26726, S26751

IDF : 1.0
 Time : 27-APR-2015 22:30

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0073	0.0067	10000	9644	ug/L	-4	10	
Antimony	A	0.0028	0.0027	100.0	101.0	ug/L	1	10	
Barium	A	4.9E-4	4.9E-4	100.0	108.4	ug/L	8	10	
Beryllium	A	0.0018	0.0017	100.0	96.31	ug/L	-4	10	
Cadmium	A	7.1E-4	6.7E-4	100.0	96.32	ug/L	-4	10	
Calcium	A	2.6E-4	1.8E-4	10000	10060	ug/L	1	10	
Lead	A	0.0084	0.0074	100.0	98.19	ug/L	-2	10	
Magnesium	A	0.0074	0.0061	10000	9497	ug/L	-5	10	
Molybdenum	A	0.0020	0.0018	100.0	97.67	ug/L	-2	10	
Potassium	A	0.0183	0.0054	10000	10260	ug/L	3	10	
Silver	A	0.0028	0.0027	100.0	98.66	ug/L	-1	10	
Thallium	A	0.0070	0.0068	50.00	49.27	ug/L	-1	10	
Arsenic	E	0.0042	0.0038	100.0	99.02	ug/L	-1	10	
Chromium	E	0.0344	0.0264	100.0	98.46	ug/L	-2	10	
Cobalt	E	0.0433	0.0394	100.0	99.13	ug/L	-1	10	
Copper	E	0.0988	0.0555	100.0	95.23	ug/L	-5	10	
Manganese	E	0.0154	0.0139	100.0	99.53	ug/L	0	10	
Nickel	E	0.0131	0.0103	100.0	99.16	ug/L	-1	10	
Sodium	E	0.0245	0.0087	10000	9404	ug/L	-6	10	
Vanadium	E	0.0254	0.0195	100.0	100.9	ug/L	1	10	
Zinc	E	0.0130	0.0084	100.0	93.52	ug/L	-6	10	
Iron	H	0.0082	0.0073	10000	10280	ug/L	3	10	
Selenium	H	0.0015	0.0013	100.0	92.04	ug/L	-8	10	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1294299	-10.77
Scandium	A	1001107	974642	-2.64
Scandium	E	30167	28995	-3.89
Scandium	H	321220	325339	1.28
Germanium	H	64683	66608	2.98
Germanium	E	15015	14499	-3.44
Indium	A	1545092	1436869	-7.00
Bismuth	A	2827442	2473882	-12.50
Yttrium	A	1349610	1318813	-2.28
Terbium	A	3455772	3217767	-6.89

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895168934129 File : 15d27h00129 Time : 27-APR-2015 22:43
 Cal : 895168934001 Caldate : 27-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	[6.066]	10.00	5.000	ug/L	!CCB
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	[0.08130]	0.1000	0.05000	ug/L	!CCB
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	0.2028	0.1000	0.2000	ug/L	CCB ***
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	74.78	10.00	100.0	ug/L	CCB ***
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1323232	-8.78
Scandium	A	1001107	948386	-5.27
Scandium	E	30167	29491	-2.24
Scandium	H	321220	311481	-3.03
Germanium	H	64683	69601	7.60
Germanium	E	15015	15244	1.53
Indium	A	1545092	1492512	-3.40
Bismuth	A	2827442	2620959	-7.30
Yttrium	A	1349610	1341023	-0.64
Terbium	A	3455772	3250183	-5.95

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895168934130 File : 15d27h00130 Time : 27-APR-2015 22:49
 Cal : 895168934001 Caldate : 27-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4792	0.1000	ug/L	
Barium	A	1.883	0.1000	ug/L	
Beryllium	A	[0.01960]	0.1000	ug/L	
Cadmium	A	2.521	0.1000	ug/L	
Lead	A	0.2001	0.1000	ug/L	
Silver	A	0.1863	0.1000	ug/L	
Thallium	A	[0.01700]	0.05000	ug/L	
Arsenic	E	0.6477	0.1000	ug/L	
Chromium	E	0.7237	0.1000	ug/L	
Cobalt	E	0.9741	0.1000	ug/L	
Copper	E	1.665	0.1000	ug/L	
Manganese	E	6.149	0.1000	ug/L	
Nickel	E	1.024	0.1000	ug/L	
Vanadium	E	0.1203	0.1000	ug/L	
Zinc	E	3.529	0.5000	ug/L	
Selenium	H	[0.08650]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	91050	ug/L	91
Calcium	A	300000	283600	ug/L	95
Magnesium	A	100000	86960	ug/L	87
Molybdenum	A	2000	1900	ug/L	95
Potassium	A	100000	95930	ug/L	96
Sodium	E	250000	203800	ug/L	82
Phosphorus	E	100000	90740	ug/L	91
Iron	H	250000	219700	ug/L	88

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1157604	-20.20
Scandium	A	1001107	914361	-8.67
Scandium	E	30167	28486	-5.57
Scandium	H	321220	323789	0.80
Germanium	H	64683	56663	-12.40
Germanium	E	15015	13256	-11.71
Indium	A	1545092	1250842	-19.04
Bismuth	A	2827442	2043515	-27.73
Yttrium	A	1349610	1225655	-9.18
Terbium	A	3455772	2986903	-13.57

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895168934131 File : 15d27h00131
 Cal : 895168934001 Caldate : 27-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 27-APR-2015 22:56

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	93460	ug/L	-7		
Cadmium	A	100.0	92.67	ug/L	-7	20	
Calcium	A	300000	289900	ug/L	-3		
Magnesium	A	100000	88760	ug/L	-11		
Molybdenum	A	2000	1896	ug/L	-5		
Potassium	A	100000	98620	ug/L	-1		
Silver	A	50.00	45.74	ug/L	-9	20	
Arsenic	E	100.0	97.83	ug/L	-2	20	
Chromium	E	200.0	185.0	ug/L	-7	20	
Cobalt	E	200.0	177.8	ug/L	-11	20	
Copper	E	200.0	163.4	ug/L	-18	20	
Manganese	E	200.0	188.8	ug/L	-6	20	
Nickel	E	200.0	173.0	ug/L	-13	20	
Sodium	E	250000	214300	ug/L	-14		
Vanadium	E	200.0	194.0	ug/L	-3	20	
Zinc	E	100.0	76.77	ug/L	-23	20	ab- ***
Iron	H	250000	241900	ug/L	-3		
Selenium	H	100.0	92.33	ug/L	-8	20	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	321220	294322	-8.37
Scandium	A	1001107	893281	-10.77
Scandium	E	30167	26888	-10.87
Germanium	H	64683	57486	-11.13
Germanium	E	15015	13249	-11.76
Indium	A	1545092	1240504	-19.71
Yttrium	A	1349610	1224707	-9.25

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895168934145 File : 15d27h00145
 Cal : 895168934001 Caldate : 27-APR-2015
 Standards: S26726, S26751

IDF : 1.0
 Time : 28-APR-2015 00:26

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0073	0.0069	10000	9883	ug/L	-1	10	
Antimony	A	0.0028	0.0027	100.0	103.1	ug/L	3	10	
Barium	A	4.9E-4	5.1E-4	100.0	111.8	ug/L	12	10	c+ ***
Beryllium	A	0.0018	0.0016	100.0	95.79	ug/L	-4	10	
Cadmium	A	7.1E-4	6.7E-4	100.0	95.70	ug/L	-4	10	
Calcium	A	2.6E-4	1.8E-4	10000	10410	ug/L	4	10	
Lead	A	0.0084	0.0074	100.0	98.41	ug/L	-2	10	
Magnesium	A	0.0074	0.0063	10000	9726	ug/L	-3	10	
Molybdenum	A	0.0020	0.0018	100.0	99.27	ug/L	-1	10	
Potassium	A	0.0183	0.0057	10000	10700	ug/L	7	10	
Silver	A	0.0028	0.0027	100.0	99.46	ug/L	-1	10	
Thallium	A	0.0070	0.0068	50.00	49.56	ug/L	-1	10	
Arsenic	E	0.0042	0.0038	100.0	99.65	ug/L	0	10	
Chromium	E	0.0344	0.0264	100.0	98.67	ug/L	-1	10	
Cobalt	E	0.0433	0.0396	100.0	99.51	ug/L	0	10	
Copper	E	0.0988	0.0552	100.0	94.79	ug/L	-5	10	
Manganese	E	0.0154	0.0138	100.0	98.86	ug/L	-1	10	
Nickel	E	0.0131	0.0103	100.0	99.36	ug/L	-1	10	
Sodium	E	0.0245	0.0086	10000	9241	ug/L	-8	10	
Vanadium	E	0.0254	0.0196	100.0	101.4	ug/L	1	10	
Zinc	E	0.0130	0.0083	100.0	93.12	ug/L	-7	10	
Iron	H	0.0082	0.0073	10000	10160	ug/L	2	10	
Selenium	H	0.0015	0.0013	100.0	90.56	ug/L	-9	10	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1157196	-20.22
Scandium	A	1001107	865331	-13.56
Scandium	E	30167	27535	-8.72
Scandium	H	321220	300335	-6.50
Germanium	H	64683	61247	-5.31
Germanium	E	15015	13981	-6.89
Indium	A	1545092	1319159	-14.62
Bismuth	A	2827442	2240427	-20.76
Yttrium	A	1349610	1218398	-9.72
Terbium	A	3455772	2927937	-15.27

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895168934147 File : 15d27h00147 Time : 28-APR-2015 00:39
 Cal : 895168934001 Caldate : 27-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	[8.579]	10.00	5.000	ug/L	!CCB
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	10.66	10.00	---	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	0.1638	0.1000	0.2000	ug/L	CCB ***
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	58.98	10.00	100.0	ug/L	CCB ***
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1212655	-16.40
Scandium	A	1001107	900582	-10.04
Scandium	E	30167	27031	-10.40
Scandium	H	321220	289147	-9.98
Germanium	H	64683	61821	-4.42
Germanium	E	15015	13915	-7.33
Indium	A	1545092	1410875	-8.69
Bismuth	A	2827442	2434879	-13.88
Yttrium	A	1349610	1275804	-5.47
Terbium	A	3455772	3042314	-11.96

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895168934161 File : 15d27h00161 Time : 28-APR-2015 02:09
 Cal : 895168934001 Caldate : 27-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4622	0.1000	ug/L	
Barium	A	2.037	0.1000	ug/L	
Beryllium	A	[0.02230]	0.1000	ug/L	
Cadmium	A	2.352	0.1000	ug/L	
Lead	A	0.2032	0.1000	ug/L	
Silver	A	0.1472	0.1000	ug/L	
Thallium	A	[0.01740]	0.05000	ug/L	
Arsenic	E	0.5966	0.1000	ug/L	
Chromium	E	0.7426	0.1000	ug/L	
Cobalt	E	0.9984	0.1000	ug/L	
Copper	E	1.505	0.1000	ug/L	
Manganese	E	6.183	0.1000	ug/L	
Nickel	E	0.9932	0.1000	ug/L	
Vanadium	E	0.1121	0.1000	ug/L	
Zinc	E	3.334	0.5000	ug/L	
Selenium	H	[0.05880]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	90240	ug/L	90
Calcium	A	300000	283600	ug/L	95
Magnesium	A	100000	85670	ug/L	86
Molybdenum	A	2000	1938	ug/L	97
Potassium	A	100000	96710	ug/L	97
Sodium	E	250000	201400	ug/L	81
Phosphorus	E	100000	91060	ug/L	91
Iron	H	250000	214200	ug/L	86

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1450546	1108205	-23.60
Scandium	A	1001107	920741	-8.03
Scandium	E	30167	27173	-9.92
Scandium	H	321220	291875	-9.14
Germanium	H	64683	51151	-20.92
Germanium	E	15015	12679	-15.56
Indium	A	1545092	1240899	-19.69
Bismuth	A	2827442	1975344	-30.14
Yttrium	A	1349610	1229775	-8.88
Terbium	A	3455772	2899201	-16.11

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895168934162 File : 15d27h00162
 Cal : 895168934001 Caldate : 27-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 28-APR-2015 02:16

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	91210	ug/L	-9		
Cadmium	A	100.0	93.13	ug/L	-7	20	
Calcium	A	300000	287200	ug/L	-4		
Magnesium	A	100000	86310	ug/L	-14		
Molybdenum	A	2000	1905	ug/L	-5		
Potassium	A	100000	98640	ug/L	-1		
Silver	A	50.00	46.65	ug/L	-7	20	
Arsenic	E	100.0	103.0	ug/L	3	20	
Chromium	E	200.0	187.1	ug/L	-6	20	
Cobalt	E	200.0	181.5	ug/L	-9	20	
Copper	E	200.0	167.8	ug/L	-16	20	
Manganese	E	200.0	189.8	ug/L	-5	20	
Nickel	E	200.0	176.7	ug/L	-12	20	
Sodium	E	250000	212200	ug/L	-15		
Vanadium	E	200.0	197.2	ug/L	-1	20	
Zinc	E	100.0	78.19	ug/L	-22	20	ab- ***
Iron	H	250000	243700	ug/L	-3		
Selenium	H	100.0	94.29	ug/L	-6	20	

ISTD (ICALBLK 15d27h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	321220	290532	-9.55
Scandium	A	1001107	999203	-0.19
Scandium	E	30167	28457	-5.67
Germanium	H	64683	56940	-11.97
Germanium	E	15015	14027	-6.58
Indium	A	1545092	1356087	-12.23
Yttrium	A	1349610	1355293	0.42

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895170427

Instrument : MET16
 Method : EPA 6020

Begun : 04/28/15 08:27
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d28i00001	X	RINSE			04/28/15 08:27	1.0	1	
002	15d28i00002	TUN				04/28/15 08:34	1.0	2	
003	15d28i00003	X	RINSE			04/28/15 08:39	1.0	1	
004	15d28i00004	ICALBLK	CALBLANK			04/28/15 08:45	1.0	1	
005	15d28i00005	ICAL				04/28/15 08:51	1.0	3 1	
006	15d28i00006	ICAL				04/28/15 08:58	1.0	4 1	
007	15d28i00007	ICAL				04/28/15 09:04	1.0	5 1	
008	15d28i00008	ICAL				04/28/15 09:10	1.0	6 1	
009	15d28i00009	ICAL				04/28/15 09:17	1.0	7 1	
010	15d28i00010	ICAL				04/28/15 09:23	1.0	8 1	
011	15d28i00011	X	RINSE			04/28/15 09:30	1.0	1	
012	15d28i00012	ICV				04/28/15 09:36	1.0	9 1	
013	15d28i00013	XCRI				04/28/15 09:43	1.0	10 1	
014	15d28i00014	XCRI				04/28/15 09:49	1.0	10 1	
015	15d28i00015	XICB				04/28/15 09:55	1.0	1	
016	15d28i00016	XICB				04/28/15 10:02	1.0	1	
017	15d28i00017	ICB				04/28/15 10:08	1.0	1	
018	15d28i00018	CRI				04/28/15 10:15	1.0	10 1	
019	15d28i00019	ICSA				04/28/15 10:21	1.0	11 1	8:CA=290000
020	15d28i00020	ICSAB				04/28/15 10:28	1.0	12 1	8:CA=300000
021	15d28i00021	X	RINSE			04/28/15 10:35	1.0	1	
022	15d28i00022	X	RINSE			04/28/15 10:41	1.0	1	
023	15d28i00023	X	RINSE			04/28/15 10:48	1.0	1	
024	15d28i00024	X	RINSE			04/28/15 10:54	1.0	1	
025	15d28i00025	X	RINSE			04/28/15 11:01	1.0	1	
026	15d28i00026	LOD	256092-048	Water	222504	04/28/15 11:07	1.0	1	
027	15d28i00027	CCV				04/28/15 11:14	1.0	13 1	
028	15d28i00028	X	XCCB			04/28/15 11:20	1.0	1	
029	15d28i00029	CCB				04/28/15 11:27	1.0	1	
030	15d28i00030	BLANK	QC785676	Filtrate	222621	04/28/15 11:33	5.0	1	
031	15d28i00031	BS	QC785677	Filtrate	222621	04/28/15 11:39	5.0	1	
032	15d28i00032	BSD	QC785678	Filtrate	222621	04/28/15 11:46	5.0	1	
033	15d28i00033	MSS	266161-007	Filtrate	222621	04/28/15 11:52	5.0	1	1:NA=22000
034	15d28i00034	MS	QC785679	Filtrate	222621	04/28/15 11:58	5.0	1	1:NA=24000
035	15d28i00035	MSD	QC785680	Filtrate	222621	04/28/15 12:05	5.0	1	1:NA=22000
036	15d28i00036	MSS	266161-007	Filtrate	222621	04/28/15 12:11	500.0	1	
037	15d28i00037	SAMPLE	266263-002	Filtrate	222621	04/28/15 12:17	5.0	1	3:NA=280000
038	15d28i00038	X	RINSE			04/28/15 12:24	1.0	1	
039	15d28i00039	SAMPLE	266263-002	Filtrate	222621	04/28/15 12:30	500.0	1	
040	15d28i00040	X	RINSE			04/28/15 12:37	1.0	1	
041	15d28i00041	CCV				04/28/15 12:43	1.0	13 1	
042	15d28i00042	X	XCCB			04/28/15 12:50	1.0	1	
043	15d28i00043	CCB				04/28/15 12:56	1.0	1	
044	15d28i00044	BLANK	QC785685	Soil	222622	04/28/15 13:03	25.0	1	
045	15d28i00045	BS	QC785686	Soil	222622	04/28/15 13:09	25.0	1	
046	15d28i00046	BSD	QC785687	Soil	222622	04/28/15 13:15	25.0	1	
047	15d28i00047	MSS	266350-001	Soil	222622	04/28/15 13:22	25.0	1	1:MN=290
048	15d28i00048	MS	QC785688	Soil	222622	04/28/15 13:28	25.0	1	
049	15d28i00049	MSD	QC785689	Soil	222622	04/28/15 13:34	25.0	1	
050	15d28i00050	SAMPLE	266363-001	Soil	222622	04/28/15 13:41	25.0	1	2:CA=33000
051	15d28i00051	SAMPLE	266363-002	Soil	222622	04/28/15 13:47	25.0	1	
052	15d28i00052	SAMPLE	266363-001	Soil	222622	04/28/15 13:53	2500	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895170427

Instrument : MET16
 Method : EPA 6020

Begun : 04/28/15 08:27
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d28i00053	CCV				04/28/15 14:00	1.0	13 1	
054	15d28i00054	X	XCCB			04/28/15 14:06	1.0	1	
055	15d28i00055	CCB				04/28/15 14:13	1.0	1	
056	15d28i00056	ICSA				04/28/15 14:19	1.0	11 1	8:CA=290000
057	15d28i00057	ICSAB				04/28/15 14:26	1.0	12 1	11:CA=310000
058	15d28i00058	X	RINSE			04/28/15 14:33	1.0	1	
059	15d28i00059	X	RINSE			04/28/15 14:39	1.0	1	
060	15d28i00060	SAMPLE	266234-003	Filtrate	222567	04/28/15 15:26	5.0	1	
061	15d28i00061	SAMPLE	266234-006	Filtrate	222567	04/28/15 15:32	5.0	1	
062	15d28i00062	SAMPLE	266150-002	Filtrate	222567	04/28/15 15:39	5.0	1	5:NA=2600000
063	15d28i00063	SAMPLE	266150-003	Filtrate	222567	04/28/15 15:45	5.0	1	5:NA=2400000
064	15d28i00064	SAMPLE	266150-004	Filtrate	222567	04/28/15 15:52	5.0	1	5:NA=2400000
065	15d28i00065	SAMPLE	266150-005	Filtrate	222567	04/28/15 15:59	5.0	1	5:NA=2600000
066	15d28i00066	SAMPLE	266150-006	Filtrate	222567	04/28/15 16:05	5.0	1	5:NA=2600000
067	15d28i00067	SAMPLE	266150-007	Filtrate	222567	04/28/15 16:12	5.0	1	5:NA=2600000
068	15d28i00068	SAMPLE	266150-008	Filtrate	222567	04/28/15 16:19	5.0	1	5:NA=2600000
069	15d28i00069	SAMPLE	266150-009	Filtrate	222567	04/28/15 16:25	5.0	1	5:NA=2700000
070	15d28i00070	CCV				04/28/15 16:32	1.0	13 1	
071	15d28i00071	X	XCCB			04/28/15 16:38	1.0	1	
072	15d28i00072	CCB				04/28/15 16:45	1.0	1	
073	15d28i00073	SAMPLE	266150-010	Filtrate	222567	04/28/15 16:51	5.0	1	4:NA=2200000
074	15d28i00074	SAMPLE	266150-010	Filtrate	222567	04/28/15 16:58	500.0	1	1:NA=23000
075	15d28i00075	SAMPLE	266150-011	Filtrate	222567	04/28/15 17:04	5.0	1	3:NA=670000
076	15d28i00076	SAMPLE	266150-012	Filtrate	222567	04/28/15 17:11	5.0	1	4:NA=3500000
077	15d28i00077	SAMPLE	266150-013	Filtrate	222567	04/28/15 17:18	5.0	1	5:NA=2200000
078	15d28i00078	SAMPLE	266150-014	Filtrate	222567	04/28/15 17:24	5.0	1	5:NA=2400000
079	15d28i00079	CCV				04/28/15 17:31	1.0	13 1	
080	15d28i00080	X	XCCB			04/28/15 17:38	1.0	1	
081	15d28i00081	CCB				04/28/15 17:44	1.0	1	
082	15d28i00082	ICSA				04/28/15 17:51	1.0	11 1	8:CA=290000
083	15d28i00083	ICSAB				04/28/15 17:57	1.0	12 1	9:CA=300000
084	15d28i00084	X	RINSE			04/28/15 18:04	1.0	1	
085	15d28i00085	X	RINSE			04/28/15 18:11	1.0	1	
086	15d28i00086	CCV				04/28/15 18:17	1.0	13 1	
087	15d28i00087	X	XCCB			04/28/15 18:24	1.0	1	
088	15d28i00088	CCB				04/28/15 18:30	1.0	1	
089	15d28i00089	ICSA				04/28/15 18:36	1.0	11 1	8:CA=300000
090	15d28i00090	ICSAB				04/28/15 18:43	1.0	12 1	10:CA=310000
091	15d28i00091	X	RINSE			04/28/15 18:50	1.0	1	
092	15d28i00092	X	RINSE			04/28/15 18:57	1.0	1	
093	15d28i00093	X	RINSE			04/28/15 19:03	1.0	1	
094	15d28i00094	X	RINSE			04/28/15 19:20	1.0	1	
095	15d28i00095	X	RINSE			04/28/15 19:27	1.0	1	
096	15d28i00096	X	RINSE			04/28/15 19:33	1.0	1	
097	15d28i00097	X	RINSE			04/28/15 19:40	1.0	1	
098	15d28i00098	X	RINSE			04/28/15 19:46	1.0	1	

CRT 04/28/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 57.

NT 04/29/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 58 through 98.

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895170427

Date : 04/28/15
 Sequence : MET16 15d28i00

Reference : 15d28i00004
 Analyzed : 04/28/15 08:45

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
	IB+ICALBLK STD	1407760	1092349	29568	303006	65056	14910	1587500	2689798	1433717	3379562	
	LOWER LIMIT	422328	327705	8870	90902	19517	4473	476250	806939	430115	1013869	
	UPPER LIMIT	1689312	1310819	35482	363607	78067	17892	1905000	3227758	1720460	4055474	
017	ICB	1443536	1113666	32667	330560	67373	15814	1651222	2784406	1490024	3504614	
019	ICSA	1185896	950578	29263	339155	55708	12723	1237613	1960686	1228871	2906169	
020	ICSAB	1177191	900643	26907	286767	54151	12463	1206885	1893335	1200244	2810243	
026	LOD	256092-048	1393359	28675	302860	60890	13986	1477175	2492499	1352165	3173846	
027	CCV	1285546	997342	27700	303791	58805	13508	1437495	2397341	1336347	3157602	
029	CCB	1311655	982295	28907	300111	61823	14248	1507258	2561365	1365878	3209081	
030	BLANK	QC785676	1325072	28852	297635	61257	14306	1502331	2544606	1362406	3205080	
031	BS	QC785677	1309143	30713	307407	61044	14342	1478979	2496950	1352754	3195453	
032	BSD	QC785678	1322011	29410	299312	60901	14275	1498382	2526045	1370549	3236435	
033	MSS	266161-007	1370108	30354	287976	61214	14677	1546803	2508641	1432731	3321861	
034	MS	QC785679	1492280	30958	324870	64302	15383	1678232	2713307	1570461	3615104	
035	MSD	QC785680	1377223	32313	333459	64591	15322	1547401	2510316	1440885	3334415	
036	MSS	266161-007	1449764	31960	315286	67426	16193	1650588	2704654	1512408	3457622	
037	SAMPLE	266263-002	1364363	30441	328359	61945	14732	1472814	2252985	1424947	3221462	
039	SAMPLE	266263-002	1457946	32866	326841	68366	16218	1639144	2678624	1499820	3430895	
041	CCV	1398155	1102210	31647	315642	61375	14986	1554340	2495456	1452613	3342145	
043	CCB	1422611	1073542	32534	313740	64806	15493	1607436	2643636	1466657	3353605	
044	BLANK	QC785685	1434188	31636	323155	64960	15555	1599407	2639104	1468155	3370023	
045	BS	QC785686	1430180	32503	338584	64631	15664	1588632	2634668	1461180	3363093	
046	BSD	QC785687	1410981	31569	318814	64014	15421	1573278	2604738	1436730	3325188	
047	MSS	266350-001	1372834	31979	322489	61455	14769	1517939	2523609	1464380	3256991	
048	MS	QC785688	1351159	31023	308236	60852	14616	1486343	2455289	1457567	3219176	
049	MSD	QC785689	1373013	30604	313456	60295	14671	1503899	2487922	1453877	3252671	
050	SAMPLE	266363-001	1332901	30705	304042	59905	14279	1471183	2455087	1404830	3174621	
051	SAMPLE	266363-002	1427737	30279	288576	58975	14825	1559482	2566960	1510127	3333223	
052	SAMPLE	266363-001	1405123	30730	302336	62099	15134	1553323	2579167	1420162	3271856	
053	CCV	1357118	1042794	31261	325303	62696	14989	1479635	2417796	1377005	3204887	
055	CCB	1401072	1082210	33365	294595	62315	16250	1557838	2592978	1419264	3273587	
056	ICSA	1183089	930661	28936	311387	51444	12784	1205490	1879853	1198231	2792948	
057	ICSAB	1169623	868656	25642	253730	49027	12082	1182403	1833861	1181080	2733643	
060	SAMPLE	266234-003	1318791	31477	314456	60038	14660	1459348	2327531	1350838	3044594	
061	SAMPLE	266234-006	1341432	31972	318058	63442	15273	1473833	2326847	1377092	3085924	
062	SAMPLE	266150-002	1205729	29192	281633	50123	12481	1286601	1620523	1301969	2681655	

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895170427

Date : 04/28/15
 Sequence : MET16 15d28i00

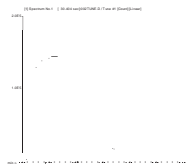
Reference : 15d28i00004
 Analyzed : 04/28/15 08:45

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
063	SAMPLE	266150-003	1242432	1023947	31625	278067	50977	13565	1275578	1572927	1322444	2633167
064	SAMPLE	266150-004	1286553	1093080	31445	319776	58164	13668	1358006	1632196	1401784	2753281
065	SAMPLE	266150-005	1272468	1096856	29968	282623	51503	13052	1361369	1613220	1409978	2747045
066	SAMPLE	266150-006	1234427	1062087	30208	290647	53055	13201	1319496	1578550	1369986	2679891
067	SAMPLE	266150-007	1214363	1054925	28790	283807	52808	12673	1309100	1558578	1358361	2649311
068	SAMPLE	266150-008	1219679	1044138	27829	290549	53960	12291	1288192	1524154	1341454	2602260
069	SAMPLE	266150-009	1275113	1125036	31378	300115	55786	13665	1376404	1590208	1440801	2753696
070	CCV		1509605	1241441	36720 *	359991	71590	17230	1622254	2326709	1582573	3296909
072	CCB		1304069	985234	30276	313356	66700	14900	1402772	2140828	1320931	2839842
073	SAMPLE	266150-010	1203812	1034249	28902	261110	48900	12800	1286798	1588300	1335612	2637677
074	SAMPLE	266150-010	1689953 *	1337534 *	37664 *	373309 *	79835 *	18270 *	1793451	2503622	1744416 *	3524938
075	SAMPLE	266150-011	1395731	1145441	34881	353594	68899	15933	1461259	1896889	1479309	2983840
076	SAMPLE	266150-012	1069484	948952	26549	274002	50122	11637	1165492	1355373	1234517	2349464
077	SAMPLE	266150-013	1315755	1177282	31550	322532	60853	13862	1427598	1651432	1512558	2840766
078	SAMPLE	266150-014	1160686	1014365	32253	328775	60842	14015	1246530	1461278	1309695	2495797
079	CCV		1403921	1173628	33895	341488	69405	16085	1525589	2184661	1490835	3083630
081	CCB		1369324	1101882	33367	353987	74681	16393	1545794	2342208	1457666	3095334
082	ICSA		1143726	960369	28855	333237	59232	13037	1183189	1701573	1214541	2618830
083	IC SAB		1095050	881491	27098	286357	56506	12861	1125040	1635936	1159486	2500525
086	CCV		1132716	896648	26933	287223	57919	12901	1197931	1786270	1165536	2464811
088	CCB		1161924	914950	27656	284882	62155	13714	1264364	1898320	1205632	2497136
089	ICSA		966768	816795	24784	278183	50485	11345	1028720	1431904	1045793	2200146
090	IC SAB		899267	747305	22984	248983	50294	11033	965899	1364688	1000511	2081089

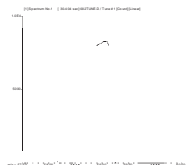
MET16 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D28i00.B\002TUNE.D
 Date Acquired: Apr 28 2015 08:34 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

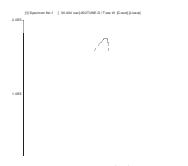
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	113246	113851	114290	115317	114509	0.80	5.00	
59 Co	45513	45855	45412	45959	46081	0.38	5.00	
115 In	948551	951697	954240	960480	961362	0.48	5.00	
205 Tl	133456	134453	134259	134449	134231	0.21	5.00	



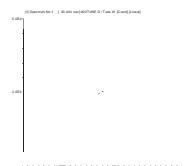
7 Li
Mass Calib.
 Actual: 7.05
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 59.00
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 204.95
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 METALS Filtrate: EPA 6020

Inst : MET16
 Calnum : 895170427001
 Units : ug/L
 Date : 28-APR-2015 08:45
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d28i00005	895170427005	28-APR-2015 08:51	S27043, S26751	
L2	15d28i00006	895170427006	28-APR-2015 08:58	S27044, S26751	
L3	15d28i00007	895170427007	28-APR-2015 09:04	S27045, S26751	
L4	15d28i00008	895170427008	28-APR-2015 09:10	S27046, S26751	
L5	15d28i00009	895170427009	28-APR-2015 09:17	S27041, S26751	
L6	15d28i00010	895170427010	28-APR-2015 09:23	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0071	0.0068	0.0068	0.0063	0.0067	0.0066	BLNK	-0.4962	151.177		0.0067	1.000	0.995	
Antimony	A	0.0033	0.0026	0.0026	0.0025	0.0026	0.0026	BLNK	-0.0418	390.958		0.0027	1.000	0.995	
Barium	A	5.1E-4	4.9E-4	5.1E-4	5.1E-4	5.0E-4	4.9E-4	BLNK	-0.0108	2038.11		5.0E-4	1.000	0.995	
Beryllium	A	0.0021	0.0017	0.0017	0.0017	0.0017	0.0017	BLNK	-0.0342	594.846		0.0018	1.000	0.995	
Cadmium	A	6.2E-4	6.8E-4	6.8E-4	6.8E-4	6.9E-4	6.7E-4	BLNK	-0.0034	1479.67		6.7E-4	1.000	0.995	
Calcium	A	4.0E-4	2.1E-4	1.9E-4	1.6E-4	1.7E-4	1.7E-4	BLNK	-6.0773	5830.57		2.2E-4	1.000	0.995	
Lead	A	0.0091	0.0079	0.0078	0.0075	0.0073	0.0070	BLNK	-0.0263	141.363		0.0078	1.000	0.995	
Magnesium	A	0.0118	0.0070	0.0066	0.0058	0.0060	0.0059	BLNK	-6.9771	168.118		0.0072	1.000	0.995	
Molybdenum	A	0.0022	0.0019	0.0019	0.0018	0.0018	0.0018	BLNK	-0.0559	565.351		0.0019	1.000	0.995	
Potassium	A	0.0590	0.0159	0.0109	0.0055	0.0054	0.0054	BLNK	-94.508	186.705		0.0170	1.000	0.995	
Silver	A	0.0043	0.0030	0.0029	0.0027	0.0027	0.0027	BLNK	-0.0779	369.238		0.0031	1.000	0.995	
Thallium	A	0.0072	0.0067	0.0067	0.0066	0.0069	0.0068	BLNK	-0.0093	146.591		0.0068	1.000	0.995	
Arsenic	E	0.0042	0.0043	0.0040	0.0038	0.0038	0.0037	BLNK	-0.0384	267.850		0.0040	1.000	0.995	
Chromium	E	0.0409	0.0295	0.0284	0.0265	0.0253	0.0257	BLNK	-0.0525	38.9934		0.0294	1.000	0.995	
Cobalt	E	0.0436	0.0416	0.0425	0.0408	0.0381	0.0385	BLNK	-0.0059	26.0356		0.0409	1.000	0.995	
Copper	E	0.2659	0.0985	0.0795	0.0607	0.0560	0.0552	BLNK	-0.2998	18.0826		0.1026	1.000	0.995	
Manganese	E	0.0161	0.0143	0.0144	0.0140	0.0133	0.0135	BLNK	-0.0073	74.4981		0.0143	1.000	0.995	
Nickel	E	0.0171	0.0127	0.0118	0.0107	0.0100	0.0100	BLNK	-0.0643	100.191		0.0121	1.000	0.995	
Sodium	E	0.0860	0.0239	0.0160	0.0087	0.0084	0.0085	BLNK	-95.441	118.920		0.0252	1.000	0.995	
Vanadium	E	0.0525	0.0265	0.0243	0.0196	0.0186	0.0190	BLNK	-0.1987	52.8637		0.0268	1.000	0.995	
Zinc	E		0.0418	0.0241	0.0102	0.0083	0.0081	BLNK	-2.0177	124.110		0.0185	1.000	0.995	
Iron	H	0.0098	0.0083	0.0081	0.0075	0.0072	0.0074	BLNK	-3.7934	135.289		0.0080	1.000	0.995	
Selenium	H	0.0014	0.0015	0.0014	0.0013	0.0014	0.0013	BLNK	-0.0154	749.827		0.0014	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	3	50.000	2	100.00	3	1000.0	-5	10000	1	20000	0
Antimony	A	0.1000	-14	0.5000	-7	1.0000	-5	10.000	-3	100.00	0	200.00	0
Barium	A	0.1000	-6	0.5000	-2	1.0000	4	10.000	3	100.00	1	200.00	0
Beryllium	A	0.1000	-7	0.5000	-5	1.0000	-1	10.000	0	100.00	1	200.00	0
Cadmium	A	0.1000	-12	0.5000	0	1.0000	1	10.000	1	100.00	2	200.00	0
Calcium	A	10.000	75	50.000	10	100.00	4	1000.0	-6	10000	1	20000	0
Lead	A	0.1000	3	0.5000	6	1.0000	7	10.000	6	100.00	4	200.00	-1
Magnesium	A	10.000	28	50.000	3	100.00	3	1000.0	-3	10000	1	20000	0
Molybdenum	A	0.1000	-30	0.5000	-4	1.0000	-1	10.000	-1	100.00	1	200.00	0
Potassium	A	10.000	56	50.000	7	100.00	9	1000.0	-6	10000	0	20000	0
Silver	A	0.1000	-18	0.5000	-6	1.0000	-1	10.000	0	100.00	1	200.00	0
Thallium	A	0.0500	-14	0.2500	-5	0.5000	-3	5.0000	-4	50.000	1	100.00	0
Arsenic	E	0.1000	-25	0.5000	7	1.0000	4	10.000	3	100.00	0	200.00	0
Chromium	E	0.1000	7	0.5000	4	1.0000	5	10.000	3	100.00	-1	200.00	0
Cobalt	E	0.1000	8	0.5000	7	1.0000	10	10.000	6	100.00	-1	200.00	0
Copper	E	0.1000	81	0.5000	18	1.0000	14	10.000	7	100.00	1	200.00	0
Manganese	E	0.1000	13	0.5000	5	1.0000	7	10.000	4	100.00	-1	200.00	0
Nickel	E	0.1000	7	0.5000	15	1.0000	12	10.000	7	100.00	0	200.00	0
Sodium	E	10.000	-32	50.000	-6	100.00	-5	1000.0	-6	10000	-1	20000	0
Vanadium	E	0.1000	-21	0.5000	0	1.0000	9	10.000	2	100.00	-2	200.00	0
Zinc	E			0.5000	15	1.0000	-2	10.000	7	100.00	1	200.00	0
Iron	H	10.000	-5	50.000	4	100.00	6	1000.0	1	10000	-3	20000	1
Selenium	H	0.1000	-9	0.5000	9	1.0000	6	10.000	-1	100.00	2	200.00	0

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
Calnum : 895170427001

Cal Date : 28-APR-2015

ICV 895170427012 (15d28i00012 28-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10070	ug/L	1	10	
Antimony	A	100.0	98.79	ug/L	-1	10	
Barium	A	100.0	98.61	ug/L	-1	10	
Beryllium	A	100.0	98.43	ug/L	-2	10	
Cadmium	A	100.0	99.09	ug/L	-1	10	
Calcium	A	10000	10120	ug/L	1	10	
Lead	A	100.0	100.2	ug/L	0	10	
Magnesium	A	10000	10130	ug/L	1	10	
Molybdenum	A	100.0	98.78	ug/L	-1	10	
Potassium	A	10000	10100	ug/L	1	10	
Silver	A	100.0	98.46	ug/L	-2	10	
Thallium	A	50.00	48.68	ug/L	-3	10	
Arsenic	E	100.0	99.87	ug/L	0	10	
Chromium	E	100.0	100.3	ug/L	0	10	
Cobalt	E	100.0	101.3	ug/L	1	10	
Copper	E	100.0	102.2	ug/L	2	10	
Manganese	E	100.0	100.8	ug/L	1	10	
Nickel	E	100.0	101.5	ug/L	2	10	
Sodium	E	10000	10050	ug/L	1	10	
Vanadium	E	100.0	99.97	ug/L	0	10	
Zinc	E	100.0	102.8	ug/L	3	10	
Iron	H	10000	9309	ug/L	-7	10	
Selenium	H	100.0	99.89	ug/L	0	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895170427017 File : 15d28i00017 Time : 28-APR-2015 10:08
 Cal : 895170427001 Caldate : 28-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	---	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	0.1370	0.1000	0.2000	ug/L	ICB ***
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28i00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1407760	1443536	2.54
Scandium	A	1092349	1113666	1.95
Scandium	E	29568	32667	10.48
Scandium	H	303006	330560	9.09
Germanium	H	65056	67373	3.56
Germanium	E	14910	15814	6.06
Indium	A	1587500	1651222	4.01
Bismuth	A	2689798	2784406	3.52
Yttrium	A	1433717	1490024	3.93
Terbium	A	3379562	3504614	3.70

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895170427019 File : 15d28i00019
 Cal : 895170427001 Caldate : 28-APR-2015
 Standards: S26727, S26751

IDF : 1.0
 Time : 28-APR-2015 10:21

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4433	0.1000	ug/L	
Barium	A	1.865	0.1000	ug/L	
Beryllium	A	[0.008900]	0.1000	ug/L	
Cadmium	A	3.046	0.1000	ug/L	
Lead	A	0.2148	0.1000	ug/L	
Silver	A	[0.08560]	0.1000	ug/L	
Thallium	A	[0.01650]	0.05000	ug/L	
Arsenic	E	0.7360	0.1000	ug/L	
Chromium	E	0.7729	0.1000	ug/L	
Cobalt	E	1.009	0.1000	ug/L	
Copper	E	1.643	0.1000	ug/L	
Manganese	E	6.357	0.1000	ug/L	
Nickel	E	1.048	0.1000	ug/L	
Vanadium	E	[0.06460]	0.1000	ug/L	
Zinc	E	3.288	0.5000	ug/L	
Selenium	H	[0.09230]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	96490	ug/L	96
Calcium	A	300000	287000	ug/L	96
Magnesium	A	100000	94400	ug/L	94
Molybdenum	A	2000	1980	ug/L	99
Potassium	A	100000	95400	ug/L	95
Sodium	E	250000	228900	ug/L	92
Phosphorus	E	100000	89480	ug/L	89
Iron	H	250000	202400	ug/L	81

ISTD (ICALBLK 15d28i00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1407760	1185896	-15.76
Scandium	A	1092349	950578	-12.98
Scandium	E	29568	29263	-1.03
Scandium	H	303006	339155	11.93
Germanium	H	65056	55708	-14.37
Germanium	E	14910	12723	-14.67
Indium	A	1587500	1237613	-22.04
Bismuth	A	2689798	1960686	-27.11
Yttrium	A	1433717	1228871	-14.29
Terbium	A	3379562	2906169	-14.01

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895170427020 File : 15d28i00020
 Cal : 895170427001 Caldate : 28-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 28-APR-2015 10:28

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	99590	ug/L	0		
Cadmium	A	100.0	98.67	ug/L	-1	20	
Calcium	A	300000	296300	ug/L	-1		
Magnesium	A	100000	97420	ug/L	-3		
Molybdenum	A	2000	1965	ug/L	-2		
Potassium	A	100000	98980	ug/L	-1		
Silver	A	50.00	46.49	ug/L	-7	20	
Arsenic	E	100.0	104.0	ug/L	4	20	
Chromium	E	200.0	192.9	ug/L	-4	20	
Cobalt	E	200.0	183.9	ug/L	-8	20	
Copper	E	200.0	180.4	ug/L	-10	20	
Manganese	E	200.0	196.8	ug/L	-2	20	
Nickel	E	200.0	179.3	ug/L	-10	20	
Sodium	E	250000	241600	ug/L	-3		
Vanadium	E	200.0	196.6	ug/L	-2	20	
Zinc	E	100.0	87.37	ug/L	-13	20	
Iron	H	250000	229500	ug/L	-8		
Selenium	H	100.0	100.9	ug/L	1	20	

ISTD (ICALBLK 15d28i00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	303006	286767	-5.36
Scandium	A	1092349	900643	-17.55
Scandium	E	29568	26907	-9.00
Germanium	H	65056	54151	-16.76
Germanium	E	14910	12463	-16.41
Indium	A	1587500	1206885	-23.98
Yttrium	A	1433717	1200244	-16.28

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895170427027 File : 15d28i00027 Time : 28-APR-2015 11:14
 Cal : 895170427001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0067	0.0067	10000	10090	ug/L	1	10	
Antimony	A	0.0027	0.0025	100.0	98.83	ug/L	-1	10	
Barium	A	5.0E-4	4.9E-4	100.0	99.29	ug/L	-1	10	
Beryllium	A	0.0018	0.0017	100.0	99.60	ug/L	0	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	99.63	ug/L	0	10	
Calcium	A	2.2E-4	1.7E-4	10000	10150	ug/L	2	10	
Lead	A	0.0078	0.0072	100.0	101.3	ug/L	1	10	
Magnesium	A	0.0072	0.0060	10000	10150	ug/L	2	10	
Molybdenum	A	0.0019	0.0017	100.0	98.19	ug/L	-2	10	
Potassium	A	0.0170	0.0055	10000	10190	ug/L	2	10	
Silver	A	0.0031	0.0027	100.0	97.83	ug/L	-2	10	
Thallium	A	0.0068	0.0066	50.00	48.69	ug/L	-3	10	
Arsenic	E	0.0040	0.0038	100.0	101.3	ug/L	1	10	
Chromium	E	0.0294	0.0266	100.0	103.6	ug/L	4	10	
Cobalt	E	0.0409	0.0398	100.0	103.7	ug/L	4	10	
Copper	E	0.1026	0.0567	100.0	102.3	ug/L	2	10	
Manganese	E	0.0143	0.0140	100.0	104.5	ug/L	5	10	
Nickel	E	0.0121	0.0104	100.0	104.4	ug/L	4	10	
Sodium	E	0.0252	0.0089	10000	10470	ug/L	5	10	
Vanadium	E	0.0268	0.0196	100.0	103.6	ug/L	4	10	
Zinc	E	0.0185	0.0084	100.0	102.4	ug/L	2	10	
Iron	H	0.0080	0.0072	10000	9771	ug/L	-2	10	
Selenium	H	0.0014	0.0014	100.0	101.3	ug/L	1	10	

ISTD (ICALBLK 15d28i00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1407760	1285546	-8.68
Scandium	A	1092349	997342	-8.70
Scandium	E	29568	27700	-6.32
Scandium	H	303006	303791	0.26
Germanium	H	65056	58805	-9.61
Germanium	E	14910	13508	-9.40
Indium	A	1587500	1437495	-9.45
Bismuth	A	2689798	2397341	-10.87
Yttrium	A	1433717	1336347	-6.79
Terbium	A	3379562	3157602	-6.57

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
Seqnum : 895170427029 File : 15d28i00029 Time : 28-APR-2015 11:27
Cal : 895170427001 Caldate : 28-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	[8.792]	10.00	---	ug/L	!CCB
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28i00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1407760	1311655	-6.83
Scandium	A	1092349	982295	-10.07
Scandium	E	29568	28907	-2.24
Scandium	H	303006	300111	-0.96
Germanium	H	65056	61823	-4.97
Germanium	E	14910	14248	-4.44
Indium	A	1587500	1507258	-5.05
Bismuth	A	2689798	2561365	-4.77
Yttrium	A	1433717	1365878	-4.73
Terbium	A	3379562	3209081	-5.04

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895170427041 File : 15d28i00041 Time : 28-APR-2015 12:43
 Cal : 895170427001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0067	0.0066	10000	10020	ug/L	0	10	
Antimony	A	0.0027	0.0026	100.0	99.72	ug/L	0	10	
Barium	A	5.0E-4	5.0E-4	100.0	101.8	ug/L	2	10	
Beryllium	A	0.0018	0.0017	100.0	100.8	ug/L	1	10	
Cadmium	A	6.7E-4	6.7E-4	100.0	99.44	ug/L	-1	10	
Calcium	A	2.2E-4	1.7E-4	10000	10000	ug/L	0	10	
Lead	A	0.0078	0.0071	100.0	99.78	ug/L	0	10	
Magnesium	A	0.0072	0.0060	10000	10040	ug/L	0	10	
Molybdenum	A	0.0019	0.0018	100.0	99.16	ug/L	-1	10	
Potassium	A	0.0170	0.0055	10000	10110	ug/L	1	10	
Silver	A	0.0031	0.0027	100.0	99.56	ug/L	0	10	
Thallium	A	0.0068	0.0067	50.00	49.12	ug/L	-2	10	
Arsenic	E	0.0040	0.0038	100.0	101.4	ug/L	1	10	
Chromium	E	0.0294	0.0255	100.0	99.30	ug/L	-1	10	
Cobalt	E	0.0409	0.0385	100.0	100.2	ug/L	0	10	
Copper	E	0.1026	0.0570	100.0	102.7	ug/L	3	10	
Manganese	E	0.0143	0.0134	100.0	99.70	ug/L	0	10	
Nickel	E	0.0121	0.0101	100.0	100.8	ug/L	1	10	
Sodium	E	0.0252	0.0085	10000	10000	ug/L	0	10	
Vanadium	E	0.0268	0.0190	100.0	100.5	ug/L	1	10	
Zinc	E	0.0185	0.0083	100.0	101.5	ug/L	2	10	
Iron	H	0.0080	0.0072	10000	9721	ug/L	-3	10	
Selenium	H	0.0014	0.0013	100.0	100.4	ug/L	0	10	

ISTD (ICALBLK 15d28i00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1407760	1398155	-0.68
Scandium	A	1092349	1102210	0.90
Scandium	E	29568	31647	7.03
Scandium	H	303006	315642	4.17
Germanium	H	65056	61375	-5.66
Germanium	E	14910	14986	0.51
Indium	A	1587500	1554340	-2.09
Bismuth	A	2689798	2495456	-7.23
Yttrium	A	1433717	1452613	1.32
Terbium	A	3379562	3342145	-1.11

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895170427043 File : 15d28i00043 Time : 28-APR-2015 12:56
 Cal : 895170427001 Caldate : 28-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	11.81	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28i00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1407760	1422611	1.05
Scandium	A	1092349	1073542	-1.72
Scandium	E	29568	32534	10.03
Scandium	H	303006	313740	3.54
Germanium	H	65056	64806	-0.38
Germanium	E	14910	15493	3.91
Indium	A	1587500	1607436	1.26
Bismuth	A	2689798	2643636	-1.72
Yttrium	A	1433717	1466657	2.30
Terbium	A	3379562	3353605	-0.77

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895170427056 File : 15d28i00056 Time : 28-APR-2015 14:19
 Cal : 895170427001 Caldate : 28-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4629	0.1000	ug/L	
Barium	A	1.873	0.1000	ug/L	
Beryllium	A	[0.01030]	0.1000	ug/L	
Cadmium	A	2.916	0.1000	ug/L	
Lead	A	0.2204	0.1000	ug/L	
Silver	A	0.2226	0.1000	ug/L	
Thallium	A	[0.01800]	0.05000	ug/L	
Arsenic	E	0.7348	0.1000	ug/L	
Chromium	E	0.7981	0.1000	ug/L	
Cobalt	E	1.030	0.1000	ug/L	
Copper	E	1.299	0.1000	ug/L	
Manganese	E	6.663	0.1000	ug/L	
Nickel	E	1.119	0.1000	ug/L	
Vanadium	E	[0.09640]	0.1000	ug/L	
Zinc	E	2.674	0.5000	ug/L	
Selenium	H	[0.09350]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	98530	ug/L	99
Calcium	A	300000	291500	ug/L	97
Magnesium	A	100000	96450	ug/L	96
Molybdenum	A	2000	2010	ug/L	101
Potassium	A	100000	97670	ug/L	98
Sodium	E	250000	233900	ug/L	94
Phosphorus	E	100000	94810	ug/L	95
Iron	H	250000	213300	ug/L	85

ISTD (ICALBLK 15d28i00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	1407760	1183089	-15.96
Scandium	A	1092349	930661	-14.80
Scandium	E	29568	28936	-2.14
Scandium	H	303006	311387	2.77
Germanium	H	65056	51444	-20.92
Germanium	E	14910	12784	-14.26
Indium	A	1587500	1205490	-24.06
Bismuth	A	2689798	1879853	-30.11
Yttrium	A	1433717	1198231	-16.42
Terbium	A	3379562	2792948	-17.36

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895170427057 File : 15d28i00057
 Cal : 895170427001 Caldate : 28-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 28-APR-2015 14:26

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	103900	ug/L	4		
Cadmium	A	100.0	98.29	ug/L	-2	20	
Calcium	A	300000	308300	ug/L	3		
Magnesium	A	100000	101700	ug/L	2		
Molybdenum	A	2000	1989	ug/L	-1		
Potassium	A	100000	104100	ug/L	4		
Silver	A	50.00	47.23	ug/L	-6	20	
Arsenic	E	100.0	110.2	ug/L	10	20	
Chromium	E	200.0	202.5	ug/L	1	20	
Cobalt	E	200.0	192.2	ug/L	-4	20	
Copper	E	200.0	186.2	ug/L	-7	20	
Manganese	E	200.0	206.4	ug/L	3	20	
Nickel	E	200.0	187.9	ug/L	-6	20	
Sodium	E	250000	252600	ug/L	1		
Vanadium	E	200.0	208.4	ug/L	4	20	
Zinc	E	100.0	89.95	ug/L	-10	20	
Iron	H	250000	244700	ug/L	-2		
Selenium	H	100.0	104.9	ug/L	5	20	

ISTD (ICALBLK 15d28i00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	303006	253730	-16.26
Scandium	A	1092349	868656	-20.48
Scandium	E	29568	25642	-13.28
Germanium	H	65056	49027	-24.64
Germanium	E	14910	12082	-18.97
Indium	A	1587500	1182403	-25.52
Yttrium	A	1433717	1181080	-17.62

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015170522

Instrument : MET26
 Method : EPA 6020

Begun : 04/28/15 10:02
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d28k00001	X	RINSE			04/28/15 10:02	1.0	1	
002	15d28k00002	TUN				04/28/15 10:07	1.0	2	
003	15d28k00003	X	RINSE			04/28/15 10:11	1.0	1	
004	15d28k00004	ICALBLK	CALBLANK			04/28/15 10:16	1.0	1	
005	15d28k00005	ICAL				04/28/15 10:21	1.0	3 1	
006	15d28k00006	ICAL				04/28/15 10:25	1.0	4 1	
007	15d28k00007	ICAL				04/28/15 10:30	1.0	5 1	
008	15d28k00008	ICAL				04/28/15 10:35	1.0	6 1	
009	15d28k00009	ICAL				04/28/15 10:39	1.0	7 1	
010	15d28k00010	ICAL				04/28/15 10:44	1.0	8 1	
011	15d28k00011	X	RINSE			04/28/15 10:48	1.0	1	
012	15d28k00012	ICV				04/28/15 10:53	1.0	9 1	
013	15d28k00013	XCRI				04/28/15 10:58	1.0	10 1	
014	15d28k00014	XICB				04/28/15 11:02	1.0	1	
015	15d28k00015	ICB				04/28/15 11:07	1.0	1	
016	15d28k00016	CRI				04/28/15 11:12	1.0	10 1	
017	15d28k00017	ICSA				04/28/15 11:16	1.0	11 1	8:CA=290000
018	15d28k00018	ICSAB				04/28/15 11:21	1.0	12 1	13:CA=290000
019	15d28k00019	X	RINSE			04/28/15 11:26	1.0	1	
020	15d28k00020	X	RINSE			04/28/15 11:31	1.0	1	
021	15d28k00021	X	RINSE			04/28/15 11:36	1.0	1	
022	15d28k00022	X	RINSE			04/28/15 11:40	1.0	1	
023	15d28k00023	X	RINSE			04/28/15 11:45	1.0	1	
024	15d28k00024	MSS	264136-007	Water	219962	04/28/15 11:50	5.0	1	
025	15d28k00025	X	RINSE			04/28/15 11:55	1.0	1	
026	15d28k00026	CCV				04/28/15 12:00	1.0	13 1	
027	15d28k00027	X	XCCB			04/28/15 12:04	1.0	1	
028	15d28k00028	CCB				04/28/15 12:09	1.0	1	
029	15d28k00029	BLANK	QC785676	Filtrate	222621	04/28/15 12:14	5.0	1	
030	15d28k00030	BS	QC785677	Filtrate	222621	04/28/15 12:18	5.0	1	
031	15d28k00031	BSD	QC785678	Filtrate	222621	04/28/15 12:23	5.0	1	
032	15d28k00032	MSS	266161-007	Filtrate	222621	04/28/15 12:27	5.0	1	1:NA=22000
033	15d28k00033	MS	QC785679	Filtrate	222621	04/28/15 12:32	5.0	1	1:NA=22000
034	15d28k00034	MSD	QC785680	Filtrate	222621	04/28/15 12:36	5.0	1	1:NA=23000
035	15d28k00035	MSS	266161-007	Filtrate	222621	04/28/15 12:41	500.0	1	
036	15d28k00036	SAMPLE	266263-002	Filtrate	222621	04/28/15 12:46	5.0	1	4:NA=250000
037	15d28k00037	X	RINSE			04/28/15 12:50	1.0	1	
038	15d28k00038	SAMPLE	266263-002	Filtrate	222621	04/28/15 12:55	500.0	1	
039	15d28k00039	X	RINSE			04/28/15 13:00	1.0	1	
040	15d28k00040	CCV				04/28/15 13:05	1.0	13 1	
041	15d28k00041	X	XCCB			04/28/15 13:09	1.0	1	
042	15d28k00042	CCB				04/28/15 13:14	1.0	1	
043	15d28k00043	BLANK	QC785685	Soil	222622	04/28/15 13:19	25.0	1	
044	15d28k00044	BS	QC785686	Soil	222622	04/28/15 13:23	25.0	1	
045	15d28k00045	BSD	QC785687	Soil	222622	04/28/15 13:28	25.0	1	
046	15d28k00046	MSS	266350-001	Soil	222622	04/28/15 13:32	25.0	1	1:MN=290
047	15d28k00047	MS	QC785688	Soil	222622	04/28/15 13:37	25.0	1	
048	15d28k00048	MSD	QC785689	Soil	222622	04/28/15 13:42	25.0	1	
049	15d28k00049	SAMPLE	266363-001	Soil	222622	04/28/15 13:46	25.0	1	2:CA=32000
050	15d28k00050	SAMPLE	266363-002	Soil	222622	04/28/15 13:51	25.0	1	
051	15d28k00051	SAMPLE	266363-001	Soil	222622	04/28/15 13:55	2500	1	
052	15d28k00052	CCV				04/28/15 14:00	1.0	13 1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015170522

Instrument : MET26
 Method : EPA 6020

Begun : 04/28/15 10:02
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d28k00053	X	XCCB			04/28/15 14:05	1.0	1	
054	15d28k00054	CCB				04/28/15 14:09	1.0	1	
055	15d28k00055	ICSA				04/28/15 14:14	1.0	11 1	8:CA=290000
056	15d28k00056	ICSAB				04/28/15 14:19	1.0	12 1	12:CA=290000
057	15d28k00057	X	RINSE			04/28/15 14:24	1.0	1	
058	15d28k00058	X	RINSE			04/28/15 15:17	1.0	1	
059	15d28k00059	SAMPLE	266087-009	Filtrate	222325	04/28/15 15:22	50.0	1	1:MN=330
060	15d28k00060	SAMPLE	266087-009	Filtrate	222325	04/28/15 15:27	500.0	1	
061	15d28k00061	CCV				04/28/15 15:31	1.0	13 1	
062	15d28k00062	X	XCCB			04/28/15 15:36	1.0	1	
063	15d28k00063	CCB				04/28/15 15:41	1.0	1	
064	15d28k00064	SAMPLE	266091-002	Filtrate	222325	04/28/15 15:45	50.0	1	1:MN=440
065	15d28k00065	SAMPLE	266091-004	Filtrate	222325	04/28/15 15:50	50.0	1	
066	15d28k00066	SAMPLE	266091-005	Filtrate	222325	04/28/15 16:00	50.0	1	
067	15d28k00067	SAMPLE	266091-008	Filtrate	222325	04/28/15 16:05	50.0	1	
068	15d28k00068	SAMPLE	266091-009	Filtrate	222325	04/28/15 16:09	50.0	1	
069	15d28k00069	SAMPLE	266091-010	Filtrate	222325	04/28/15 16:14	50.0	1	
070	15d28k00070	SAMPLE	266091-012	Filtrate	222325	04/28/15 16:19	50.0	1	
071	15d28k00071	CCV				04/28/15 16:23	1.0	13 1	
072	15d28k00072	X	XCCB			04/28/15 16:28	1.0	1	
073	15d28k00073	CCB				04/28/15 16:33	1.0	1	
074	15d28k00074	ICSA				04/28/15 16:37	1.0	11 1	8:CA=300000
075	15d28k00075	ICSAB				04/28/15 16:42	1.0	12 1	11:CA=290000
076	15d28k00076	X	RINSE			04/28/15 16:47	1.0	1	
077	15d28k00077	X	RINSE			04/28/15 16:52	1.0	1	
078	15d28k00078	MSS	266161-007	Filtrate	222621	04/28/15 16:56	500.0	1	
079	15d28k00079	X	RINSE			04/28/15 17:01	1.0	1	
080	15d28k00080	X	MB WET DI			04/28/15 17:06	5.0	1	
081	15d28k00081	SER	QC785681	Filtrate	222621	04/28/15 17:11	2500	1	
082	15d28k00082	PDS	QC785682	Filtrate	222621	04/28/15 17:15	500.0	14 15 16 1	
083	15d28k00083	SAMPLE	266161-009	Filtrate	222621	04/28/15 17:20	500.0	1	
084	15d28k00084	SAMPLE	266161-020	Filtrate	222621	04/28/15 17:25	500.0	1	
085	15d28k00085	CCV				04/28/15 17:30	1.0	13 1	
086	15d28k00086	X	XCCB			04/28/15 17:34	1.0	1	
087	15d28k00087	CCB				04/28/15 17:39	1.0	1	
088	15d28k00088	MSS	266161-007	Filtrate	222621	04/28/15 17:44	5.0	1	1:NA=21000
089	15d28k00089	SER	QC785681	Filtrate	222621	04/28/15 17:48	25.0	1	
090	15d28k00090	PDS	QC785682	Filtrate	222621	04/28/15 18:00	5.0	14 15 16 1	
091	15d28k00091	SAMPLE	266161-004	Filtrate	222621	04/28/15 18:05	5.0	1	
092	15d28k00092	SAMPLE	266161-005	Filtrate	222621	04/28/15 18:10	5.0	1	
093	15d28k00093	SAMPLE	266161-006	Filtrate	222621	04/28/15 18:14	5.0	1	
094	15d28k00094	SAMPLE	266161-008	Filtrate	222621	04/28/15 18:19	5.0	1	
095	15d28k00095	SAMPLE	266161-009	Filtrate	222621	04/28/15 18:23	5.0	1	
096	15d28k00096	SAMPLE	266161-016	Filtrate	222621	04/28/15 18:28	5.0	1	
097	15d28k00097	SAMPLE	266161-017	Filtrate	222621	04/28/15 18:33	5.0	1	
098	15d28k00098	CCV				04/28/15 18:38	1.0	13 1	
099	15d28k00099	X	XCCB			04/28/15 18:42	1.0	1	
100	15d28k00100	CCB				04/28/15 18:47	1.0	1	
101	15d28k00101	SAMPLE	266161-018	Filtrate	222621	04/28/15 18:52	5.0	1	
102	15d28k00102	SAMPLE	266161-019	Filtrate	222621	04/28/15 18:56	5.0	1	
103	15d28k00103	SAMPLE	266161-020	Filtrate	222621	04/28/15 19:01	5.0	1	4:MG=55000
104	15d28k00104	X	RINSE			04/28/15 19:06	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015170522

Instrument : MET26
 Method : EPA 6020

Begun : 04/28/15 10:02
 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used	
105	15d28k00105	SAMPLE	266161-019	Filtrate	222621	04/28/15 19:10	5.0	1	
106	15d28k00106	X	RINSE			04/28/15 19:20	1.0	1	
107	15d28k00107	SAMPLE	266161-017	Filtrate	222621	04/28/15 19:25	5.0	1	
108	15d28k00108	SAMPLE	266161-021	Filtrate	222621	04/28/15 19:29	5.0	1	
109	15d28k00109	SAMPLE	266161-023	Filtrate	222621	04/28/15 19:34	5.0	1	
110	15d28k00110	SAMPLE	266161-025	Filtrate	222621	04/28/15 19:39	5.0	1	
111	15d28k00111	SAMPLE	266161-026	Filtrate	222621	04/28/15 19:43	5.0	1	
112	15d28k00112	SAMPLE	266091-010	Filtrate	222325	04/28/15 19:48	50.0	1	
113	15d28k00113	CCV				04/28/15 19:53	1.0	13	1
114	15d28k00114	X	XCCB			04/28/15 19:57	1.0	1	
115	15d28k00115	CCB				04/28/15 20:02	1.0	1	
116	15d28k00116	X	RINSE			04/28/15 20:07	1.0	1	
117	15d28k00117	SAMPLE	266161-013	Filtrate	222621	04/28/15 20:12	500.0	1	
118	15d28k00118	SAMPLE	266161-013	Filtrate	222621	04/28/15 20:16	5.0	1	4:NA=80000
119	15d28k00119	X	RINSE			04/28/15 20:21	1.0	1	
120	15d28k00120	CCV				04/28/15 20:26	1.0	13	1
121	15d28k00121	X	XCCB			04/28/15 20:31	1.0	1	
122	15d28k00122	CCB				04/28/15 20:36	1.0	1	
123	15d28k00123	ICSA				04/28/15 20:40	1.0	11	1 8:CA=300000
124	15d28k00124	ICSAB				04/28/15 20:45	1.0	12	1 13:CA=300000
125	15d28k00125	X	RINSE			04/28/15 20:50	1.0	1	
126	15d28k00126	X	RINSE			04/28/15 20:55	1.0	1	
127	15d28k00127	SAMPLE	266150-002	Filtrate	222567	04/28/15 20:59	5.0	1	4:NA=2400000
128	15d28k00128	SAMPLE	266150-003	Filtrate	222567	04/28/15 21:04	5.0	1	4:NA=2100000
129	15d28k00129	SAMPLE	266150-004	Filtrate	222567	04/28/15 21:09	5.0	1	4:NA=2300000
130	15d28k00130	SAMPLE	266150-005	Filtrate	222567	04/28/15 21:14	5.0	1	4:NA=2300000
131	15d28k00131	SAMPLE	266150-006	Filtrate	222567	04/28/15 21:18	5.0	1	4:NA=2300000
132	15d28k00132	SAMPLE	266150-007	Filtrate	222567	04/28/15 21:23	5.0	1	4:NA=2400000
133	15d28k00133	SAMPLE	266150-008	Filtrate	222567	04/28/15 21:28	5.0	1	5:NA=2400000
134	15d28k00134	SAMPLE	266150-009	Filtrate	222567	04/28/15 21:33	5.0	1	4:NA=2400000
135	15d28k00135	SAMPLE	266150-010	Filtrate	222567	04/28/15 21:37	5.0	1	4:NA=2000000
136	15d28k00136	X	RINSE			04/28/15 21:42	1.0	1	
137	15d28k00137	SAMPLE	266150-010	Filtrate	222567	04/28/15 21:47	500.0	1	1:NA=21000
138	15d28k00138	CCV				04/28/15 21:52	1.0	13	1
139	15d28k00139	X	XCCB			04/28/15 21:57	1.0	1	
140	15d28k00140	CCB				04/28/15 22:02	1.0	1	
141	15d28k00141	SAMPLE	266150-011	Filtrate	222567	04/28/15 22:06	5.0	1	3:NA=640000
142	15d28k00142	SAMPLE	266150-012	Filtrate	222567	04/28/15 22:11	5.0	1	3:NA=3400000
143	15d28k00143	SAMPLE	266150-013	Filtrate	222567	04/28/15 22:16	5.0	1	5:NA=2100000
144	15d28k00144	SAMPLE	266150-014	Filtrate	222567	04/28/15 22:21	5.0	1	5:NA=2400000
145	15d28k00145	CCV				04/28/15 22:25	1.0	13	1
146	15d28k00146	X	XCCB			04/28/15 22:30	1.0	1	
147	15d28k00147	CCB				04/28/15 22:35	1.0	1	
148	15d28k00148	ICSA				04/28/15 22:40	1.0	11	1 8:CA=310000
149	15d28k00149	ICSAB				04/28/15 22:44	1.0	12	1 10:CA=310000
150	15d28k00150	X	RINSE			04/28/15 22:49	1.0	1	
151	15d28k00151	X	RINSE			04/28/15 22:54	1.0	1	
152	15d28k00152	X	RINSE			04/28/15 22:59	1.0	1	
153	15d28k00153	X	RINSE			04/28/15 23:04	1.0	1	
154	15d28k00154	X	RINSE			04/28/15 23:09	1.0	1	
155	15d28k00155	X	RINSE			04/28/15 23:14	1.0	1	
156	15d28k00156	X	RINSE			04/28/15 23:19	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015170522

Instrument : MET26 Begun : 04/28/15 10:02
 Method : EPA 6020 SOP Version : icpms_rv10

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Stds Used
157	15d28k00157	X	RINSE			04/28/15 23:24	1.0	1

CRT 04/28/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 56.

NT 04/29/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 57 through 157.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S26949 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 10151170522

Date : 04/28/15
 Sequence : MET26 15d28k00

Reference : 15d28k00004
 Analyzed : 04/28/15 10:16

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	932896	1408090	91453	713110	178823	44424	2120426	1443527	2111995	2803913
		LOWER LIMIT	279869	422427	27436	213933	53647	13327	636128	433058	633599	841174
		UPPER LIMIT	1119475	1689708	109744	855732	214588	53309	2544511	1732232	2534394	3364696
015	ICB	2641136--007	1068839	1624593	102819	841854	198436	49526	2333071	1525048	2351478	3024568
017	ICSA		595683	1123557	73588	606893	152617	38616	1666512	1117722	1763793	2389940
018	ICSAB		556248	1070109	67283	555175	140759	36143	1606406	1093472	1687645	2324247
024	MSS		1096230	1659733	99865	794607	191084	48407	2334398	1565325	2398125	3059407
026	CCV		960218	1539719	97608	810444	190956	47335	2208218	1443357	2273448	2939534
028	CCB		1151710 *	1691152 *	105345	871197 *	203247	50839	2443362	1576012	2459194	3157902
029	BLANK		1148354 *	1716279 *	105558	881189 *	205050	50720	2431483	1572727	2475793	3115458
030	BS		1107232	1661126	104324	874695 *	201386	50429	2382307	1549609	2408611	3080648
031	BSD		1079469	1629193	102675	857016 *	198303	49642	2341379	1541962	2379324	3080557
032	MSS	266161--007	953889	1509340	100010	844153	196219	48549	2271375	1472763	2281312	2984891
033	MS		920440	1553402	98893	829009	195388	49093	2252011	1449072	2296539	2972202
034	MSD		919144	1578123	99260	805581	193018	48651	2314271	1471225	2371861	3075047
035	MSS	266161--007	1052144	1698895 *	106640	838886	204935	52672	2490975	1592145	2507696	3170589
036	SAMPLE	266263--002	720399	1368119	95046	727406	181146	45809	1965395	1225727	2062452	2634383
038	SAMPLE	266263--002	933823	1538872	101345	787452	193357	49478	2340239	1486755	2312474	2985546
040	CCV		914479	1530535	100540	823360	195379	48909	2253426	1443065	2287241	2996603
042	CCB		1126755 *	1734579 *	110097 *	879274 *	210192	52834	2505271	1604822	2529948	3199386
043	BLANK		1130297 *	1763668 *	108749	884881 *	208809	52670	2519170	1612994	2563295 *	3256497
044	BS		988580	1545860	104523	857005 *	201631	50373	2199060	1460276	2250466	2890403
045	BSD		1020928	1606307	103907	846332	199078	50039	2343851	1535813	2377661	3047070
046	MSS	266350--001	1070132	1745877 *	110828 *	866873 *	201014	52032	2420884	1550498	2615049 *	3177538
047	MS		914410	1559212	103552	870873 *	197123	48720	22929207	1458284	2367462	2932892
048	MSD		971997	1630866	103151	841856	190451	48936	2277866	1489682	2439602	3022723
049	SAMPLE	266363--001	885829	1488608	98076	793976	185306	46440	2131736	1459141	2268187	2834930
050	SAMPLE	266363--002	1015516	1688814	104811	781320	182623	48568	2328438	1507445	2484303	3038607
051	SAMPLE	266363--001	1106197	1697741 *	109539	895716 *	208323	53035	2475105	1581083	2482408	3140447
052	CCV		1001047	1617593	102995	849656	197710	49526	2299973	1489993	2364961	3093150
054	CCB		1164194 *	1767611 *	111289 *	829496	202586	53024	2528003	1618791	2551614 *	3233387
055	ICSA		582507	1159971	77925	635652	157327	40387	1718989	1148535	1800598	2493326
056	ICSAB		439738	1034557	66184	544711	139073	35608	1565749	1069308	1613295	2300290
059	SAMPLE	266087--009	1056637	1675325	112452 *	869565 *	205362	53397 *	2434154	1597696	2447323	3184070
060	SAMPLE	266087--009	1023113	1616984	99651	864259 *	207245	48828	2457068	1587281	2421530	3185467
061	CCV		952104	1608251	100182	765898	186065	48035	2342918	1528304	2356108	3153099

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 10151170522

Date : 04/28/15
 Sequence : MET26 15d28k00

Reference : 15d28k00004
 Analyzed : 04/28/15 10:16

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
063	CCB		1036498	1647155	100950	873122 *	202068	48367	2418306	1595031	2410526	3159201
064	SAMPLE	266091-002	931987	1589062	100352	820135	193689	48657	2301691	1515671	2392404	3039061
065	SAMPLE	266091-004	944282	1552830	100102	775805	192118	48788	2345669	1579861	2350457	3088286
066	SAMPLE	266091-005	1034563	1603649	108768	886957 *	208998	52777	2430082	1630477	2409849	3173467
067	SAMPLE	266091-008	1049980	1679091	105046	850514	199480	50503	2491911	1639002	2487318	3259740
068	SAMPLE	266091-009	1034639	1648544	102617	858266 *	205571	50822	2383323	1592130	2427099	3154080
069	SAMPLE	266091-010	1068140	1676942	105813	628832	172670	51556	2426110	1603845	2474782	3192127
070	SAMPLE	266091-012	1008960	1596943	105573	858474 *	202511	51019	2372741	1586551	2360073	3116976
071	CCV		851158	1464497	98079	818121	193441	47619	2200357	1459512	2204852	2962679
073	CCB		1050564	1642399	104762	848790	201210	50517	2430542	1614111	2426754	3188255
074	ICSA		571070	1141331	76462	630932	158574	40479	1736645	1155626	1809727	2512655
075	ICSAB		434435	1066079	68339	550396	141436	36602	1621240	1102632	1680431	2406628
078	MSS	266161-007	774360	1355566	89123	682696	175064	43709	2101181	1461486	2062782	2820786
081	SER	QC785681	790204	1405385	91640	688523	176169	44739	2155467	1483245	2149915	2882075
082	PDS	QC785682	856625	1456663	92524	698946	175360	44935	2147189	1454395	2184763	2892205
083	SAMPLE	266161-009	900818	1490083	95676	749880	187557	47375	2261654	1521977	2244914	3000442
084	SAMPLE	266161-020	922183	1547294	97282	760987	187369	47630	2291179	1557219	2299269	3044088
085	CCV		859507	1487140	95117	735251	183420	46037	2184066	1448222	2226321	2952235
087	CCB		907180	1533653	98077	808112	189389	47122	2335042	1557364	2296187	3062306
088	MSS	266161-007	846960	1502987	95481	730441	185129	47030	2288036	1476527	2254739	3030968
089	SER	QC785681	930897	1596866	102570	823458	196555	49951	2352497	1551764	2388797	3115357
090	PDS	QC785682	836008	1506950	99919	870685 *	199884	47968	2229619	1442023	2250121	3024344
091	SAMPLE	266161-004	930247	1604740	101175	807885	195742	49518	2358622	1521755	2356078	3155566
092	SAMPLE	266161-005	965102	1592526	103487	829244	200828	50869	2448181	1584494	2375721	3175842
093	SAMPLE	266161-006	901058	1560834	100894	836612	198953	49150	2339854	1566909	2345954	3075248
094	SAMPLE	266161-008	831525	1485109	96223	740825	188272	47135	2261504	1498899	2220799	3017606
095	SAMPLE	266161-009	904900	1534445	100246	797647	191746	48753	2350669	1572385	2308001	3098024
096	SAMPLE	266161-016	876057	1516593	97289	759329	188771	47858	2279478	1536937	2256033	3061747
097	SAMPLE	266161-017	920861	1576783	98888	784709	191841	48334	2343459	1607402	2323644	3112199
098	CCV		809477	1401083	90772	713340	179258	44927	2142590	1444876	2138203	2894422
100	CCB		964483	1589477	101437	823491	195530	49457	2412507	1616874	2371541	3183972
101	SAMPLE	266161-018	983837	1606489	102418	834234	200475	49804	2408432	1598410	2378453	3189973
102	SAMPLE	266161-019	1044040	1754844 *	103796	821538	196433	50541	2630573 *	1736464 *	2599838 *	3482905 *
103	SAMPLE	266161-020	773233	1394616	92132	821177	191823	45309	2072742	1387051	2105707	2868652
105	SAMPLE	266161-019	709073	1345419	89574	679220	174509	44299	2077377	1455376	2091158	2816745
107	SAMPLE	266161-017	777345	1413998	93216	700245	180988	46503	2220325	1538567	2185574	2931352
108	SAMPLE	266161-021	732608	1384839	93103	841959	198231	46412	2185419	1480284	2144663	2914263

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 10151170522

Date : 04/28/15
Sequence : MET26 15d28k00

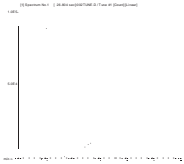
Reference : 15d28k00004
Analyzed : 04/28/15 10:16

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
109	SAMPLE	266161-023	698724	1360227	92372	692931	179479	46183	2150788	1429942	2118283	2912317
110	SAMPLE	266161-025	722710	1378683	92857	691882	180401	46345	2187592	1440377	2153170	2897974
111	SAMPLE	266161-026	768534	1415774	95690	710038	183353	46643	2246376	1495244	2215428	2971499
112	SAMPLE	266091-010	870013	1534666	97895	729030	189255	49183	2365176	1544576	2326807	3087149
113	CCV		799556	1468272	96466	765620	187453	47508	2270749	1476710	2227787	3068152
115	CCB		956380	1584561	102194	821420	197268	50186	2397233	1596114	2412599	3129272
117	SAMPLE	266161-013	898420	1555692	102170	825753	199559	50907	2421062	1582053	2362908	3144008
118	SAMPLE	266161-013	868450	1523765	91289	712796	178279	45126	2202519	1365763	2267566	2937398
120	CCV		885256	1566031	97715	733066	186036	48408	2324478	1506560	2370429	3043665
122	CCB		929541	1558106	100924	820117	197215	49929	2396627	1543447	2376255	3080526
123	ICSA		500515	1139492	76572	646894	163588	41256	1774773	1148626	1824066	2547368
124	IC SAB		400227	1059385	67233	554803	144330	36577	1690560	1110719	1716761	2453075
127	SAMPLE	266150-002	1366784 *	2133289 *	111470 *	848547	193242	53937 *	2582408 *	1317607	2900037 *	3170880
128	SAMPLE	266150-003	1431663 *	2274408 *	125548 *	1063279 *	236223 *	59770 *	2703800 *	1340604	3086943 *	3287383
129	SAMPLE	266150-004	1359775 *	2242628 *	124410 *	997596 *	230029 *	60863 *	2716443 *	1346886	3078395 *	3255257
130	SAMPLE	266150-005	1224637 *	2150595 *	125038 *	1046918 *	237900 *	61161 *	2670221 *	1305493	2999198 *	3146035
131	SAMPLE	266150-006	1124393 *	1995450 *	118674 *	1025093 *	231238 *	57807 *	2499462	1238585	2807498 *	3011666
132	SAMPLE	266150-007	1181820 *	2040351 *	112841 *	980446 *	223878 *	55734 *	2505748	1259290	2832724 *	3036494
133	SAMPLE	266150-008	1185626 *	1977044 *	110166 *	946863 *	217726 *	53585 *	2401574	1217233	2700286 *	2925175
134	SAMPLE	266150-009	1004846	1848033 *	108864	905604 *	208079	53804 *	2359842	1223066	2604428 *	2893505
135	SAMPLE	266150-010	971539	1809092 *	101804	839736	195059	49421	2338382	1234315	2562267 *	2896591
137	SAMPLE	266150-010	356152	975696	69245	547746	147760	35392	1730549	1166558	1651736	2284178
138	CCV		291690	895997	60979	451334	122580	31522	1564774	1107721	1545536	2198171
140	CCB		291674	847405	60985	454537	124376	31472	1571970	1117108	1466344	2126210
141	SAMPLE	266150-011	456761	1139491	73213	533170	138929	36433	1744117	1061809	1800424	2356538
142	SAMPLE	266150-012	1274945 *	2106407 *	114151 *	933172 *	211831	54910 *	2484029	1273040	2836139 *	3071099
143	SAMPLE	266150-013	1005924	1816722 *	106359	922141 *	207167	50519	2244678	1195456	2505323	2841932
144	SAMPLE	266150-014	981545	1825498 *	104132	895585 *	205123	49985	2298099	1217884	2577483 *	2876462
145	CCV		304971	928278	70545	574912	154381	36297	1655293	1126616	1609545	2265321
147	CCB		248212 *	789621	58210	428342	120249	30240	1509676	1073130	1410071	2031774
148	ICSA		197364 *	673815	51385	396647	108389	28415	1270741	846022	1289157	1883472
149	IC SAB		178688 *	595720	46355	360573	99812	26198	1189947	815215	1196790	1779241

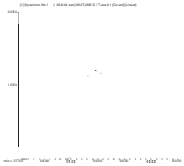
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D28k00.B\002TUNE.D
 Date Acquired: Apr 28 2015 10:07 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

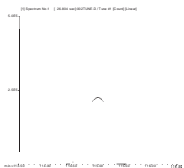
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	58267	59856	60434	60823	62305	2.48	5.00	
59 Co	67650	67633	68613	69021	68751	0.68	5.00	
115 In	1045319	1126132	1125551	1144751	1146573	3.96	5.00	
205 Tl	45164	45255	45216	45623	45469	0.41	5.00	



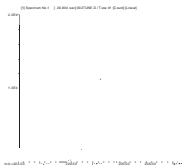
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015170522001
 Units : ug/L
 Date : 28-APR-2015 10:16
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d28k00005	1015170522005	28-APR-2015 10:21	S27043, S26751	
L2	15d28k00006	1015170522006	28-APR-2015 10:25	S27044, S26751	
L3	15d28k00007	1015170522007	28-APR-2015 10:30	S27045, S26751	
L4	15d28k00008	1015170522008	28-APR-2015 10:35	S27046, S26751	
L5	15d28k00009	1015170522009	28-APR-2015 10:39	S27041, S26751	
L6	15d28k00010	1015170522010	28-APR-2015 10:44	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0060	0.0066	0.0056	0.0054	0.0053	0.0050	BLNK	-0.9031	196.961		0.0056	0.999	0.995	
Antimony	A	0.0029	0.0031	0.0028	0.0027	0.0027	0.0029	BLNK	-0.0144	352.680		0.0028	0.999	0.995	
Barium	A	7.7E-4	8.9E-4	8.0E-4	7.5E-4	7.3E-4	7.2E-4	BLNK	-0.0115	1380.39		7.8E-4	1.000	0.995	
Beryllium	A	0.0030	0.0027	0.0027	0.0027	0.0027	0.0026	BLNK	-0.0064	382.370		0.0027	1.000	0.995	
Cadmium	A	9.2E-4	8.4E-4	7.3E-4	7.4E-4	7.3E-4	7.2E-4	BLNK	-0.0137	1378.68		7.8E-4	1.000	0.995	
Calcium	A	0.0016	4.8E-4	3.0E-4	1.9E-4	1.8E-4	1.8E-4	BLNK	-68.581	5624.58		4.9E-4	1.000	0.995	
Lead	A	0.0080	0.0061	0.0053	0.0048	0.0046	0.0047	BLNK	-0.0627	213.364		0.0056	1.000	0.995	
Magnesium	A	0.0084	0.0056	0.0048	0.0046	0.0044	0.0042	BLNK	-1.3029	236.605		0.0053	0.999	0.995	
Molybdenum	A	0.0034	0.0026	0.0021	0.0020	0.0020	0.0020	BLNK	-0.0971	508.536		0.0023	1.000	0.995	
Potassium	A	0.1021	0.0291	0.0156	0.0070	0.0059	0.0057	BLNK	-171.63	175.896		0.0276	1.000	0.995	
Silver	A	0.0045	0.0041	0.0036	0.0034	0.0033	0.0035	BLNK	-0.0408	288.749		0.0037	1.000	0.995	
Thallium	A	0.0086	0.0076	0.0069	0.0069	0.0070	0.0073	BLNK	-0.0126	138.509		0.0074	1.000	0.995	
Arsenic	E	0.0132	0.0068	0.0061	0.0055	0.0055	0.0056	BLNK	-0.1275	180.645		0.0071	1.000	0.995	
Chromium	E	0.0536	0.0289	0.0266	0.0234	0.0220	0.0228	BLNK	-0.1544	44.2842		0.0295	1.000	0.995	
Cobalt	E	0.0390	0.0357	0.0366	0.0353	0.0334	0.0343	BLNK	-0.0069	29.3333		0.0357	1.000	0.995	
Copper	E	0.1716	0.0547	0.0414	0.0269	0.0240	0.0244	BLNK	-0.5377	41.2522		0.0572	1.000	0.995	
Manganese	E	0.0151	0.0151	0.0151	0.0142	0.0138	0.0143	BLNK	-0.0091	70.5154		0.0146	1.000	0.995	
Nickel	E	0.0122	0.0104	0.0103	0.0097	0.0090	0.0092	BLNK	-0.0309	108.965		0.0101	1.000	0.995	
Sodium	E	0.0237	0.0091	0.0075	0.0055	0.0051	0.0053	BLNK	-34.902	191.109		0.0094	1.000	0.995	
Vanadium	E	0.0704	0.0288	0.0243	0.0191	0.0181	0.0190	BLNK	-0.2710	53.2429		0.0299	0.999	0.995	
Zinc	E		0.0086	0.0066	0.0046	0.0042	0.0043	BLNK	-0.3713	233.834		0.0057	1.000	0.995	
Iron	H	0.0109	0.0076	0.0076	0.0076	0.0071	0.0071	BLNK	-1.7703	140.348		0.0080	1.000	0.995	
Selenium	H	0.0014	0.0010	0.0010	0.0010	9.8E-4	9.5E-4	BLNK	-0.0273	1045.83		0.0011	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	9	50.000	27	100.00	9	1000.0	7	10000	4	20000	-1
Antimony	A	0.1000	-13	0.5000	6	1.0000	-2	10.000	-7	100.00	-5	200.00	1
Barium	A	0.1000	-6	0.5000	20	1.0000	10	10.000	3	100.00	1	200.00	0
Beryllium	A	0.1000	9	0.5000	1	1.0000	1	10.000	2	100.00	3	200.00	-1
Cadmium	A	0.1000	13	0.5000	13	1.0000	-1	10.000	2	100.00	1	200.00	0
Calcium	A	10.000	129	50.000	33	100.00	0	1000.0	0	10000	3	20000	-1
Lead	A	0.1000	7	0.5000	18	1.0000	7	10.000	2	100.00	-1	200.00	0
Magnesium	A	10.000	86	50.000	29	100.00	13	1000.0	8	10000	4	20000	-1
Molybdenum	A	0.1000	-25	0.5000	11	1.0000	-3	10.000	-2	100.00	0	200.00	0
Potassium	A	10.000	-21	50.000	69	100.00	2	1000.0	6	10000	3	20000	-1
Silver	A	0.1000	-10	0.5000	10	1.0000	-1	10.000	-3	100.00	-3	200.00	1
Thallium	A	0.0500	-6	0.2500	0	0.5000	-7	5.0000	-5	50.000	-3	100.00	1
Arsenic	E	0.1000	11	0.5000	-2	1.0000	-2	10.000	-1	100.00	-1	200.00	0
Chromium	E	0.1000	-17	0.5000	-3	1.0000	2	10.000	2	100.00	-3	200.00	1
Cobalt	E	0.1000	8	0.5000	3	1.0000	7	10.000	3	100.00	-2	200.00	0
Copper	E	0.1000	70	0.5000	18	1.0000	17	10.000	6	100.00	-1	200.00	0
Manganese	E	0.1000	-3	0.5000	5	1.0000	5	10.000	0	100.00	-3	200.00	1
Nickel	E	0.1000	2	0.5000	7	1.0000	9	10.000	5	100.00	-2	200.00	0
Sodium	E	10.000	3	50.000	4	100.00	8	1000.0	2	10000	-2	20000	1
Vanadium	E	0.1000	4	0.5000	-1	1.0000	3	10.000	-1	100.00	-4	200.00	1
Zinc	E			0.5000	27	1.0000	17	10.000	4	100.00	-2	200.00	0
Iron	H	10.000	35	50.000	3	100.00	5	1000.0	6	10000	0	20000	0
Selenium	H	0.1000	22	0.5000	1	1.0000	4	10.000	5	100.00	2	200.00	-1

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015170522001

Cal Date : 28-APR-2015

ICV 1015170522012 (15d28k00012 28-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	9944	ug/L	-1	10	
Antimony	A	100.0	95.87	ug/L	-4	10	
Barium	A	100.0	100.1	ug/L	0	10	
Beryllium	A	100.0	96.56	ug/L	-3	10	
Cadmium	A	100.0	100.0	ug/L	0	10	
Calcium	A	10000	9846	ug/L	-2	10	
Lead	A	100.0	97.09	ug/L	-3	10	
Magnesium	A	10000	9943	ug/L	-1	10	
Molybdenum	A	100.0	97.33	ug/L	-3	10	
Potassium	A	10000	9907	ug/L	-1	10	
Silver	A	100.0	95.52	ug/L	-4	10	
Thallium	A	50.00	47.19	ug/L	-6	10	
Arsenic	E	100.0	98.77	ug/L	-1	10	
Chromium	E	100.0	99.79	ug/L	0	10	
Cobalt	E	100.0	100.5	ug/L	1	10	
Copper	E	100.0	102.2	ug/L	2	10	
Manganese	E	100.0	99.00	ug/L	-1	10	
Nickel	E	100.0	101.1	ug/L	1	10	
Sodium	E	10000	10070	ug/L	1	10	
Vanadium	E	100.0	99.00	ug/L	-1	10	
Zinc	E	100.0	101.4	ug/L	1	10	
Iron	H	10000	9859	ug/L	-1	10	
Selenium	H	100.0	102.8	ug/L	3	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522015 File : 15d28k00015 Time : 28-APR-2015 11:07
 Cal : 1015170522001 Caldate : 28-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	1068839	14.57
Scandium	A	1408090	1624593	15.38
Scandium	E	91453	102819	12.43
Scandium	H	713110	841854	18.05
Germanium	H	178823	198436	10.97
Germanium	E	44424	49526	11.48
Indium	A	2120426	2333071	10.03
Bismuth	A	1443527	1525048	5.65
Yttrium	A	2111995	2351478	11.34
Terbium	A	2803913	3024568	7.87

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015170522017 File : 15d28k00017
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26727, S26751

IDF : 1.0
 Time : 28-APR-2015 11:16

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4712	0.1000	ug/L	
Barium	A	1.833	0.1000	ug/L	
Beryllium	A	[0.01430]	0.1000	ug/L	
Cadmium	A	2.198	0.1000	ug/L	
Lead	A	0.2221	0.1000	ug/L	
Silver	A	[0.09450]	0.1000	ug/L	
Thallium	A	[0.01480]	0.05000	ug/L	
Arsenic	E	0.6657	0.1000	ug/L	
Chromium	E	0.9208	0.1000	ug/L	
Cobalt	E	1.186	0.1000	ug/L	
Copper	E	1.393	0.1000	ug/L	
Manganese	E	7.523	0.1000	ug/L	
Nickel	E	1.213	0.1000	ug/L	
Vanadium	E	[0.006200]	0.1000	ug/L	
Zinc	E	2.826	0.5000	ug/L	
Selenium	H	[0.05950]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	96550	ug/L	97
Calcium	A	300000	294200	ug/L	98
Magnesium	A	100000	93990	ug/L	94
Molybdenum	A	2000	2029	ug/L	101
Potassium	A	100000	97430	ug/L	97
Sodium	E	250000	238800	ug/L	96
Phosphorus	E	100000	98160	ug/L	98
Iron	H	250000	249600	ug/L	100

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	595683	-36.15
Scandium	A	1408090	1123557	-20.21
Scandium	E	91453	73588	-19.53
Scandium	H	713110	606893	-14.89
Germanium	H	178823	152617	-14.65
Germanium	E	44424	38616	-13.07
Indium	A	2120426	1666512	-21.41
Bismuth	A	1443527	1117722	-22.57
Yttrium	A	2111995	1763793	-16.49
Terbium	A	2803913	2389940	-14.76

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015170522018 File : 15d28k00018
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 28-APR-2015 11:21

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	95740	ug/L	-4		
Cadmium	A	100.0	100.5	ug/L	1	20	
Calcium	A	300000	290000	ug/L	-3		
Magnesium	A	100000	93110	ug/L	-7		
Molybdenum	A	2000	2024	ug/L	1		
Potassium	A	100000	97480	ug/L	-3		
Silver	A	50.00	46.61	ug/L	-7	20	
Arsenic	E	100.0	101.3	ug/L	1	20	
Chromium	E	200.0	205.7	ug/L	3	20	
Cobalt	E	200.0	204.1	ug/L	2	20	
Copper	E	200.0	200.3	ug/L	0	20	
Manganese	E	200.0	210.0	ug/L	5	20	
Nickel	E	200.0	199.9	ug/L	0	20	
Sodium	E	250000	242500	ug/L	-3		
Vanadium	E	200.0	209.1	ug/L	5	20	
Zinc	E	100.0	103.7	ug/L	4	20	
Iron	H	250000	252400	ug/L	1		
Selenium	H	100.0	103.6	ug/L	4	20	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	713110	555175	-22.15
Scandium	A	1408090	1070109	-24.00
Scandium	E	91453	67283	-26.43
Germanium	H	178823	140759	-21.29
Germanium	E	44424	36143	-18.64
Indium	A	2120426	1606406	-24.24
Yttrium	A	2111995	1687645	-20.09

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522026 File : 15d28k00026 Time : 28-APR-2015 12:00
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0056	0.0050	10000	9832	ug/L	-2	10	
Antimony	A	0.0028	0.0027	100.0	96.79	ug/L	-3	10	
Barium	A	7.8E-4	7.4E-4	100.0	101.8	ug/L	2	10	
Beryllium	A	0.0027	0.0025	100.0	94.23	ug/L	-6	10	
Cadmium	A	7.8E-4	7.2E-4	100.0	99.54	ug/L	0	10	
Calcium	A	4.9E-4	1.8E-4	10000	9918	ug/L	-1	10	
Lead	A	0.0056	0.0046	100.0	97.48	ug/L	-3	10	
Magnesium	A	0.0053	0.0041	10000	9762	ug/L	-2	10	
Molybdenum	A	0.0023	0.0019	100.0	97.06	ug/L	-3	10	
Potassium	A	0.0276	0.0058	10000	10000	ug/L	0	10	
Silver	A	0.0037	0.0033	100.0	95.49	ug/L	-5	10	
Thallium	A	0.0074	0.0068	50.00	47.04	ug/L	-6	10	
Arsenic	E	0.0071	0.0055	100.0	99.46	ug/L	-1	10	
Chromium	E	0.0295	0.0227	100.0	100.2	ug/L	0	10	
Cobalt	E	0.0357	0.0342	100.0	100.3	ug/L	0	10	
Copper	E	0.0572	0.0248	100.0	101.7	ug/L	2	10	
Manganese	E	0.0146	0.0141	100.0	99.34	ug/L	-1	10	
Nickel	E	0.0101	0.0093	100.0	100.9	ug/L	1	10	
Sodium	E	0.0094	0.0052	10000	9966	ug/L	0	10	
Vanadium	E	0.0299	0.0187	100.0	99.27	ug/L	-1	10	
Zinc	E	0.0057	0.0044	100.0	101.6	ug/L	2	10	
Iron	H	0.0080	0.0069	10000	9711	ug/L	-3	10	
Selenium	H	0.0011	9.9E-4	100.0	103.3	ug/L	3	10	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	960218	2.93
Scandium	A	1408090	1539719	9.35
Scandium	E	91453	97608	6.73
Scandium	H	713110	810444	13.65
Germanium	H	178823	190956	6.78
Germanium	E	44424	47335	6.55
Indium	A	2120426	2208218	4.14
Bismuth	A	1443527	1443357	-0.01
Yttrium	A	2111995	2273448	7.64
Terbium	A	2803913	2939534	4.84

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015170522028
Cal : 1015170522001

File : 15d28k00028
Caldate : 28-APR-2015

IDF : 1.0
Time : 28-APR-2015 12:09

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	i+ ***
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	i+ ***
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	i+ ***
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	i+ ***
Molybdenum	A	0.1054	0.1000	0.2000	ug/L	CCB ***
Potassium	A	ND	10.00	10.00	ug/L	i+ ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	i+ ***
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	1151710	23.46 *
Scandium	A	1408090	1691152	20.10 *
Scandium	E	91453	105345	15.19
Scandium	H	713110	871197	22.17 *
Germanium	H	178823	203247	13.66
Germanium	E	44424	50839	14.44
Indium	A	2120426	2443362	15.23
Bismuth	A	1443527	1576012	9.18
Yttrium	A	2111995	2459194	16.44
Terbium	A	2803913	3157902	12.62

+ = high bias CCB = instrument blank i = ISTD failure

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522040 File : 15d28k00040 Time : 28-APR-2015 13:05
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0056	0.0050	10000	9898	ug/L	-1	10	
Antimony	A	0.0028	0.0027	100.0	95.32	ug/L	-5	10	
Barium	A	7.8E-4	7.4E-4	100.0	102.2	ug/L	2	10	
Beryllium	A	0.0027	0.0026	100.0	97.76	ug/L	-2	10	
Cadmium	A	7.8E-4	7.2E-4	100.0	99.27	ug/L	-1	10	
Calcium	A	4.9E-4	1.8E-4	10000	9958	ug/L	0	10	
Lead	A	0.0056	0.0045	100.0	95.76	ug/L	-4	10	
Magnesium	A	0.0053	0.0042	10000	9863	ug/L	-1	10	
Molybdenum	A	0.0023	0.0019	100.0	97.08	ug/L	-3	10	
Potassium	A	0.0276	0.0058	10000	10040	ug/L	0	10	
Silver	A	0.0037	0.0033	100.0	95.44	ug/L	-5	10	
Thallium	A	0.0074	0.0069	50.00	47.67	ug/L	-5	10	
Arsenic	E	0.0071	0.0054	100.0	98.19	ug/L	-2	10	
Chromium	E	0.0295	0.0222	100.0	98.36	ug/L	-2	10	
Cobalt	E	0.0357	0.0338	100.0	99.22	ug/L	-1	10	
Copper	E	0.0572	0.0245	100.0	100.4	ug/L	0	10	
Manganese	E	0.0146	0.0140	100.0	98.74	ug/L	-1	10	
Nickel	E	0.0101	0.0092	100.0	99.89	ug/L	0	10	
Sodium	E	0.0094	0.0051	10000	9735	ug/L	-3	10	
Vanadium	E	0.0299	0.0185	100.0	98.38	ug/L	-2	10	
Zinc	E	0.0057	0.0043	100.0	100.0	ug/L	0	10	
Iron	H	0.0080	0.0069	10000	9680	ug/L	-3	10	
Selenium	H	0.0011	10.0E-4	100.0	104.1	ug/L	4	10	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	914479	-1.97
Scandium	A	1408090	1530535	8.70
Scandium	E	91453	100540	9.94
Scandium	H	713110	823360	15.46
Germanium	H	178823	195379	9.26
Germanium	E	44424	48909	10.10
Indium	A	2120426	2253426	6.27
Bismuth	A	1443527	1443065	-0.03
Yttrium	A	2111995	2287241	8.30
Terbium	A	2803913	2996603	6.87

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015170522042
Cal : 1015170522001

File : 15d28k00042
Caldate : 28-APR-2015

IDF : 1.0
Time : 28-APR-2015 13:14

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	i+ ***
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	i+ ***
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	i+ ***
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	i+ ***
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	i+ ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	i+ ***
Cobalt	E	ND	0.1000	0.05000	ug/L	i+ ***
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	i+ ***
Nickel	E	ND	0.1000	0.2000	ug/L	i+ ***
Sodium	E	ND	10.00	15.00	ug/L	i+ ***
Vanadium	E	ND	0.1000	0.05000	ug/L	i+ ***
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	i+ ***
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	1126755	20.78 *
Scandium	A	1408090	1734579	23.19 *
Scandium	E	91453	110097	20.39 *
Scandium	H	713110	879274	23.30 *
Germanium	H	178823	210192	17.54
Germanium	E	44424	52834	18.93
Indium	A	2120426	2505271	18.15
Bismuth	A	1443527	1604822	11.17
Yttrium	A	2111995	2529948	19.79
Terbium	A	2803913	3199386	14.10

+ = high bias i = ISTD failure

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522055 File : 15d28k00055 Time : 28-APR-2015 14:14
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4853	0.1000	ug/L	
Barium	A	1.793	0.1000	ug/L	
Beryllium	A	[0.01700]	0.1000	ug/L	
Cadmium	A	2.148	0.1000	ug/L	
Lead	A	0.2252	0.1000	ug/L	
Silver	A	[0.04600]	0.1000	ug/L	
Thallium	A	[0.01220]	0.05000	ug/L	
Arsenic	E	0.7178	0.1000	ug/L	
Chromium	E	0.8964	0.1000	ug/L	
Cobalt	E	1.177	0.1000	ug/L	
Copper	E	1.267	0.1000	ug/L	
Manganese	E	7.355	0.1000	ug/L	
Nickel	E	1.228	0.1000	ug/L	
Vanadium	E	[0.002100]	0.1000	ug/L	
Zinc	E	2.704	0.5000	ug/L	
Selenium	H	[0.07160]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94740	ug/L	95
Calcium	A	300000	290000	ug/L	97
Magnesium	A	100000	92210	ug/L	92
Molybdenum	A	2000	2032	ug/L	102
Potassium	A	100000	98210	ug/L	98
Sodium	E	250000	234600	ug/L	94
Phosphorus	E	100000	95610	ug/L	96
Iron	H	250000	251900	ug/L	101

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	582507	-37.56
Scandium	A	1408090	1159971	-17.62
Scandium	E	91453	77925	-14.79
Scandium	H	713110	635652	-10.86
Germanium	H	178823	157327	-12.02
Germanium	E	44424	40387	-9.09
Indium	A	2120426	1718989	-18.93
Bismuth	A	1443527	1148535	-20.44
Yttrium	A	2111995	1800598	-14.74
Terbium	A	2803913	2493326	-11.08

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015170522056
 Cal : 1015170522001
 Standards: S26728, S26751

File : 15d28k00056
 Caldate : 28-APR-2015

IDF : 1.0
 Time : 28-APR-2015 14:19

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	94990	ug/L	-5		
Cadmium	A	100.0	100.8	ug/L	1	20	
Calcium	A	300000	294000	ug/L	-2		
Magnesium	A	100000	91480	ug/L	-9		
Molybdenum	A	2000	2069	ug/L	3		
Potassium	A	100000	97170	ug/L	-3		
Silver	A	50.00	46.51	ug/L	-7	20	
Arsenic	E	100.0	100.5	ug/L	1	20	
Chromium	E	200.0	206.7	ug/L	3	20	
Cobalt	E	200.0	203.8	ug/L	2	20	
Copper	E	200.0	199.5	ug/L	0	20	
Manganese	E	200.0	211.9	ug/L	6	20	
Nickel	E	200.0	198.6	ug/L	-1	20	
Sodium	E	250000	240500	ug/L	-4		
Vanadium	E	200.0	208.8	ug/L	4	20	
Zinc	E	100.0	104.4	ug/L	4	20	
Iron	H	250000	258900	ug/L	4		
Selenium	H	100.0	103.7	ug/L	4	20	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	713110	544711	-23.61
Scandium	A	1408090	1034557	-26.53
Scandium	E	91453	66184	-27.63
Germanium	H	178823	139073	-22.23
Germanium	E	44424	35608	-19.85
Indium	A	2120426	1565749	-26.16
Yttrium	A	2111995	1613295	-23.61

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522071 File : 15d28k00071 Time : 28-APR-2015 16:23
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0056	0.0051	10000	10030	ug/L	0	10	
Antimony	A	0.0028	0.0027	100.0	95.90	ug/L	-4	10	
Barium	A	7.8E-4	7.4E-4	100.0	102.0	ug/L	2	10	
Beryllium	A	0.0027	0.0026	100.0	98.76	ug/L	-1	10	
Cadmium	A	7.8E-4	7.3E-4	100.0	100.2	ug/L	0	10	
Calcium	A	4.9E-4	1.8E-4	10000	10130	ug/L	1	10	
Lead	A	0.0056	0.0047	100.0	99.43	ug/L	-1	10	
Magnesium	A	0.0053	0.0042	10000	10030	ug/L	0	10	
Molybdenum	A	0.0023	0.0019	100.0	97.80	ug/L	-2	10	
Potassium	A	0.0276	0.0059	10000	10200	ug/L	2	10	
Silver	A	0.0037	0.0033	100.0	95.68	ug/L	-4	10	
Thallium	A	0.0074	0.0069	50.00	47.89	ug/L	-4	10	
Arsenic	E	0.0071	0.0055	100.0	98.88	ug/L	-1	10	
Chromium	E	0.0295	0.0225	100.0	99.54	ug/L	0	10	
Cobalt	E	0.0357	0.0340	100.0	99.67	ug/L	0	10	
Copper	E	0.0572	0.0245	100.0	100.6	ug/L	1	10	
Manganese	E	0.0146	0.0141	100.0	99.46	ug/L	-1	10	
Nickel	E	0.0101	0.0092	100.0	99.75	ug/L	0	10	
Sodium	E	0.0094	0.0052	10000	9897	ug/L	-1	10	
Vanadium	E	0.0299	0.0186	100.0	98.79	ug/L	-1	10	
Zinc	E	0.0057	0.0043	100.0	100.8	ug/L	1	10	
Iron	H	0.0080	0.0069	10000	9678	ug/L	-3	10	
Selenium	H	0.0011	9.9E-4	100.0	103.2	ug/L	3	10	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	851158	-8.76
Scandium	A	1408090	1464497	4.01
Scandium	E	91453	98079	7.25
Scandium	H	713110	818121	14.73
Germanium	H	178823	193441	8.17
Germanium	E	44424	47619	7.19
Indium	A	2120426	2200357	3.77
Bismuth	A	1443527	1459512	1.11
Yttrium	A	2111995	2204852	4.40
Terbium	A	2803913	2962679	5.66

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522073 File : 15d28k00073 Time : 28-APR-2015 16:33
 Cal : 1015170522001 Caldate : 28-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	1050564	12.61
Scandium	A	1408090	1642399	16.64
Scandium	E	91453	104762	14.55
Scandium	H	713110	848790	19.03
Germanium	H	178823	201210	12.52
Germanium	E	44424	50517	13.72
Indium	A	2120426	2430542	14.63
Bismuth	A	1443527	1614111	11.82
Yttrium	A	2111995	2426754	14.90
Terbium	A	2803913	3188255	13.71

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015170522074
 Cal : 1015170522001
 Standards: S26727, S26751

File : 15d28k00074
 Caldate : 28-APR-2015

IDF : 1.0
 Time : 28-APR-2015 16:37

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4894	0.1000	ug/L	
Barium	A	1.955	0.1000	ug/L	
Beryllium	A	[0.01080]	0.1000	ug/L	
Cadmium	A	2.200	0.1000	ug/L	
Lead	A	0.2253	0.1000	ug/L	
Silver	A	[0.04210]	0.1000	ug/L	
Thallium	A	[0.01430]	0.05000	ug/L	
Arsenic	E	0.7362	0.1000	ug/L	
Chromium	E	0.8642	0.1000	ug/L	
Cobalt	E	1.206	0.1000	ug/L	
Copper	E	1.409	0.1000	ug/L	
Manganese	E	7.544	0.1000	ug/L	
Nickel	E	1.249	0.1000	ug/L	
Vanadium	E	[-0.01270]	0.1000	ug/L	
Zinc	E	3.009	0.5000	ug/L	
Selenium	H	[0.07820]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	96290	ug/L	96
Calcium	A	300000	298100	ug/L	99
Magnesium	A	100000	93040	ug/L	93
Molybdenum	A	2000	2031	ug/L	102
Potassium	A	100000	98990	ug/L	99
Sodium	E	250000	239000	ug/L	96
Phosphorus	E	100000	97900	ug/L	98
Iron	H	250000	252100	ug/L	101

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	571070	-38.79
Scandium	A	1408090	1141331	-18.94
Scandium	E	91453	76462	-16.39
Scandium	H	713110	630932	-11.52
Germanium	H	178823	158574	-11.32
Germanium	E	44424	40479	-8.88
Indium	A	2120426	1736645	-18.10
Bismuth	A	1443527	1155626	-19.94
Yttrium	A	2111995	1809727	-14.31
Terbium	A	2803913	2512655	-10.39

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015170522075 File : 15d28k00075
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 28-APR-2015 16:42

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	92550	ug/L	-7		
Cadmium	A	100.0	100.2	ug/L	0	20	
Calcium	A	300000	291400	ug/L	-3		
Magnesium	A	100000	88480	ug/L	-12		
Molybdenum	A	2000	2041	ug/L	2		
Potassium	A	100000	97380	ug/L	-3		
Silver	A	50.00	46.62	ug/L	-7	20	
Arsenic	E	100.0	100.3	ug/L	0	20	
Chromium	E	200.0	203.9	ug/L	2	20	
Cobalt	E	200.0	199.4	ug/L	0	20	
Copper	E	200.0	195.4	ug/L	-2	20	
Manganese	E	200.0	207.8	ug/L	4	20	
Nickel	E	200.0	196.0	ug/L	-2	20	
Sodium	E	250000	238000	ug/L	-5		
Vanadium	E	200.0	205.1	ug/L	3	20	
Zinc	E	100.0	101.9	ug/L	2	20	
Iron	H	250000	255500	ug/L	2		
Selenium	H	100.0	102.2	ug/L	2	20	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	713110	550396	-22.82
Scandium	A	1408090	1066079	-24.29
Scandium	E	91453	68339	-25.27
Germanium	H	178823	141436	-20.91
Germanium	E	44424	36602	-17.61
Indium	A	2120426	1621240	-23.54
Yttrium	A	2111995	1680431	-20.43

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522085 File : 15d28k00085 Time : 28-APR-2015 17:30
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0056	0.0049	10000	9718	ug/L	-3	10	
Antimony	A	0.0028	0.0027	100.0	96.25	ug/L	-4	10	
Barium	A	7.8E-4	7.4E-4	100.0	101.8	ug/L	2	10	
Beryllium	A	0.0027	0.0025	100.0	96.11	ug/L	-4	10	
Cadmium	A	7.8E-4	7.2E-4	100.0	99.61	ug/L	0	10	
Calcium	A	4.9E-4	1.8E-4	10000	9943	ug/L	-1	10	
Lead	A	0.0056	0.0046	100.0	98.88	ug/L	-1	10	
Magnesium	A	0.0053	0.0042	10000	9822	ug/L	-2	10	
Molybdenum	A	0.0023	0.0019	100.0	96.84	ug/L	-3	10	
Potassium	A	0.0276	0.0058	10000	10010	ug/L	0	10	
Silver	A	0.0037	0.0033	100.0	95.65	ug/L	-4	10	
Thallium	A	0.0074	0.0069	50.00	48.04	ug/L	-4	10	
Arsenic	E	0.0071	0.0054	100.0	97.93	ug/L	-2	10	
Chromium	E	0.0295	0.0224	100.0	98.94	ug/L	-1	10	
Cobalt	E	0.0357	0.0338	100.0	99.03	ug/L	-1	10	
Copper	E	0.0572	0.0243	100.0	99.64	ug/L	0	10	
Manganese	E	0.0146	0.0141	100.0	99.26	ug/L	-1	10	
Nickel	E	0.0101	0.0091	100.0	99.46	ug/L	-1	10	
Sodium	E	0.0094	0.0052	10000	9971	ug/L	0	10	
Vanadium	E	0.0299	0.0185	100.0	98.24	ug/L	-2	10	
Zinc	E	0.0057	0.0043	100.0	99.76	ug/L	0	10	
Iron	H	0.0080	0.0073	10000	10300	ug/L	3	10	
Selenium	H	0.0011	9.9E-4	100.0	103.7	ug/L	4	10	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	859507	-7.87
Scandium	A	1408090	1487140	5.61
Scandium	E	91453	95117	4.01
Scandium	H	713110	735251	3.10
Germanium	H	178823	183420	2.57
Germanium	E	44424	46037	3.63
Indium	A	2120426	2184066	3.00
Bismuth	A	1443527	1448222	0.33
Yttrium	A	2111995	2226321	5.41
Terbium	A	2803913	2952235	5.29

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522087 File : 15d28k00087 Time : 28-APR-2015 17:39
 Cal : 1015170522001 Caldate : 28-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	[0.05290]	0.1000	0.05000	ug/L	!CCB
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	907180	-2.76
Scandium	A	1408090	1533653	8.92
Scandium	E	91453	98077	7.24
Scandium	H	713110	808112	13.32
Germanium	H	178823	189389	5.91
Germanium	E	44424	47122	6.07
Indium	A	2120426	2335042	10.12
Bismuth	A	1443527	1557364	7.89
Yttrium	A	2111995	2296187	8.72
Terbium	A	2803913	3062306	9.22

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522098 File : 15d28k00098 Time : 28-APR-2015 18:38
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0056	0.0050	10000	9927	ug/L	-1	10	
Antimony	A	0.0028	0.0027	100.0	95.83	ug/L	-4	10	
Barium	A	7.8E-4	7.4E-4	100.0	102.6	ug/L	3	10	
Beryllium	A	0.0027	0.0025	100.0	96.47	ug/L	-4	10	
Cadmium	A	7.8E-4	7.2E-4	100.0	99.87	ug/L	0	10	
Calcium	A	4.9E-4	1.8E-4	10000	10110	ug/L	1	10	
Lead	A	0.0056	0.0047	100.0	100.7	ug/L	1	10	
Magnesium	A	0.0053	0.0042	10000	9826	ug/L	-2	10	
Molybdenum	A	0.0023	0.0019	100.0	98.29	ug/L	-2	10	
Potassium	A	0.0276	0.0059	10000	10200	ug/L	2	10	
Silver	A	0.0037	0.0033	100.0	95.08	ug/L	-5	10	
Thallium	A	0.0074	0.0069	50.00	48.08	ug/L	-4	10	
Arsenic	E	0.0071	0.0055	100.0	98.60	ug/L	-1	10	
Chromium	E	0.0295	0.0226	100.0	100.1	ug/L	0	10	
Cobalt	E	0.0357	0.0341	100.0	100.0	ug/L	0	10	
Copper	E	0.0572	0.0247	100.0	101.2	ug/L	1	10	
Manganese	E	0.0146	0.0142	100.0	100.2	ug/L	0	10	
Nickel	E	0.0101	0.0092	100.0	100.1	ug/L	0	10	
Sodium	E	0.0094	0.0053	10000	10060	ug/L	1	10	
Vanadium	E	0.0299	0.0187	100.0	99.04	ug/L	-1	10	
Zinc	E	0.0057	0.0044	100.0	101.4	ug/L	1	10	
Iron	H	0.0080	0.0074	10000	10450	ug/L	5	10	
Selenium	H	0.0011	9.9E-4	100.0	103.5	ug/L	4	10	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	809477	-13.23
Scandium	A	1408090	1401083	-0.50
Scandium	E	91453	90772	-0.74
Scandium	H	713110	713340	0.03
Germanium	H	178823	179258	0.24
Germanium	E	44424	44927	1.13
Indium	A	2120426	2142590	1.05
Bismuth	A	1443527	1444876	0.09
Yttrium	A	2111995	2138203	1.24
Terbium	A	2803913	2894422	3.23

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015170522100
Cal : 1015170522001

File : 15d28k00100
Caldate : 28-APR-2015

IDF : 1.0
Time : 28-APR-2015 18:47

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	[7.419]	10.00	5.000	ug/L	!CCB
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	[9.153]	10.00	5.000	ug/L	!CCB
Molybdenum	A	0.1915	0.1000	0.2000	ug/L	CCB ***
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	964483	3.39
Scandium	A	1408090	1589477	12.88
Scandium	E	91453	101437	10.92
Scandium	H	713110	823491	15.48
Germanium	H	178823	195530	9.34
Germanium	E	44424	49457	11.33
Indium	A	2120426	2412507	13.77
Bismuth	A	1443527	1616874	12.01
Yttrium	A	2111995	2371541	12.29
Terbium	A	2803913	3183972	13.55

!=warning CCB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522113 File : 15d28k00113 Time : 28-APR-2015 19:53
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0056	0.0051	10000	10000	ug/L	0	10	
Antimony	A	0.0028	0.0027	100.0	96.25	ug/L	-4	10	
Barium	A	7.8E-4	7.4E-4	100.0	102.6	ug/L	3	10	
Beryllium	A	0.0027	0.0026	100.0	100.9	ug/L	1	10	
Cadmium	A	7.8E-4	7.2E-4	100.0	99.49	ug/L	-1	10	
Calcium	A	4.9E-4	1.8E-4	10000	10210	ug/L	2	10	
Lead	A	0.0056	0.0046	100.0	97.91	ug/L	-2	10	
Magnesium	A	0.0053	0.0042	10000	9912	ug/L	-1	10	
Molybdenum	A	0.0023	0.0019	100.0	98.20	ug/L	-2	10	
Potassium	A	0.0276	0.0060	10000	10320	ug/L	3	10	
Silver	A	0.0037	0.0033	100.0	94.64	ug/L	-5	10	
Thallium	A	0.0074	0.0070	50.00	48.44	ug/L	-3	10	
Arsenic	E	0.0071	0.0054	100.0	98.05	ug/L	-2	10	
Chromium	E	0.0295	0.0220	100.0	97.39	ug/L	-3	10	
Cobalt	E	0.0357	0.0337	100.0	98.72	ug/L	-1	10	
Copper	E	0.0572	0.0240	100.0	98.64	ug/L	-1	10	
Manganese	E	0.0146	0.0141	100.0	99.21	ug/L	-1	10	
Nickel	E	0.0101	0.0090	100.0	98.19	ug/L	-2	10	
Sodium	E	0.0094	0.0051	10000	9669	ug/L	-3	10	
Vanadium	E	0.0299	0.0183	100.0	97.25	ug/L	-3	10	
Zinc	E	0.0057	0.0043	100.0	100.5	ug/L	1	10	
Iron	H	0.0080	0.0072	10000	10060	ug/L	1	10	
Selenium	H	0.0011	9.8E-4	100.0	102.9	ug/L	3	10	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	799556	-14.29
Scandium	A	1408090	1468272	4.27
Scandium	E	91453	96466	5.48
Scandium	H	713110	765620	7.36
Germanium	H	178823	187453	4.83
Germanium	E	44424	47508	6.94
Indium	A	2120426	2270749	7.09
Bismuth	A	1443527	1476710	2.30
Yttrium	A	2111995	2227787	5.48
Terbium	A	2803913	3068152	9.42

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522115 File : 15d28k00115 Time : 28-APR-2015 20:02
 Cal : 1015170522001 Caldate : 28-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	956380	2.52
Scandium	A	1408090	1584561	12.53
Scandium	E	91453	102194	11.74
Scandium	H	713110	821420	15.19
Germanium	H	178823	197268	10.31
Germanium	E	44424	50186	12.97
Indium	A	2120426	2397233	13.05
Bismuth	A	1443527	1596114	10.57
Yttrium	A	2111995	2412599	14.23
Terbium	A	2803913	3129272	11.60

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522120 File : 15d28k00120 Time : 28-APR-2015 20:26
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0056	0.0049	10000	9695	ug/L	-3	10	
Antimony	A	0.0028	0.0027	100.0	96.87	ug/L	-3	10	
Barium	A	7.8E-4	7.6E-4	100.0	105.6	ug/L	6	10	
Beryllium	A	0.0027	0.0025	100.0	96.04	ug/L	-4	10	
Cadmium	A	7.8E-4	7.3E-4	100.0	100.4	ug/L	0	10	
Calcium	A	4.9E-4	1.8E-4	10000	9962	ug/L	0	10	
Lead	A	0.0056	0.0046	100.0	98.85	ug/L	-1	10	
Magnesium	A	0.0053	0.0041	10000	9621	ug/L	-4	10	
Molybdenum	A	0.0023	0.0019	100.0	97.45	ug/L	-3	10	
Potassium	A	0.0276	0.0058	10000	9986	ug/L	0	10	
Silver	A	0.0037	0.0033	100.0	95.62	ug/L	-4	10	
Thallium	A	0.0074	0.0069	50.00	47.44	ug/L	-5	10	
Arsenic	E	0.0071	0.0056	100.0	100.4	ug/L	0	10	
Chromium	E	0.0295	0.0226	100.0	99.75	ug/L	0	10	
Cobalt	E	0.0357	0.0343	100.0	100.7	ug/L	1	10	
Copper	E	0.0572	0.0246	100.0	100.8	ug/L	1	10	
Manganese	E	0.0146	0.0142	100.0	100.3	ug/L	0	10	
Nickel	E	0.0101	0.0093	100.0	101.1	ug/L	1	10	
Sodium	E	0.0094	0.0051	10000	9732	ug/L	-3	10	
Vanadium	E	0.0299	0.0187	100.0	99.41	ug/L	-1	10	
Zinc	E	0.0057	0.0044	100.0	102.4	ug/L	2	10	
Iron	H	0.0080	0.0075	10000	10460	ug/L	5	10	
Selenium	H	0.0011	9.8E-4	100.0	102.6	ug/L	3	10	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	885256	-5.11
Scandium	A	1408090	1566031	11.22
Scandium	E	91453	97715	6.85
Scandium	H	713110	733066	2.80
Germanium	H	178823	186036	4.03
Germanium	E	44424	48408	8.97
Indium	A	2120426	2324478	9.62
Bismuth	A	1443527	1506560	4.37
Yttrium	A	2111995	2370429	12.24
Terbium	A	2803913	3043665	8.55

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522122 File : 15d28k00122 Time : 28-APR-2015 20:36
 Cal : 1015170522001 Caldate : 28-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	929541	-0.36
Scandium	A	1408090	1558106	10.65
Scandium	E	91453	100924	10.36
Scandium	H	713110	820117	15.01
Germanium	H	178823	197215	10.29
Germanium	E	44424	49929	12.39
Indium	A	2120426	2396627	13.03
Bismuth	A	1443527	1543447	6.92
Yttrium	A	2111995	2376255	12.51
Terbium	A	2803913	3080526	9.87

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015170522123 File : 15d28k00123 Time : 28-APR-2015 20:40
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4910	0.1000	ug/L	
Barium	A	1.970	0.1000	ug/L	
Beryllium	A	[0.01660]	0.1000	ug/L	
Cadmium	A	2.235	0.1000	ug/L	
Lead	A	0.2153	0.1000	ug/L	
Silver	A	[0.04020]	0.1000	ug/L	
Thallium	A	[0.01350]	0.05000	ug/L	
Arsenic	E	0.7272	0.1000	ug/L	
Chromium	E	0.9080	0.1000	ug/L	
Cobalt	E	1.188	0.1000	ug/L	
Copper	E	1.481	0.1000	ug/L	
Manganese	E	7.681	0.1000	ug/L	
Nickel	E	1.259	0.1000	ug/L	
Vanadium	E	[-0.01190]	0.1000	ug/L	
Zinc	E	2.878	0.5000	ug/L	
Selenium	H	[0.07630]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	94420	ug/L	94
Calcium	A	300000	297200	ug/L	99
Magnesium	A	100000	90000	ug/L	90
Molybdenum	A	2000	2047	ug/L	102
Potassium	A	100000	99470	ug/L	99
Sodium	E	250000	231700	ug/L	93
Phosphorus	E	100000	95690	ug/L	96
Iron	H	250000	252500	ug/L	101

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	932896	500515	-46.35
Scandium	A	1408090	1139492	-19.08
Scandium	E	91453	76572	-16.27
Scandium	H	713110	646894	-9.29
Germanium	H	178823	163588	-8.52
Germanium	E	44424	41256	-7.13
Indium	A	2120426	1774773	-16.30
Bismuth	A	1443527	1148626	-20.43
Yttrium	A	2111995	1824066	-13.63
Terbium	A	2803913	2547368	-9.15

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015170522124 File : 15d28k00124
 Cal : 1015170522001 Caldate : 28-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 28-APR-2015 20:45

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	93580	ug/L	-6		
Cadmium	A	100.0	100.3	ug/L	0	20	
Calcium	A	300000	297400	ug/L	-1		
Magnesium	A	100000	88900	ug/L	-11		
Molybdenum	A	2000	2036	ug/L	2		
Potassium	A	100000	99510	ug/L	0		
Silver	A	50.00	46.04	ug/L	-8	20	
Arsenic	E	100.0	102.5	ug/L	3	20	
Chromium	E	200.0	205.6	ug/L	3	20	
Cobalt	E	200.0	202.6	ug/L	1	20	
Copper	E	200.0	200.3	ug/L	0	20	
Manganese	E	200.0	210.8	ug/L	5	20	
Nickel	E	200.0	199.2	ug/L	0	20	
Sodium	E	250000	230300	ug/L	-8		
Vanadium	E	200.0	209.3	ug/L	5	20	
Zinc	E	100.0	104.7	ug/L	5	20	
Iron	H	250000	255600	ug/L	2		
Selenium	H	100.0	103.4	ug/L	3	20	

ISTD (ICALBLK 15d28k00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	713110	554803	-22.20
Scandium	A	1408090	1059385	-24.76
Scandium	E	91453	67233	-26.48
Germanium	H	178823	144330	-19.29
Germanium	E	44424	36577	-17.66
Indium	A	2120426	1690560	-20.27
Yttrium	A	2111995	1716761	-18.71

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015171787

Instrument : MET26
 Method : EPA 6020

Begun : 04/29/15 07:07
 SOP Version : icpms_rv10

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d29h00001	X	RINSE				04/29/15 07:07	1.0	1	
002	15d29h00002	TUN					04/29/15 07:12	1.0	2	
003	15d29h00003	X	RINSE				04/29/15 07:17	1.0	1	
004	15d29h00004	ICALBLK	CALBLANK				04/29/15 07:21	1.0	1	
005	15d29h00005	ICAL					04/29/15 07:26	1.0	3 1	
006	15d29h00006	ICAL					04/29/15 07:31	1.0	4 1	
007	15d29h00007	ICAL					04/29/15 07:35	1.0	5 1	
008	15d29h00008	ICAL					04/29/15 07:40	1.0	6 1	
009	15d29h00009	ICAL					04/29/15 07:44	1.0	7 1	
010	15d29h00010	ICAL					04/29/15 07:49	1.0	8 1	
011	15d29h00011	X	RINSE				04/29/15 07:54	1.0	1	
012	15d29h00012	ICV					04/29/15 07:58	1.0	9 1	
013	15d29h00013	XCRI					04/29/15 08:07	1.0	10 1	
014	15d29h00014	XICB					04/29/15 08:12	1.0	1	
015	15d29h00015	ICB					04/29/15 08:17	1.0	1	
016	15d29h00016	CRI					04/29/15 08:22	1.0	10 1	
017	15d29h00017	ICSA					04/29/15 08:26	1.0	11 1	8:CA=280000
018	15d29h00018	ICSAB					04/29/15 08:35	1.0	12 1	11:CA=350000
019	15d29h00019	X	RINSE				04/29/15 08:40	1.0	1	
020	15d29h00020	X	RINSE				04/29/15 08:45	1.0	1	
021	15d29h00021	X	RINSE				04/29/15 08:50	1.0	1	
022	15d29h00022	X	RINSE				04/29/15 08:55	1.0	1	
023	15d29h00023	X	RINSE				04/29/15 09:00	1.0	1	
024	15d29h00024	BLANK	QC785676		Filtrate	222621	04/29/15 09:04	5.0	1	
025	15d29h00025	SAMPLE	266161-009		Filtrate	222621	04/29/15 09:09	5.0	1	
026	15d29h00026	SAMPLE	266161-009		Filtrate	222621	04/29/15 09:14	500.0	1	
027	15d29h00027	SAMPLE	266161-026		Filtrate	222621	04/29/15 09:18	5.0	1	
028	15d29h00028	CCV					04/29/15 09:23	1.0	13 1	
029	15d29h00029	X	XCCB				04/29/15 09:28	1.0	1	
030	15d29h00030	CCB					04/29/15 09:47	1.0	1	
031	15d29h00031	BLANK	QC785862	B	Air	222665	04/29/15 09:52	100.0	1	
032	15d29h00032	BS	QC785863	B	Air	222665	04/29/15 09:57	100.0	1	
033	15d29h00033	BSD	QC785864	B	Air	222665	04/29/15 10:02	100.0	1	
034	15d29h00034	MSS	266219-001	B	Air	222665	04/29/15 10:06	100.0	1	
035	15d29h00035	SDUP	QC785865	B	Air	222665	04/29/15 10:11	100.0	1	
036	15d29h00036	SSPIKE	QC785866	B	Air	222665	04/29/15 10:16	100.0	14 15 16 1	
037	15d29h00037	SAMPLE	266219-002	B	Air	222665	04/29/15 10:20	100.0	1	
038	15d29h00038	SAMPLE	266219-003	B	Air	222665	04/29/15 10:25	100.0	1	
039	15d29h00039	SAMPLE	266219-004	B	Air	222665	04/29/15 10:30	100.0	1	
040	15d29h00040	X	RINSE				04/29/15 10:34	1.0	1	
041	15d29h00041	BLANK	QC785862	B	Air	222665	04/29/15 10:39	100.0	1	
042	15d29h00042	CCV					04/29/15 10:44	1.0	13 1	
043	15d29h00043	X	XCCB				04/29/15 10:49	1.0	1	
044	15d29h00044	CCB					04/29/15 10:54	1.0	1	
045	15d29h00045	BS	QC785863	B	Air	222665	04/29/15 10:58	100.0	1	
046	15d29h00046	BSD	QC785864	B	Air	222665	04/29/15 11:03	100.0	1	
047	15d29h00047	CCV					04/29/15 11:10	1.0	13 1	
048	15d29h00048	X	XCCB				04/29/15 11:15	1.0	1	
049	15d29h00049	CCB					04/29/15 11:20	1.0	1	
050	15d29h00050	BLANK	QC785628		Water	222609	04/29/15 11:25	5.0	1	
051	15d29h00051	BS	QC785629		Water	222609	04/29/15 11:29	5.0	1	
052	15d29h00052	BSD	QC785630		Water	222609	04/29/15 11:34	5.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015171787

Instrument : MET26
 Method : EPA 6020

Begun : 04/29/15 07:07
 SOP Version : icpms_rv10

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
053	15d29h00053	MSS	266326-001		Water	222609	04/29/15 11:39	5.0	1
054	15d29h00054	MS	QC785631		Water	222609	04/29/15 11:43	5.0	1
055	15d29h00055	MSD	QC785632		Water	222609	04/29/15 11:48	5.0	1
056	15d29h00056	SER	QC785633		Water	222609	04/29/15 11:52	25.0	1
057	15d29h00057	PDS	QC785634		Water	222609	04/29/15 11:57	5.0	14 15 16 1
058	15d29h00058	X	RINSE				04/29/15 12:02	1.0	1
059	15d29h00059	BS	QC785629		Water	222609	04/29/15 12:07	5.0	1
060	15d29h00060	BSD	QC785630		Water	222609	04/29/15 12:11	5.0	1
061	15d29h00061	CCV					04/29/15 12:16	1.0	13 1
062	15d29h00062	X	XCCB				04/29/15 12:21	1.0	1
063	15d29h00063	CCB					04/29/15 12:26	1.0	1
064	15d29h00064	SAMPLE	266234-002		Water	222609	04/29/15 12:30	5.0	1 1:ZN=240
065	15d29h00065	SAMPLE	266234-004		Water	222609	04/29/15 12:35	5.0	1 1:CA=22000
066	15d29h00066	SAMPLE	266234-007		Water	222609	04/29/15 12:40	5.0	1
067	15d29h00067	SAMPLE	266258-002		Water	222609	04/29/15 12:44	5.0	1
068	15d29h00068	SAMPLE	266270-003		Water	222609	04/29/15 12:49	5.0	1 1:NA=32000
069	15d29h00069	SAMPLE	266274-005		Water	222609	04/29/15 12:54	5.0	1 2:NA=34000
070	15d29h00070	SAMPLE	266274-006		Water	222609	04/29/15 12:58	5.0	1
071	15d29h00071	SAMPLE	266274-007		Water	222609	04/29/15 13:03	5.0	1 1:NA=140000
072	15d29h00072	SAMPLE	266274-008		Water	222609	04/29/15 13:08	5.0	1 2:NA=190000
073	15d29h00073	SAMPLE	266275-005		Water	222609	04/29/15 13:12	5.0	1 1:NA=210000
074	15d29h00074	CCV					04/29/15 13:17	1.0	13 1
075	15d29h00075	X	XCCB				04/29/15 13:22	1.0	1
076	15d29h00076	CCB					04/29/15 13:27	1.0	1
077	15d29h00077	SAMPLE	266275-006		Water	222609	04/29/15 13:31	5.0	1 1:NA=190000
078	15d29h00078	SAMPLE	266275-007		Water	222609	04/29/15 13:36	5.0	1 1:NA=96000
079	15d29h00079	SAMPLE	266275-008		Water	222609	04/29/15 13:41	5.0	1 1:NA=38000
080	15d29h00080	SAMPLE	266326-002		Water	222609	04/29/15 13:45	5.0	1
081	15d29h00081	SAMPLE	266343-005		Water	222609	04/29/15 13:50	5.0	1 3:CA=180000
082	15d29h00082	SAMPLE	266343-006		Water	222609	04/29/15 13:55	5.0	1 1:NA=32000
083	15d29h00083	SAMPLE	266343-007		Water	222609	04/29/15 13:59	5.0	1 1:NA=33000
084	15d29h00084	CCV					04/29/15 14:04	1.0	13 1
085	15d29h00085	X	XCCB				04/29/15 14:09	1.0	1
086	15d29h00086	CCB					04/29/15 14:14	1.0	1
087	15d29h00087	ICSA					04/29/15 14:19	1.0	11 1 8:CA=320000
088	15d29h00088	ICSAB					04/29/15 14:23	1.0	12 1 10:CA=320000
089	15d29h00089	X	RINSE				04/29/15 14:28	1.0	1
090	15d29h00090	X	RINSE				04/29/15 14:33	1.0	1
091	15d29h00091	BLANK	QC785917		Miscell.	222681	04/29/15 14:38	1.0	1
092	15d29h00092	BS	QC785918		Miscell.	222681	04/29/15 14:43	25.0	1
093	15d29h00093	BSD	QC785919		Miscell.	222681	04/29/15 14:47	25.0	1
094	15d29h00094	MSS	266261-001		Miscell.	222681	04/29/15 14:52	25.0	1 1:K=21000
095	15d29h00095	MS	QC785920		Miscell.	222681	04/29/15 14:57	25.0	1
096	15d29h00096	MSD	QC785921		Miscell.	222681	04/29/15 15:01	25.0	1
097	15d29h00097	X	RINSE				04/29/15 15:06	1.0	1
098	15d29h00098	SAMPLE	266343-005		Water	222609	04/29/15 15:11	5.0	1 3:CA=130000
099	15d29h00099	X	RINSE				04/29/15 15:16	1.0	1
100	15d29h00100	SAMPLE	266347-001		Miscell.	222681	04/29/15 15:21	25.0	1
101	15d29h00101	SAMPLE	266347-002		Miscell.	222681	04/29/15 15:25	25.0	1
102	15d29h00102	SAMPLE	266347-003		Miscell.	222681	04/29/15 15:30	25.0	1
103	15d29h00103	CCV					04/29/15 15:35	1.0	13 1
104	15d29h00104	X	XCCB				04/29/15 15:40	1.0	1

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1015171787

Instrument : MET26
 Method : EPA 6020

Begun : 04/29/15 07:07
 SOP Version : icpms_rv10

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used
105	15d29h00105	CCB					04/29/15 15:45	1.0	1
106	15d29h00106	SAMPLE	266347-004		Miscell.	222681	04/29/15 15:49	25.0	1
107	15d29h00107	MSS	266261-001		Miscell.	222681	04/29/15 15:54	1.0	1 9:K=420000
108	15d29h00108	X	RINSE				04/29/15 15:59	1.0	1
109	15d29h00109	SAMPLE	266347-001		Miscell.	222681	04/29/15 16:04	1.0	1 7:K=210000
110	15d29h00110	X	RINSE				04/29/15 16:09	1.0	1
111	15d29h00111	SAMPLE	266347-002		Miscell.	222681	04/29/15 16:13	1.0	1 4:K=210000
112	15d29h00112	X	RINSE				04/29/15 16:18	1.0	1
113	15d29h00113	SAMPLE	266347-003		Miscell.	222681	04/29/15 16:23	1.0	1 7:K=200000
114	15d29h00114	X	RINSE				04/29/15 16:28	1.0	1
115	15d29h00115	SAMPLE	266347-004		Miscell.	222681	04/29/15 16:33	1.0	1 3:K=180000
116	15d29h00116	X	RINSE				04/29/15 16:38	1.0	1
117	15d29h00117	CCV					04/29/15 16:43	1.0	13 1
118	15d29h00118	X	XCCB				04/29/15 16:47	1.0	1
119	15d29h00119	CCB					04/29/15 16:52	1.0	1
120	15d29h00120	ICSA					04/29/15 16:57	1.0	11 1 8:CA=310000
121	15d29h00121	ICSAB					04/29/15 17:02	1.0	12 1 10:CA=320000

CRT 04/29/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 95.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S27165 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015171787

Date : 04/29/15
 Sequence : MET26 15d29h00

Reference : 15d29h00004
 Analyzed : 04/29/15 07:21

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	262650	813810	54948	422338	115976	28733	1534078	1033865	1456930	2025787
		LOWER LIMIT	78795	244143	16484	126701	34793	8620	460223	310160	437079	607736
		UPPER LIMIT	315180	976572	65938	506806	139171	34480	1840894	1240638	1748316	2430944
015	ICB		277551	871895	58805	442374	120760	29921	1550781	1052688	1497761	2072494
017	ICSA		210851	771242	52145	421664	111942	28184	1290176	820988	1345370	1911185
018	ICSAB		147623	540584	45737	369985	99679	25325	1028875	683578	1048471	1509679
024	BLANK	QC785676	238412	781539	62437	407207	112388	30768	1475720	990794	1392235	1981559
025	SAMPLE	266161-009	254449	750315	58391	430781	117252	29988	1440924	952773	1360651	1915180
026	SAMPLE	266161-009	252901	823527	58312	437094	118665	29743	1511673	1000092	1431661	2019948
027	SAMPLE	266161-026	237935	796078	52944	433415	116152	27608	1465005	982177	1399328	1945201
028	CCV		223628	743651	54546	405924	111041	27762	1411641	925424	1335030	1952367
030	CCB		243850	774509	58817	410439	112462	29376	1464989	1027010	1385176	1955801
031	BLANK	QC785862	236014	774371	57303	416385	113138	28780	1453936	998758	1378823	1963827
032	BS	QC785863	251297	852381	56230	420311	112355	28184	1564935	1078774	1484136	2091378
033	BSD	QC785864	263839	809449	54207	423795	115011	27944	1517189	1041643	1419835	2021689
034	MSS	266219-001	257827	819815	57731	430380	116875	29205	1490792	1019934	1422606	2018917
035	SDUP	QC785865	250986	850441	56944	419844	113899	28747	1532073	1045101	1474975	2073114
036	SSPIKE	QC785866	226486	734679	54796	409252	110423	27871	1411950	951410	1340879	1937560
037	SAMPLE	266219-002	233238	735190	60371	399964	110040	29478	1411045	987780	1349750	1925437
038	SAMPLE	266219-003	244412	801013	56102	414947	112710	28333	1485114	1027635	1396766	1988280
039	SAMPLE	266219-004	237637	765489	55767	414456	113112	28638	1443396	979275	1349724	1934649
041	BLANK	QC785862	241078	762138	55712	413629	111718	28282	1462077	989320	1348634	1962514
042	CCV		230686	762449	54474	421588	111973	27210	1403437	938179	1337525	1943541
044	CCB		252687	803278	57052	420807	113659	28714	1489462	1040017	1397913	1986037
045	BS	QC785863	248715	796909	57845	428620	114883	29208	1481046	1031674	1390224	1980020
046	BSD	QC785864	242305	778003	57500	425574	113165	28945	1436464	989335	1351952	1940163
047	CCV		235027	786125	56760	422042	111658	28170	1411120	960123	1372292	1951051
049	CCB		260324	810770	57656	426639	114293	29006	1479364	1013416	1404266	2012160
050	BLANK	QC785628	241017	804429	60226	441315	117199	29788	1467635	1033829	1392352	1994752
051	BS	QC785629	236008	787720	57221	425208	114160	28927	1434007	1002619	1383076	1964831
052	BSD	QC785630	248808	846380	53207	422197	112926	26957	1552727	1070850	1461114	2136451
053	MSS	266326-001	249437	795167	57225	422174	114104	29130	1471589	1012144	1401574	1992730
054	MS	QC785631	242206	789815	56522	421018	113431	28505	1420831	974632	1369931	1948898
055	MSD	QC785632	238835	768058	53659	420703	112486	27440	1424538	954514	1359420	1968396
056	SER	QC785633	245981	791369	57881	417653	113944	28666	1460620	1003780	1378718	1976066
057	PDS	QC785634	229598	757959	55187	407742	110207	28016	1410084	923637	1346968	1934239
059	BS	QC785629	233534	786574	54004	408263	109679	27156	1446752	980536	1377628	1958701
060	BSD	QC785630	237220	803964	56965	353603	99309	28351	1469254	990795	1408300	2006916
061	CCV		230293	800891	56116	414699	111254	28256	1447529	960663	1385195	1990564
063	CCB		257989	822273	58864	433378	116800	29465	1501788	1035165	1414935	2002908
064	SAMPLE	266234-002	242943	824005	57622	427673	114158	29019	1465097	987015	1410556	1986936
065	SAMPLE	266234-004	244515	831860	58230	439811	117040	29379	1502380	1004105	1409823	2019780
066	SAMPLE	266234-007	235613	811327	58099	430353	115155	29624	1462214	986075	1391948	1980075
067	SAMPLE	266258-002	237138	813787	58011	429999	116042	29267	1455067	973373	1404715	1976509
074	CCV		204789	730686	52844	389603	105200	26883	1349399	894289	1294182	1867878
076	CCB		227821	764537	56566	411433	111597	28546	1442206	980322	1354398	1924225
080	SAMPLE	266326-002	197021	659463	53888	383921	105734	27219	1349301	894894	1269001	1817898
084	CCV		177551	615072	51460	361111	99520	25933	1253437	837991	1241844	1725290
086	CCB		170540	604620	51875	369838	100852	26057	1273795	850380	1206499	1663718
087	ICSA		108653	471008	42796	330583	89693	23600	977574	630352	984174	1398860
088	ICSAB		98794	439131	39367	302499	82123	21946	920045	595397	931132	1326898

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 1015171787

Date : 04/29/15
 Sequence : MET26 15d29h00

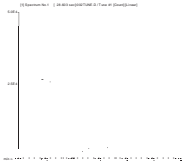
Reference : 15d29h00004
 Analyzed : 04/29/15 07:21

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
091	BLANK	QC785917	116165	461584	41880	278851	88261	23893	976628	648459	928933	1279188
092	BS	QC785918	163653	592825	51692	372605	102491	25874	1239733	819339	1190477	1639389
093	BSD	QC785919	144267	562436	48752	347257	95492	24532	1186335	813753	1149516	1582028
094	MSS	266261-001	131987	464675	43546	310477	91148	23496	1125246	757084	1053818	1501108
095	MS	QC785920	125086	470194	46057	302231	87560	23655	1057792	726632	1014652	1435633
096	MSD	QC785921	125413	422423	39116	279747	87279	22557	1090350	733561	1020528	1459295
100	SAMPLE	266347-001	124060	473464	45899	314557	88563	23494	1067117	731595	993101	1434848
101	SAMPLE	266347-002	137082	501490	44448	263499	79996	22755	1103537	755240	1034875	1467059
102	SAMPLE	266347-003	131986	487458	44790	316096	88353	23107	1087898	741558	1019015	1440892
103	CCV		135684	521927	46664	329515	88493	23280	1114409	744821	1072260	1521100
105	CCB		135044	516883	46809	332184	91350	23554	1128962	773029	1060386	1516418
106	SAMPLE	266347-004	133175	507773	45497	322213	88731	23115	1108715	767507	1048977	1482993
107	MSS	266261-001	84366	395868	38578	296216	71840	17697	753460	517893	757408	1071478
109	SAMPLE	266347-001	84859	344575	35665	242349	68216	18450	726810	494248	715808	1030951
111	SAMPLE	266347-002	86231	392563	38334	271179	71436	19560	773483	527015	757774	1087173
113	SAMPLE	266347-003	83584	361461	34420	251579	68843	17726	739356	501202	731207	1045381
115	SAMPLE	266347-004	80318	341765	36205	243661	69880	18804	707240	483590	688580	977876
117	CCV		119548	479730	42920	299298	82025	21887	1036378	688267	1002275	1390566
119	CCB		113739	463433	44421	313015	86073	22334	1026968	707038	978894	1365197
120	ICSA		78038 *	372245	34669	270301	71614	18831	764285	514096	757050	1138601
121	ICSAB		62022 *	317646	32123	244130	67328	17991	688160	468510	670208	1016121

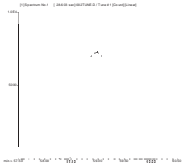
MET26 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D29h00.B\002TUNE.D
 Date Acquired: Apr 29 2015 07:12 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

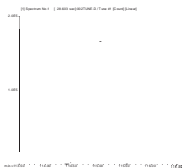
Element	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	21076	21894	21482	21359	21556	0.90	5.00	
59 Co	41458	41790	41061	41603	41017	1.40	5.00	
115 In	819726	833063	852947	833846	838557	1.68	5.00	
205 Tl	33388	33610	33410	33129	33071	0.90	5.00	



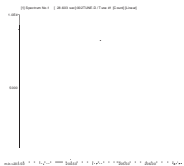
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 58.95
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 205.00
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.70
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 METALS Filtrate: EPA 6020

Inst : MET26
 Calnum : 1015171787001
 Units : ug/L
 Date : 29-APR-2015 07:21
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d29h00005	1015171787005	29-APR-2015 07:26	S27043, S26751	
L2	15d29h00006	1015171787006	29-APR-2015 07:31	S27044, S26751	
L3	15d29h00007	1015171787007	29-APR-2015 07:35	S27045, S26751	
L4	15d29h00008	1015171787008	29-APR-2015 07:40	S27046, S26751	
L5	15d29h00009	1015171787009	29-APR-2015 07:44	S27041, S26751	
L6	15d29h00010	1015171787010	29-APR-2015 07:49	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0052	0.0048	0.0049	0.0046	0.0047	0.0046	BLNK	-0.6045	216.485		0.0048	1.000	0.995	
Antimony	A	0.0029	0.0026	0.0027	0.0027	0.0027	0.0027	BLNK	-0.0128	367.160		0.0027	1.000	0.995	
Barium	A	7.5E-4	7.4E-4	7.9E-4	7.4E-4	7.4E-4	7.3E-4	BLNK	-0.0113	1370.00		7.5E-4	1.000	0.995	
Beryllium	A	0.0035	0.0036	0.0033	0.0033	0.0033	0.0033	BLNK	-0.0077	301.938		0.0034	1.000	0.995	
Cadmium	A	8.1E-4	6.8E-4	7.1E-4	7.2E-4	7.1E-4	7.0E-4	BLNK	-0.0248	1425.25		7.2E-4	1.000	0.995	
Calcium	A	0.0010	2.8E-4	2.3E-4	1.8E-4	1.9E-4	1.8E-4	BLNK	-30.655	5507.94		3.5E-4	1.000	0.995	
Lead	A	0.0076	0.0053	0.0051	0.0047	0.0046	0.0046	BLNK	-0.0588	216.931		0.0053	1.000	0.995	
Magnesium	A	0.0086	0.0042	0.0040	0.0038	0.0038	0.0037	BLNK	-4.8274	271.580		0.0047	1.000	0.995	
Molybdenum	A	0.0029	0.0020	0.0021	0.0019	0.0019	0.0019	BLNK	-0.0718	517.206		0.0021	1.000	0.995	
Potassium	A	0.1046	0.0247	0.0155	0.0067	0.0059	0.0057	BLNK	-172.96	176.947		0.0272	1.000	0.995	
Silver	A	0.0036	0.0031	0.0033	0.0033	0.0032	0.0034	BLNK	-0.0060	297.804		0.0033	0.999	0.995	
Thallium	A	0.0077	0.0070	0.0069	0.0068	0.0069	0.0070	BLNK	-0.0090	143.727		0.0071	1.000	0.995	
Arsenic	E	0.0124	0.0069	0.0062	0.0057	0.0055	0.0054	BLNK	-0.1140	184.564		0.0070	1.000	0.995	
Chromium	E	0.0485	0.0273	0.0246	0.0234	0.0221	0.0219	BLNK	-0.1104	45.5983		0.0280	1.000	0.995	
Cobalt	E	0.0372	0.0361	0.0342	0.0359	0.0339	0.0333	BLNK	-0.0075	29.9395		0.0351	1.000	0.995	
Copper	E	0.8188	0.1756	0.0976	0.0330	0.0248	0.0240	BLNK	-3.3432	42.1968		0.1956	1.000	0.995	
Manganese	E	0.0159	0.0150	0.0146	0.0150	0.0142	0.0142	BLNK	-0.0161	70.5727		0.0148	1.000	0.995	
Nickel	E	0.0145	0.0107	0.0097	0.0097	0.0091	0.0090	BLNK	-0.0360	111.168		0.0104	1.000	0.995	
Sodium	E	0.0508	0.0135	0.0089	0.0052	0.0048	0.0047	BLNK	-95.089	213.768		0.0147	1.000	0.995	
Vanadium	E	0.0450	0.0246	0.0212	0.0191	0.0184	0.0184	BLNK	-0.1435	54.4297		0.0244	1.000	0.995	
Zinc	E		0.0079	0.0070	0.0048	0.0043	0.0042	BLNK	-0.3965	235.359		0.0056	1.000	0.995	
Iron	H	0.0089	0.0080	0.0078	0.0075	0.0075	0.0075	BLNK	-1.4318	132.973		0.0079	1.000	0.995	
Selenium	H	0.0011	9.9E-4	9.7E-4	9.7E-4	9.7E-4	9.5E-4	BLNK	-0.0221	1044.71		0.0010	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	6	50.000	3	100.00	5	1000.0	0	10000	2	20000	-1
Antimony	A	0.1000	-5	0.5000	-8	1.0000	-2	10.000	-2	100.00	-1	200.00	0
Barium	A	0.1000	-8	0.5000	-1	1.0000	8	10.000	2	100.00	1	200.00	0
Beryllium	A	0.1000	-3	0.5000	8	1.0000	0	10.000	1	100.00	-1	200.00	0
Cadmium	A	0.1000	-9	0.5000	-8	1.0000	-1	10.000	3	100.00	1	200.00	0
Calcium	A	10.000	171	50.000	-7	100.00	-3	1000.0	-5	10000	3	20000	-1
Lead	A	0.1000	6	0.5000	3	1.0000	5	10.000	2	100.00	0	200.00	0
Magnesium	A	10.000	85	50.000	4	100.00	4	1000.0	2	10000	3	20000	-1
Molybdenum	A	0.1000	-20	0.5000	-9	1.0000	-1	10.000	-2	100.00	0	200.00	0
Potassium	A	10.000	21	50.000	-8	100.00	2	1000.0	1	10000	3	20000	-1
Silver	A	0.1000	0	0.5000	-9	1.0000	-2	10.000	-2	100.00	-4	200.00	1
Thallium	A	0.0500	-8	0.2500	-2	0.5000	-2	5.0000	-2	50.000	-1	100.00	0
Arsenic	E	0.1000	14	0.5000	4	1.0000	4	10.000	3	100.00	2	200.00	-1
Chromium	E	0.1000	11	0.5000	3	1.0000	1	10.000	6	100.00	1	200.00	0
Cobalt	E	0.1000	4	0.5000	7	1.0000	2	10.000	7	100.00	1	200.00	0
Copper	E	0.1000	12	0.5000	-28	1.0000	-23	10.000	6	100.00	1	200.00	0
Manganese	E	0.1000	-4	0.5000	2	1.0000	1	10.000	6	100.00	0	200.00	0
Nickel	E	0.1000	25	0.5000	11	1.0000	4	10.000	8	100.00	1	200.00	0
Sodium	E	10.000	36	50.000	-1	100.00	-5	1000.0	2	10000	2	20000	0
Vanadium	E	0.1000	1	0.5000	5	1.0000	1	10.000	3	100.00	0	200.00	0
Zinc	E			0.5000	6	1.0000	24	10.000	8	100.00	2	200.00	0
Iron	H	10.000	4	50.000	3	100.00	2	1000.0	0	10000	0	20000	0
Selenium	H	0.1000	-3	0.5000	-1	1.0000	-1	10.000	1	100.00	2	200.00	0

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
Calnum : 1015171787001

Cal Date : 29-APR-2015

ICV 1015171787012 (15d29h00012 29-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10810	ug/L	8	10	
Antimony	A	100.0	106.8	ug/L	7	10	
Barium	A	100.0	107.2	ug/L	7	10	
Beryllium	A	100.0	103.6	ug/L	4	10	
Cadmium	A	100.0	108.8	ug/L	9	10	
Calcium	A	10000	10950	ug/L	10	10	
Lead	A	100.0	105.8	ug/L	6	10	
Magnesium	A	10000	10890	ug/L	9	10	
Molybdenum	A	100.0	106.8	ug/L	7	10	
Potassium	A	10000	10960	ug/L	10	10	
Silver	A	100.0	102.5	ug/L	3	10	
Thallium	A	50.00	52.57	ug/L	5	10	
Arsenic	E	100.0	102.7	ug/L	3	10	
Chromium	E	100.0	102.9	ug/L	3	10	
Cobalt	E	100.0	103.8	ug/L	4	10	
Copper	E	100.0	104.7	ug/L	5	10	
Manganese	E	100.0	103.3	ug/L	3	10	
Nickel	E	100.0	104.2	ug/L	4	10	
Sodium	E	10000	10500	ug/L	5	10	
Vanadium	E	100.0	102.3	ug/L	2	10	
Zinc	E	100.0	104.8	ug/L	5	10	
Iron	H	10000	10210	ug/L	2	10	
Selenium	H	100.0	104.0	ug/L	4	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015171787015
Cal : 1015171787001

File : 15d29h00015
Caldate : 29-APR-2015

IDF : 1.0
Time : 29-APR-2015 08:17

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.05000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d29h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	262650	277551	5.67
Scandium	A	813810	871895	7.14
Scandium	E	54948	58805	7.02
Scandium	H	422338	442374	4.74
Germanium	H	115976	120760	4.12
Germanium	E	28733	29921	4.13
Indium	A	1534078	1550781	1.09
Bismuth	A	1033865	1052688	1.82
Yttrium	A	1456930	1497761	2.80
Terbium	A	2025787	2072494	2.31

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015171787017
 Cal : 1015171787001
 Standards: S26727, S26751
 File : 15d29h00017
 Caldate : 29-APR-2015
 IDF : 1.0
 Time : 29-APR-2015 08:26

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4878	0.1000	ug/L	
Barium	A	1.830	0.1000	ug/L	
Beryllium	A	[0.009900]	0.1000	ug/L	
Cadmium	A	2.235	0.1000	ug/L	
Lead	A	0.2177	0.1000	ug/L	
Silver	A	[0.06880]	0.1000	ug/L	
Thallium	A	[0.02040]	0.05000	ug/L	
Arsenic	E	0.7384	0.1000	ug/L	
Chromium	E	0.9428	0.1000	ug/L	
Cobalt	E	1.161	0.1000	ug/L	
Copper	E	[-0.06800]	0.1000	ug/L	
Manganese	E	7.534	0.1000	ug/L	
Nickel	E	1.242	0.1000	ug/L	
Vanadium	E	0.1140	0.1000	ug/L	
Zinc	E	2.698	0.5000	ug/L	
Selenium	H	0.1168	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	93220	ug/L	93
Calcium	A	300000	283500	ug/L	95
Magnesium	A	100000	90090	ug/L	90
Molybdenum	A	2000	2022	ug/L	101
Potassium	A	100000	95180	ug/L	95
Sodium	E	250000	241200	ug/L	96
Phosphorus	E	100000	99170	ug/L	99
Iron	H	250000	237100	ug/L	95

ISTD (ICALBLK 15d29h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	262650	210851	-19.72
Scandium	A	813810	771242	-5.23
Scandium	E	54948	52145	-5.10
Scandium	H	422338	421664	-0.16
Germanium	H	115976	111942	-3.48
Germanium	E	28733	28184	-1.91
Indium	A	1534078	1290176	-15.90
Bismuth	A	1033865	820988	-20.59
Yttrium	A	1456930	1345370	-7.66
Terbium	A	2025787	1911185	-5.66

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015171787018
 Cal : 1015171787001
 Standards: S26728, S26751

IDF : 1.0
 Time : 29-APR-2015 08:35

File : 15d29h00018
 Caldate : 29-APR-2015

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	114000	ug/L	14		
Cadmium	A	100.0	116.8	ug/L	17	20	
Calcium	A	300000	352000	ug/L	17		
Magnesium	A	100000	109700	ug/L	10		
Molybdenum	A	2000	2350	ug/L	18		
Potassium	A	100000	117600	ug/L	18		
Silver	A	50.00	52.97	ug/L	6	20	
Arsenic	E	100.0	100.8	ug/L	1	20	
Chromium	E	200.0	203.4	ug/L	2	20	
Cobalt	E	200.0	199.8	ug/L	0	20	
Copper	E	200.0	193.6	ug/L	-3	20	
Manganese	E	200.0	210.8	ug/L	5	20	
Nickel	E	200.0	195.0	ug/L	-2	20	
Sodium	E	250000	240600	ug/L	-4		
Vanadium	E	200.0	207.6	ug/L	4	20	
Zinc	E	100.0	99.36	ug/L	-1	20	
Iron	H	250000	240500	ug/L	-4		
Selenium	H	100.0	101.0	ug/L	1	20	

ISTD (ICALBLK 15d29h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	422338	369985	-12.40
Scandium	A	813810	540584	-33.57
Scandium	E	54948	45737	-16.76
Germanium	H	115976	99679	-14.05
Germanium	E	28733	25325	-11.86
Indium	A	1534078	1028875	-32.93
Yttrium	A	1456930	1048471	-28.04

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26 IDF : 1.0
 Seqnum : 1015171787028 File : 15d29h00028 Time : 29-APR-2015 09:23
 Cal : 1015171787001 Caldate : 29-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0048	0.0046	10000	10060	ug/L	1	10	
Antimony	A	0.0027	0.0026	100.0	97.17	ug/L	-3	10	
Barium	A	7.5E-4	7.2E-4	100.0	98.30	ug/L	-2	10	
Beryllium	A	0.0034	0.0034	100.0	103.4	ug/L	3	10	
Cadmium	A	7.2E-4	6.9E-4	100.0	97.87	ug/L	-2	10	
Calcium	A	3.5E-4	1.9E-4	10000	10250	ug/L	3	10	
Lead	A	0.0053	0.0046	100.0	98.71	ug/L	-1	10	
Magnesium	A	0.0047	0.0037	10000	10070	ug/L	1	10	
Molybdenum	A	0.0021	0.0019	100.0	98.15	ug/L	-2	10	
Potassium	A	0.0272	0.0059	10000	10250	ug/L	3	10	
Silver	A	0.0033	0.0031	100.0	92.19	ug/L	-8	10	
Thallium	A	0.0071	0.0070	50.00	50.60	ug/L	1	10	
Arsenic	E	0.0070	0.0054	100.0	99.27	ug/L	-1	10	
Chromium	E	0.0280	0.0217	100.0	99.02	ug/L	-1	10	
Cobalt	E	0.0351	0.0333	100.0	99.60	ug/L	0	10	
Copper	E	0.1956	0.0241	100.0	98.23	ug/L	-2	10	
Manganese	E	0.0148	0.0142	100.0	100.4	ug/L	0	10	
Nickel	E	0.0104	0.0090	100.0	99.46	ug/L	-1	10	
Sodium	E	0.0147	0.0048	10000	10140	ug/L	1	10	
Vanadium	E	0.0244	0.0182	100.0	98.72	ug/L	-1	10	
Zinc	E	0.0056	0.0043	100.0	101.5	ug/L	2	10	
Iron	H	0.0079	0.0076	10000	10050	ug/L	1	10	
Selenium	H	0.0010	9.8E-4	100.0	102.8	ug/L	3	10	

ISTD (ICALBLK 15d29h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	262650	223628	-14.86
Scandium	A	813810	743651	-8.62
Scandium	E	54948	54546	-0.73
Scandium	H	422338	405924	-3.89
Germanium	H	115976	111041	-4.26
Germanium	E	28733	27762	-3.38
Indium	A	1534078	1411641	-7.98
Bismuth	A	1033865	925424	-10.49
Yttrium	A	1456930	1335030	-8.37
Terbium	A	2025787	1952367	-3.62

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
Seqnum : 1015171787030
Cal : 1015171787001

File : 15d29h00030
Caldate : 29-APR-2015

IDF : 1.0
Time : 29-APR-2015 09:47

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	[0.05630]	0.1000	0.05000	ug/L	!CCB
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.05000	ug/L	
Cadmium	A	ND	0.1000	0.1000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	0.4344	0.1000	0.2000	ug/L	CCB ***
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.05000	ug/L	
Copper	E	ND	0.1000	0.5000	ug/L	
Manganese	E	ND	0.1000	0.05000	ug/L	
Nickel	E	ND	0.1000	0.2000	ug/L	
Sodium	E	ND	10.00	15.00	ug/L	
Vanadium	E	ND	0.1000	0.05000	ug/L	
Zinc	E	ND	0.5000	1.000	ug/L	
Iron	H	ND	10.00	10.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d29h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	262650	243850	-7.16
Scandium	A	813810	774509	-4.83
Scandium	E	54948	58817	7.04
Scandium	H	422338	410439	-2.82
Germanium	H	115976	112462	-3.03
Germanium	E	28733	29376	2.24
Indium	A	1534078	1464989	-4.50
Bismuth	A	1033865	1027010	-0.66
Yttrium	A	1456930	1385176	-4.93
Terbium	A	2025787	1955801	-3.45

!=warning CCB=instrument blank

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015171787087.2
 Cal : 1015171787001
 Standards: S26727, S26751

File : 15d29h00087
 Caldate : 29-APR-2015

IDF : 1.0
 Time : 29-APR-2015 14:19

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4764	0.1000	ug/L	
Barium	A	1.888	0.1000	ug/L	
Beryllium	A	[0.01090]	0.1000	ug/L	
Cadmium	A	2.588	0.1000	ug/L	
Lead	A	0.2458	0.1000	ug/L	
Silver	A	[0.06840]	0.1000	ug/L	
Thallium	A	[0.01710]	0.05000	ug/L	
Arsenic	E	0.7407	0.1000	ug/L	
Chromium	E	0.8982	0.1000	ug/L	
Cobalt	E	1.136	0.1000	ug/L	
Copper	E	[-0.3901]	0.1000	ug/L	
Manganese	E	7.561	0.1000	ug/L	
Nickel	E	1.237	0.1000	ug/L	
Vanadium	E	0.1524	0.1000	ug/L	
Zinc	E	2.658	0.5000	ug/L	
Selenium	H	[0.09180]	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	102900	ug/L	103
Calcium	A	300000	319600	ug/L	107
Magnesium	A	100000	96680	ug/L	97
Molybdenum	A	2000	2049	ug/L	102
Potassium	A	100000	108300	ug/L	108
Sodium	E	250000	237300	ug/L	95
Phosphorus	E	100000	104300	ug/L	104
Iron	H	250000	241700	ug/L	97

ISTD (ICALBLK 15d29h00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	262650	108653	-58.63
Scandium	A	813810	471008	-42.12
Scandium	E	54948	42796	-22.12
Scandium	H	422338	330583	-21.73
Germanium	H	115976	89693	-22.66
Germanium	E	28733	23600	-17.86
Indium	A	1534078	977574	-36.28
Bismuth	A	1033865	630352	-39.03
Yttrium	A	1456930	984174	-32.45
Terbium	A	2025787	1398860	-30.95

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET26
 Seqnum : 1015171787088.2 File : 15d29h00088
 Cal : 1015171787001 Caldate : 29-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 29-APR-2015 14:23

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	102800	ug/L	3		
Cadmium	A	100.0	101.8	ug/L	2	20	
Calcium	A	300000	318800	ug/L	6		
Magnesium	A	100000	96590	ug/L	-3		
Molybdenum	A	2000	2062	ug/L	3		
Potassium	A	100000	108100	ug/L	8		
Silver	A	50.00	46.22	ug/L	-8	20	
Arsenic	E	100.0	100.3	ug/L	0	20	
Chromium	E	200.0	195.7	ug/L	-2	20	
Cobalt	E	200.0	191.5	ug/L	-4	20	
Copper	E	200.0	183.2	ug/L	-8	20	
Manganese	E	200.0	208.9	ug/L	4	20	
Nickel	E	200.0	187.1	ug/L	-6	20	
Sodium	E	250000	235300	ug/L	-6		
Vanadium	E	200.0	201.7	ug/L	1	20	
Zinc	E	100.0	95.33	ug/L	-5	20	
Iron	H	250000	239300	ug/L	-4		
Selenium	H	100.0	101.3	ug/L	1	20	

ISTD (ICALBLK 15d29h00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	422338	302499	-28.38
Scandium	A	813810	439131	-46.04
Scandium	E	54948	39367	-28.36
Germanium	H	115976	82123	-29.19
Germanium	E	28733	21946	-23.62
Indium	A	1534078	920045	-40.03
Yttrium	A	1456930	931132	-36.09

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895173160

Instrument : MET16
 Method : EPA 6020

Begun : 04/30/15 06:00
 SOP Version : icpms_rv10

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
001	15d30f00001	X	RINSE				04/30/15 06:00	1.0	1	
002	15d30f00002	TUN					04/30/15 06:07	1.0	2	
003	15d30f00003	X	RINSE				04/30/15 06:12	1.0	1	
004	15d30f00004	ICALBLK	CALBLANK				04/30/15 06:18	1.0	1	
005	15d30f00005	ICAL					04/30/15 06:24	1.0	3 1	
006	15d30f00006	ICAL					04/30/15 06:31	1.0	4 1	
007	15d30f00007	ICAL					04/30/15 06:37	1.0	5 1	
008	15d30f00008	ICAL					04/30/15 06:43	1.0	6 1	
009	15d30f00009	ICAL					04/30/15 06:50	1.0	7 1	
010	15d30f00010	ICAL					04/30/15 06:56	1.0	8 1	
011	15d30f00011	X	RINSE				04/30/15 07:03	1.0	1	
012	15d30f00012	ICV					04/30/15 07:09	1.0	9 1	
013	15d30f00013	XCRI					04/30/15 07:16	1.0	10 1	
014	15d30f00014	XCRI					04/30/15 07:22	1.0	10 1	
015	15d30f00015	XICB					04/30/15 07:28	1.0	1	
016	15d30f00016	XICB					04/30/15 07:35	1.0	1	
017	15d30f00017	ICB					04/30/15 07:41	1.0	1	
018	15d30f00018	CRI					04/30/15 07:48	1.0	10 1	
019	15d30f00019	ICSA					04/30/15 07:54	1.0	11 1	8:CA=300000
020	15d30f00020	ICSAB					04/30/15 08:01	1.0	12 1	11:CA=300000
021	15d30f00021	X	RINSE				04/30/15 08:08	1.0	1	
022	15d30f00022	X	RINSE				04/30/15 08:14	1.0	1	
023	15d30f00023	X	RINSE				04/30/15 08:21	1.0	1	
024	15d30f00024	X	RINSE				04/30/15 08:27	1.0	1	
025	15d30f00025	X	RINSE				04/30/15 08:34	1.0	1	
026	15d30f00026	BLANK	QC785628		Water	222609	04/30/15 08:40	5.0	1	
027	15d30f00027	BS	QC785629		Water	222609	04/30/15 08:47	5.0	1	
028	15d30f00028	BSD	QC785630		Water	222609	04/30/15 08:53	5.0	1	
029	15d30f00029	SAMPLE	266270-003		Water	222609	04/30/15 08:59	5.0	1	1:NA=32000
030	15d30f00030	CCV					04/30/15 09:06	1.0	13 1	
031	15d30f00031	X	XCCB				04/30/15 09:12	1.0	1	
032	15d30f00032	CCB					04/30/15 09:19	1.0	1	
033	15d30f00033	BLANK	QC785862	B	Air	222665	04/30/15 09:25	100.0	1	
034	15d30f00034	BS	QC785863	B	Air	222665	04/30/15 09:31	100.0	1	
035	15d30f00035	BSD	QC785864	B	Air	222665	04/30/15 09:38	100.0	1	
036	15d30f00036	MSS	266219-001	B	Air	222665	04/30/15 09:44	100.0	1	
037	15d30f00037	SDUP	QC785865	B	Air	222665	04/30/15 09:50	100.0	1	
038	15d30f00038	SSPIKE	QC785866	B	Air	222665	04/30/15 09:57	100.0	14 15 16 1	
039	15d30f00039	SAMPLE	266219-002	B	Air	222665	04/30/15 10:03	100.0	1	
040	15d30f00040	SAMPLE	266219-003	B	Air	222665	04/30/15 10:10	100.0	1	
041	15d30f00041	SAMPLE	266219-004	B	Air	222665	04/30/15 10:16	100.0	1	
042	15d30f00042	CCV					04/30/15 10:22	1.0	13 1	
043	15d30f00043	X	XCCB				04/30/15 10:29	1.0	1	
044	15d30f00044	CCB					04/30/15 10:35	1.0	1	
045	15d30f00045	ICSA					04/30/15 10:42	1.0	11 1	8:CA=300000
046	15d30f00046	ICSAB					04/30/15 10:48	1.0	12 1	11:CA=310000
047	15d30f00047	X	RINSE				04/30/15 10:55	1.0	1	
048	15d30f00048	X	RINSE				04/30/15 11:02	1.0	1	
049	15d30f00049	SAMPLE	266219-003	B	Air	222665	04/30/15 11:08	100.0	1	
050	15d30f00050	CCV					04/30/15 11:15	1.0	13 1	
051	15d30f00051	X	XCCB				04/30/15 11:21	1.0	1	
052	15d30f00052	CCB					04/30/15 11:28	1.0	1	

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 895173160

Instrument : MET16
 Method : EPA 6020

Begun : 04/30/15 06:00
 SOP Version : icpms_rv10

#	File	Type	Sample ID	P	Matrix	Batch	Analyzed	IDF	Stds Used	
053	15d30f00053	ICSA					04/30/15 11:34	1.0	11 1	8:CA=310000
054	15d30f00054	ICSAB					04/30/15 11:41	1.0	12 1	11:CA=320000
055	15d30f00055	X	RINSE				04/30/15 11:48	1.0	1	
056	15d30f00056	X	RINSE				04/30/15 11:54	1.0	1	
057	15d30f00057	SAMPLE	266161-004		Filtrate	222621	04/30/15 12:01	5.0	1	
058	15d30f00058	SAMPLE	266161-005		Filtrate	222621	04/30/15 12:07	5.0	1	
059	15d30f00059	SAMPLE	266161-006		Filtrate	222621	04/30/15 12:13	5.0	1	
060	15d30f00060	MSS	266161-007		Filtrate	222621	04/30/15 12:20	5.0	1	1:NA=22000
061	15d30f00061	SAMPLE	266161-008		Filtrate	222621	04/30/15 12:26	5.0	1	
062	15d30f00062	SAMPLE	266161-009		Filtrate	222621	04/30/15 12:32	5.0	1	
063	15d30f00063	SAMPLE	266161-013		Filtrate	222621	04/30/15 12:39	5.0	1	4:NA=88000
064	15d30f00064	SAMPLE	266161-016		Filtrate	222621	04/30/15 12:45	5.0	1	
065	15d30f00065	SAMPLE	266161-017		Filtrate	222621	04/30/15 12:51	5.0	1	
066	15d30f00066	SAMPLE	266161-018		Filtrate	222621	04/30/15 12:58	5.0	1	
067	15d30f00067	CCV					04/30/15 13:04	1.0	13 1	
068	15d30f00068	X	XCCB				04/30/15 13:11	1.0	1	
069	15d30f00069	CCB					04/30/15 13:17	1.0	1	
070	15d30f00070	SAMPLE	266161-019		Filtrate	222621	04/30/15 13:24	5.0	1	
071	15d30f00071	SAMPLE	266161-020		Filtrate	222621	04/30/15 13:30	5.0	1	4:MG=55000
072	15d30f00072	SAMPLE	266161-021		Filtrate	222621	04/30/15 13:36	5.0	1	
073	15d30f00073	SAMPLE	266161-023		Filtrate	222621	04/30/15 13:43	5.0	1	
074	15d30f00074	SAMPLE	266161-025		Filtrate	222621	04/30/15 13:49	5.0	1	
075	15d30f00075	SAMPLE	266161-026		Filtrate	222621	04/30/15 13:55	5.0	1	
076	15d30f00076	CCV					04/30/15 14:02	1.0	13 1	
077	15d30f00077	X	XCCB				04/30/15 14:08	1.0	1	
078	15d30f00078	CCB					04/30/15 14:15	1.0	1	
079	15d30f00079	ICSA					04/30/15 14:21	1.0	11 1	8:CA=300000
080	15d30f00080	ICSAB					04/30/15 14:28	1.0	12 1	11:CA=310000
081	15d30f00081	X	RINSE				04/30/15 14:35	1.0	1	
082	15d30f00082	X	RINSE				04/30/15 14:41	1.0	1	
083	15d30f00083	X	RINSE				04/30/15 14:48	1.0	1	

NT 04/30/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 54.

CRT 04/30/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 55 through 82.

Standards used: 1=S26751 2=S26750 3=S27043 4=S27044 5=S27045 6=S27046 7=S27041 8=S27042 9=S26725 10=S27165 11=S26727
 12=S26728 13=S26726 14=S26229 15=S26230 16=S26912

CURTIS & TOMPKINS INTERNAL STANDARD SUMMARY FOR SEQUENCE 895173160

Date : 04/30/15
 Sequence : MET16 15d30f00

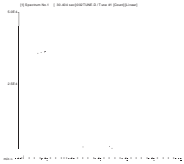
Reference : 15d30f00004
 Analyzed : 04/30/15 06:18

#	Type	Sample ID	LI A	SC A	SC E	SC H	GE H	GE E	IN A	BI A	Y A	TB A
		IB+ICALBLK STD	367151	367692	12265	129426	30355	6614	691513	1231339	606346	1468795
		LOWER LIMIT	110145	110308	3680	38828	9107	1984	207454	369402	181904	440639
		UPPER LIMIT	440581	441230	14718	155311	36426	7937	829816	1477607	727615	1762554
017	ICB		374762	414730	13696	138331	31768	7156	735328	1271736	650258	1541574
019	ICSA		295349	346917	12169	135887	24966	5800	532915	898490	511903	1256190
020	ICSAB		273501	324478	11075	115363	23850	5454	504598	858364	487784	1197779
026	BLANK	QC785628	281843	300561	11657	117875	26600	5934	558910	999751	493110	1186512
027	BS	QC785629	298691	346490	11074	108460	25843	5768	593443	1055240	527136	1276306
028	BSD	QC785630	298292	346436	11592	116278	25833	5808	592172	1053792	526419	1279060
030	CCV		289102	344609	11642	125475	25194	5659	568591	1004234	512341	1258186
032	CCB		301800	337388	11283	111655	26704	5944	601600	1072504	528119	1277443
033	BLANK	QC785862	297853	331833	11219	109551	26317	5858	597566	1063773	526580	1271833
034	BS	QC785863	320914	380853	11264	111531	25898	5798	646563	1149266	569408	1376897
035	BSD	QC785864	298198	336238	10084	112791	25913	5737	600546	1070774	528951	1274382
036	MSS	266219-001	297421	345548	11155	109901	26285	5790	598975	1069082	526318	1275862
037	SDUP	QC785865	295413	347706	11110	113489	25999	5817	592795	1060754	520063	1264748
038	SSPIKE	QC785866	291594	335047	11658	116103	25491	5722	572034	1016467	510784	1250762
039	SAMPLE	266219-002	293899	326961	10565	105944	25549	5634	585228	1050554	514799	1246051
040	SAMPLE	266219-003	295403	343120	11397	116151	25750	5725	589240	1058080	519414	1258453
041	SAMPLE	266219-004	292360	331669	11156	115820	25746	5741	585667	1046197	514146	1247573
042	CCV		291257	352963	11067	107956	25196	5635	575031	1008715	516754	1265557
044	CCB		293666	341302	11246	107475	25964	5778	593497	1063603	517634	1261428
045	ICSA		249836	304704	10688	119093	21683	4985	460745	780767	443266	1090175
046	ICSAB		236146	281126	9513	95471	21058	4919	448072	758253	432041	1055764
049	SAMPLE	266219-003	257593	309257	10681	94450	22904	5468	530300	960348	466816	1133933
050	CCV		247393	294592	9666	96249	22384	5011	504569	890473	452726	1115311
052	CCB		252313	290569	9750	71029	20116	5166	523718	933881	455850	1106527
053	ICSA		216914	265083	9292	100804	19326	4547	418058	706094	401873	973400
054	ICSAB		222960	266881	9246	89163	19701	4752	434936	739524	416469	1019844
057	SAMPLE	266161-004	223347	269765	8704	86806	20563	4654	466526	849349	410898	1016157
058	SAMPLE	266161-005	227973	270866	8767	87033	21510	4743	480551	875401	421261	1033613
059	SAMPLE	266161-006	220299	269469	8760	87565	21115	4558	462285	860651	404435	1006890
060	MSS	266161-007	214021	260016	8704	89219	20455	4405	443087	816336	390381	973949
061	SAMPLE	266161-008	217537	258091	8334	80900	19616	4375	446384	825903	390186	977121
062	SAMPLE	266161-009	225282	262344	8884	89847	21088	4536	464636	867841	405465	997294
063	SAMPLE	266161-013	224014	264046	8590	85712	20176	4415	446602	781848	405666	995915
064	SAMPLE	266161-016	224027	256013	8749	87153	21350	4665	449156	843272	392926	985874
065	SAMPLE	266161-017	208603	248669	8405	90613	19987	4371	431701	831101	373317	945550
066	SAMPLE	266161-018	205278	239308	8025	81490	19120	4229	425471	813633	369307	924434
067	CCV		207326	249156	8420	83302	18759	4196	423809	797038	374342	952429
069	CCB		198130	229143	8008	82517	19376	4102	415725	799852	358202	903015
070	SAMPLE	266161-019	187000	218850	7571	77656	18193	3959	390271	753164	337295	860239
071	SAMPLE	266161-020	193906	231164	7734	75580	17678	3968	394247	724051	354307	880987
072	SAMPLE	266161-021	198636	236516	8334	87260	19327	4195	407291	767783	356209	897447
073	SAMPLE	266161-023	191617	232186	7931	80358	18722	4006	398443	750581	348914	881997
074	SAMPLE	266161-025	184008	223659	7796	81908	18492	4027	383830	724822	335227	846295
075	SAMPLE	266161-026	184744	216490	7836	72853	18256	3881	387715	741436	334640	839806
076	CCV		174611	210224	7378	78107	17170	3717	366043	700265	321970	822687
078	CCB		180333	214671	7713	80690	17820	3857	378924	730940	326362	819842
079	ICSA		164564	208710	7590	79202	14790	3649	322551	581819	304898	771549
080	ICSAB		158550	198136	7098	72756	15631	3637	317366	572334	300318	758803

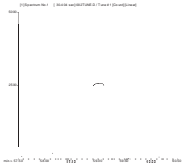
MET16 QC Tune Report

Data File: C:\ICPCHEM\1\DATA\15D30f00.B\002TUNE.D
 Date Acquired: Apr 30 2015 06:07 am
 Acq. Method: TN6020F.M
 Operator:
 Sample Name: tun,s26750
 Misc Info:
 Vial Number: 1307
 Current Method: C:\ICPCHEM\1\METHODS\TN6020F.M

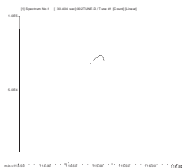
RSD (%)	Rep1	Rep2	Rep3	Rep4	Rep5	Actual	Required	Flag
7 Li	25050	25253	24980	25037	25014	1.12	5.00	
59 Co	14237	14346	14076	14192	14159	1.35	5.00	
115 In	399595	399724	399216	397369	392354	0.95	5.00	
205 Tl	47318	46882	46867	46605	46729	0.94	5.00	



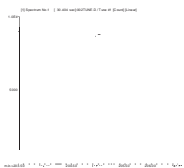
7 Li
Mass Calib.
 Actual: 7.00
 Required: 6.90 - 7.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



59 Co
Mass Calib.
 Actual: 59.00
 Required: 58.90 - 59.10
 Flag:
Peak Width @ 5%
 Actual: 0.65
 Required: 0.75
 Flag:



115 In
Mass Calib.
 Actual: 115.00
 Required: 114.90 - 115.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:



205 Tl
Mass Calib.
 Actual: 204.95
 Required: 204.90 - 205.10
 Flag:
Peak Width @ 5%
 Actual: 0.60
 Required: 0.75
 Flag:

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 METALS Filtrate: EPA 6020

Inst : MET16
 Calnum : 895173160001
 Units : ug/L
 Date : 30-APR-2015 06:18
 X Axis : R
 Reviewer : ---

Level	File	Segnum	Sample ID	Analyzed	Stds
L1	15d30f00005	895173160005	30-APR-2015 06:24	S27043, S26751	
L2	15d30f00006	895173160006	30-APR-2015 06:31	S27044, S26751	
L3	15d30f00007	895173160007	30-APR-2015 06:37	S27045, S26751	
L4	15d30f00008	895173160008	30-APR-2015 06:43	S27046, S26751	
L5	15d30f00009	895173160009	30-APR-2015 06:50	S27041, S26751	
L6	15d30f00010	895173160010	30-APR-2015 06:56	S27042, S26751	

Analyte	Ch	L1	L2	L3	L4	L5	L6	Type	a0	a1	a2	Avg	r^2	MnR^2	Flg
Aluminum	A	0.0063	0.0062	0.0064	0.0062	0.0059	0.0059	BLNK	-0.4476	170.384		0.0062	1.000	0.995	
Antimony	A	0.0024	0.0026	0.0025	0.0025	0.0025	0.0025	BLNK	-0.0050	394.858		0.0025	1.000	0.995	
Barium	A	6.3E-4	5.5E-4	5.6E-4	5.2E-4	5.1E-4	5.1E-4	BLNK	-0.0062	1952.68		5.5E-4	1.000	0.995	
Beryllium	A	0.0026	0.0022	0.0022	0.0020	0.0020	0.0020	BLNK	-0.0349	491.989		0.0022	1.000	0.995	
Cadmium	A	4.7E-4	6.7E-4	6.5E-4	6.6E-4	6.6E-4	6.6E-4	BLNK	-0.0015	1508.07		6.3E-4	1.000	0.995	
Calcium	A	6.0E-4	2.6E-4	2.2E-4	1.8E-4	1.7E-4	1.7E-4	BLNK	-16.966	5843.83		2.7E-4	1.000	0.995	
Lead	A	0.0099	0.0083	0.0082	0.0077	0.0075	0.0074	BLNK	-0.0276	134.331		0.0082	1.000	0.995	
Magnesium	A	0.0179	0.0078	0.0069	0.0057	0.0052	0.0051	BLNK	-22.550	194.849		0.0081	1.000	0.995	
Molybdenum	A	0.0024	0.0019	0.0019	0.0018	0.0018	0.0018	BLNK	-0.0324	545.174		0.0019	1.000	0.995	
Potassium	A	0.1239	0.0299	0.0187	0.0071	0.0057	0.0056	BLNK	-226.47	179.983		0.0318	1.000	0.995	
Silver	A	0.0030	0.0029	0.0027	0.0028	0.0027	0.0028	BLNK	-0.0087	362.819		0.0028	1.000	0.995	
Thallium	A	0.0070	0.0066	0.0065	0.0065	0.0067	0.0068	BLNK	-0.0068	147.567		0.0067	1.000	0.995	
Arsenic	E	0.0063	0.0049	0.0041	0.0040	0.0038	0.0038	BLNK	-0.0635	262.859		0.0045	1.000	0.995	
Chromium	E	0.0353	0.0285	0.0255	0.0256	0.0239	0.0230	BLNK	-0.0648	43.1488		0.0270	1.000	0.995	
Cobalt	E	0.0434	0.0380	0.0404	0.0389	0.0361	0.0347	BLNK	-0.0166	28.5861		0.0386	1.000	0.995	
Copper	E	0.2761	0.0977	0.0741	0.0558	0.0512	0.0500	BLNK	-0.3256	19.9283		0.1008	1.000	0.995	
Manganese	E	0.0199	0.0154	0.0147	0.0143	0.0134	0.0130	BLNK	-0.0276	76.5687		0.0151	1.000	0.995	
Nickel	E	0.1211	0.0279	0.0192	0.0112	0.0095	0.0089	BLNK	-1.4416	111.600		0.0330	0.999	0.995	
Sodium	E	0.1281	0.0309	0.0189	0.0080	0.0072	0.0068	BLNK	-188.61	146.521		0.0333	0.999	0.995	
Vanadium	E	0.1379	0.0432	0.0302	0.0203	0.0181	0.0176	BLNK	-0.6757	56.7499		0.0445	1.000	0.995	
Zinc	E		0.0141	0.0114	0.0081	0.0076	0.0073	BLNK	-0.2376	135.761		0.0097	1.000	0.995	
Iron	H	0.0145	0.0090	0.0097	0.0077	0.0071	0.0066	BLNK	-11.880	149.803		0.0091	0.999	0.995	
Selenium	H	0.0016	0.0011	0.0010	0.0012	0.0012	0.0012	BLNK	-0.0293	833.327		0.0012	1.000	0.995	

Spiked Amounts / Drifts	Ch	L1	%D	L2	%D	L3	%D	L4	%D	L5	%D	L6	%D
Aluminum	A	10.000	3	50.000	5	100.00	9	1000.0	6	10000	1	20000	0
Antimony	A	0.1000	-9	0.5000	0	1.0000	0	10.000	-3	100.00	-2	200.00	0
Barium	A	0.1000	16	0.5000	7	1.0000	8	10.000	1	100.00	-1	200.00	0
Beryllium	A	0.1000	-5	0.5000	0	1.0000	3	10.000	0	100.00	-1	200.00	0
Cadmium	A	0.1000	-31	0.5000	0	1.0000	-2	10.000	-1	100.00	0	200.00	0
Calcium	A	10.000	82	50.000	16	100.00	14	1000.0	4	10000	-1	20000	0
Lead	A	0.1000	5	0.5000	5	1.0000	7	10.000	3	100.00	1	200.00	0
Magnesium	A	10.000	23	50.000	6	100.00	12	1000.0	8	10000	1	20000	0
Molybdenum	A	0.1000	-1	0.5000	-5	1.0000	-1	10.000	-2	100.00	-1	200.00	0
Potassium	A	10.000	-135	50.000	-15	100.00	10	1000.0	5	10000	0	20000	0
Silver	A	0.1000	2	0.5000	2	1.0000	-1	10.000	0	100.00	0	200.00	0
Thallium	A	0.0500	-11	0.2500	-6	0.5000	-6	5.0000	-4	50.000	-1	100.00	0
Arsenic	E	0.1000	2	0.5000	17	1.0000	2	10.000	4	100.00	1	200.00	0
Chromium	E	0.1000	-12	0.5000	10	1.0000	3	10.000	10	100.00	3	200.00	-1
Cobalt	E	0.1000	8	0.5000	5	1.0000	14	10.000	11	100.00	3	200.00	-1
Copper	E	0.1000	125	0.5000	30	1.0000	15	10.000	8	100.00	2	200.00	0
Manganese	E	0.1000	24	0.5000	12	1.0000	10	10.000	9	100.00	3	200.00	-1
Nickel	E	0.1000	-190	0.5000	-76	1.0000	-30	10.000	11	100.00	4	200.00	-1
Sodium	E	10.000	-109	50.000	-24	100.00	-11	1000.0	-1	10000	4	20000	-1
Vanadium	E	0.1000	7	0.5000	10	1.0000	4	10.000	8	100.00	2	200.00	-1
Zinc	E			0.5000	44	1.0000	31	10.000	8	100.00	2	200.00	-1
Iron	H	10.000	-2	50.000	11	100.00	33	1000.0	14	10000	6	20000	-2
Selenium	H	0.1000	8	0.5000	-14	1.0000	-17	10.000	1	100.00	2	200.00	-1

NT 04/30/15 : Cal 1 showing unusual recoveries.

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
Calnum : 895173160001

Cal Date : 30-APR-2015

ICV 895173160012 (15d30f00012 30-APR-2015) stds: S26725, S26751

Analyte	Ch	Spiked	Quant	Units	%D	Max	Flags
Aluminum	A	10000	10040	ug/L	0	10	
Antimony	A	100.0	98.70	ug/L	-1	10	
Barium	A	100.0	98.86	ug/L	-1	10	
Beryllium	A	100.0	98.44	ug/L	-2	10	
Cadmium	A	100.0	98.47	ug/L	-2	10	
Calcium	A	10000	9900	ug/L	-1	10	
Lead	A	100.0	98.83	ug/L	-1	10	
Magnesium	A	10000	10070	ug/L	1	10	
Molybdenum	A	100.0	98.22	ug/L	-2	10	
Potassium	A	10000	10070	ug/L	1	10	
Silver	A	100.0	98.02	ug/L	-2	10	
Thallium	A	50.00	48.49	ug/L	-3	10	
Arsenic	E	100.0	99.27	ug/L	-1	10	
Chromium	E	100.0	101.3	ug/L	1	10	
Cobalt	E	100.0	102.3	ug/L	2	10	
Copper	E	100.0	100.8	ug/L	1	10	
Manganese	E	100.0	101.7	ug/L	2	10	
Nickel	E	100.0	103.5	ug/L	4	10	
Sodium	E	10000	10150	ug/L	2	10	
Vanadium	E	100.0	101.1	ug/L	1	10	
Zinc	E	100.0	102.3	ug/L	2	10	
Iron	H	10000	10080	ug/L	1	10	
Selenium	H	100.0	101.8	ug/L	2	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895173160017 File : 15d30f00017 Time : 30-APR-2015 07:41
 Cal : 895173160001 Caldate : 30-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	15.33	10.00	5.000	ug/L	ICB ***
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	ND	10.00	10.00	ug/L	
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	[0.09020]	0.1000	0.05000	ug/L	!ICB
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d30f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	367151	374762	2.07
Scandium	A	367692	414730	12.79
Scandium	E	12265	13696	11.67
Scandium	H	129426	138331	6.88
Germanium	H	30355	31768	4.65
Germanium	E	6614	7156	8.19
Indium	A	691513	735328	6.34
Bismuth	A	1231339	1271736	3.28
Yttrium	A	606346	650258	7.24
Terbium	A	1468795	1541574	4.96

!=warning ICB=instrument blank

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895173160050 File : 15d30f00050
 Cal : 895173160001 Caldate : 30-APR-2015
 Standards: S26726, S26751

IDF : 1.0
 Time : 30-APR-2015 11:15

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0062	0.0061	10000	10480	ug/L	5	10	
Antimony	A	0.0025	0.0025	100.0	98.58	ug/L	-1	10	
Barium	A	5.5E-4	5.0E-4	100.0	98.51	ug/L	-1	10	
Beryllium	A	0.0022	0.0021	100.0	104.1	ug/L	4	10	
Cadmium	A	6.3E-4	6.6E-4	100.0	98.90	ug/L	-1	10	
Calcium	A	2.7E-4	1.8E-4	10000	10360	ug/L	4	10	
Lead	A	0.0082	0.0075	100.0	100.0	ug/L	0	10	
Magnesium	A	0.0081	0.0054	10000	10530	ug/L	5	10	
Molybdenum	A	0.0019	0.0018	100.0	99.00	ug/L	-1	10	
Potassium	A	0.0318	0.0061	10000	10810	ug/L	8	10	
Silver	A	0.0028	0.0027	100.0	99.03	ug/L	-1	10	
Thallium	A	0.0067	0.0066	50.00	48.82	ug/L	-2	10	
Arsenic	E	0.0045	0.0039	100.0	101.8	ug/L	2	10	
Chromium	E	0.0270	0.0249	100.0	107.4	ug/L	7	10	
Cobalt	E	0.0386	0.0378	100.0	108.1	ug/L	8	10	
Copper	E	0.1008	0.0516	100.0	102.6	ug/L	3	10	
Manganese	E	0.0151	0.0142	100.0	108.8	ug/L	9	10	
Nickel	E	0.0330	0.0099	100.0	108.8	ug/L	9	10	
Sodium	E	0.0333	0.0069	10000	9924	ug/L	-1	10	
Vanadium	E	0.0445	0.0192	100.0	108.1	ug/L	8	10	
Zinc	E	0.0097	0.0076	100.0	103.3	ug/L	3	10	
Iron	H	0.0091	0.0075	10000	11260	ug/L	13	10	c+ ***
Selenium	H	0.0012	0.0012	100.0	102.8	ug/L	3	10	

ISTD (ICALBLK 15d30f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	367151	247393	-32.62
Scandium	A	367692	294592	-19.88
Scandium	E	12265	9666	-21.19
Scandium	H	129426	96249	-25.63
Germanium	H	30355	22384	-26.26
Germanium	E	6614	5011	-24.24
Indium	A	691513	504569	-27.03
Bismuth	A	1231339	890473	-27.68
Yttrium	A	606346	452726	-25.34
Terbium	A	1468795	1115311	-24.07

+ = high bias c = CCV

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895173160052 File : 15d30f00052 Time : 30-APR-2015 11:28
 Cal : 895173160001 Caldate : 30-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	0.1919	0.1000	0.2000	ug/L	CCB ***
Potassium	A	55.70	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	0.1060	0.1000	0.1000	ug/L	CCB ***
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	0.3047	0.1000	0.05000	ug/L	CCB ***
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	13.32	10.00	15.00	ug/L	CCB ***
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d30f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	367151	252313	-31.28
Scandium	A	367692	290569	-20.97
Scandium	E	12265	9750	-20.51
Scandium	H	129426	71029	-45.12
Germanium	H	30355	20116	-33.73
Germanium	E	6614	5166	-21.89
Indium	A	691513	523718	-24.26
Bismuth	A	1231339	933881	-24.16
Yttrium	A	606346	455850	-24.82
Terbium	A	1468795	1106527	-24.66

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895173160053 File : 15d30f00053 Time : 30-APR-2015 11:34
 Cal : 895173160001 Caldate : 30-APR-2015
 Standards: S26727, S26751

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4524	0.1000	ug/L	
Barium	A	1.848	0.1000	ug/L	
Beryllium	A	[0.05620]	0.1000	ug/L	
Cadmium	A	4.504	0.1000	ug/L	
Lead	A	0.2347	0.1000	ug/L	
Silver	A	[0.06830]	0.1000	ug/L	
Thallium	A	[0.01950]	0.05000	ug/L	
Arsenic	E	0.8167	0.1000	ug/L	
Chromium	E	0.7950	0.1000	ug/L	
Cobalt	E	1.115	0.1000	ug/L	
Copper	E	1.220	0.1000	ug/L	
Manganese	E	7.025	0.1000	ug/L	
Nickel	E	[-0.06970]	0.1000	ug/L	
Vanadium	E	0.5342	0.1000	ug/L	
Zinc	E	2.989	0.5000	ug/L	
Selenium	H	0.1316	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	104000	ug/L	104
Calcium	A	300000	311100	ug/L	104
Magnesium	A	100000	101500	ug/L	102
Molybdenum	A	2000	2015	ug/L	101
Potassium	A	100000	106100	ug/L	106
Sodium	E	250000	245100	ug/L	98
Phosphorus	E	100000	102800	ug/L	103
Iron	H	250000	234600	ug/L	94

ISTD (ICALBLK 15d30f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	367151	216914	-40.92
Scandium	A	367692	265083	-27.91
Scandium	E	12265	9292	-24.24
Scandium	H	129426	100804	-22.11
Germanium	H	30355	19326	-36.33
Germanium	E	6614	4547	-31.25
Indium	A	691513	418058	-39.54
Bismuth	A	1231339	706094	-42.66
Yttrium	A	606346	401873	-33.72
Terbium	A	1468795	973400	-33.73

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895173160054 File : 15d30f00054
 Cal : 895173160001 Caldate : 30-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 30-APR-2015 11:41

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	106000	ug/L	6		
Cadmium	A	100.0	99.88	ug/L	0	20	
Calcium	A	300000	317400	ug/L	6		
Magnesium	A	100000	103400	ug/L	3		
Molybdenum	A	2000	2018	ug/L	1		
Potassium	A	100000	107200	ug/L	7		
Silver	A	50.00	47.07	ug/L	-6	20	
Arsenic	E	100.0	104.2	ug/L	4	20	
Chromium	E	200.0	207.5	ug/L	4	20	
Cobalt	E	200.0	197.4	ug/L	-1	20	
Copper	E	200.0	177.9	ug/L	-11	20	
Manganese	E	200.0	215.0	ug/L	8	20	
Nickel	E	200.0	192.4	ug/L	-4	20	
Sodium	E	250000	256600	ug/L	3		
Vanadium	E	200.0	212.1	ug/L	6	20	
Zinc	E	100.0	85.79	ug/L	-14	20	
Iron	H	250000	268000	ug/L	7		
Selenium	H	100.0	105.2	ug/L	5	20	

ISTD (ICALBLK 15d30f00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	129426	89163	-31.11
Scandium	A	367692	266881	-27.42
Scandium	E	12265	9246	-24.61
Germanium	H	30355	19701	-35.10
Germanium	E	6614	4752	-28.15
Indium	A	691513	434936	-37.10
Yttrium	A	606346	416469	-31.31

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895173160067 File : 15d30f00067
 Cal : 895173160001 Caldate : 30-APR-2015
 Standards: S26726, S26751

IDF : 1.0
 Time : 30-APR-2015 13:04

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0062	0.0060	10000	10180	ug/L	2	10	
Antimony	A	0.0025	0.0025	100.0	100.5	ug/L	1	10	
Barium	A	5.5E-4	5.0E-4	100.0	98.00	ug/L	-2	10	
Beryllium	A	0.0022	0.0021	100.0	101.4	ug/L	1	10	
Cadmium	A	6.3E-4	6.5E-4	100.0	98.15	ug/L	-2	10	
Calcium	A	2.7E-4	1.7E-4	10000	9973	ug/L	0	10	
Lead	A	0.0082	0.0078	100.0	104.8	ug/L	5	10	
Magnesium	A	0.0081	0.0053	10000	10290	ug/L	3	10	
Molybdenum	A	0.0019	0.0018	100.0	98.95	ug/L	-1	10	
Potassium	A	0.0318	0.0058	10000	10270	ug/L	3	10	
Silver	A	0.0028	0.0027	100.0	97.20	ug/L	-3	10	
Thallium	A	0.0067	0.0066	50.00	48.81	ug/L	-2	10	
Arsenic	E	0.0045	0.0038	100.0	100.7	ug/L	1	10	
Chromium	E	0.0270	0.0237	100.0	102.0	ug/L	2	10	
Cobalt	E	0.0386	0.0355	100.0	101.6	ug/L	2	10	
Copper	E	0.1008	0.0500	100.0	99.34	ug/L	-1	10	
Manganese	E	0.0151	0.0137	100.0	104.5	ug/L	5	10	
Nickel	E	0.0330	0.0091	100.0	100.6	ug/L	1	10	
Sodium	E	0.0333	0.0066	10000	9549	ug/L	-5	10	
Vanadium	E	0.0445	0.0180	100.0	101.7	ug/L	2	10	
Zinc	E	0.0097	0.0075	100.0	102.1	ug/L	2	10	
Iron	H	0.0091	0.0072	10000	10800	ug/L	8	10	
Selenium	H	0.0012	0.0012	100.0	99.69	ug/L	0	10	

ISTD (ICALBLK 15d30f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	367151	207326	-43.53
Scandium	A	367692	249156	-32.24
Scandium	E	12265	8420	-31.35
Scandium	H	129426	83302	-35.64
Germanium	H	30355	18759	-38.20
Germanium	E	6614	4196	-36.56
Indium	A	691513	423809	-38.71
Bismuth	A	1231339	797038	-35.27
Yttrium	A	606346	374342	-38.26
Terbium	A	1468795	952429	-35.16

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895173160069 File : 15d30f00069 Time : 30-APR-2015 13:17
 Cal : 895173160001 Caldate : 30-APR-2015

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	0.1118	0.1000	0.2000	ug/L	CCB ***
Potassium	A	45.17	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	0.3357	0.1000	0.05000	ug/L	CCB ***
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d30f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	367151	198130	-46.04
Scandium	A	367692	229143	-37.68
Scandium	E	12265	8008	-34.71
Scandium	H	129426	82517	-36.24
Germanium	H	30355	19376	-36.17
Germanium	E	6614	4102	-37.98
Indium	A	691513	415725	-39.88
Bismuth	A	1231339	799852	-35.04
Yttrium	A	606346	358202	-40.92
Terbium	A	1468795	903015	-38.52

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16 IDF : 1.0
 Seqnum : 895173160076 File : 15d30f00076 Time : 30-APR-2015 14:02
 Cal : 895173160001 Caldate : 30-APR-2015
 Standards: S26726, S26751

Analyte	Ch	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	0.0062	0.0061	10000	10370	ug/L	4	10	
Antimony	A	0.0025	0.0025	100.0	99.22	ug/L	-1	10	
Barium	A	5.5E-4	5.0E-4	100.0	97.83	ug/L	-2	10	
Beryllium	A	0.0022	0.0021	100.0	102.9	ug/L	3	10	
Cadmium	A	6.3E-4	6.5E-4	100.0	97.68	ug/L	-2	10	
Calcium	A	2.7E-4	1.7E-4	10000	10160	ug/L	2	10	
Lead	A	0.0082	0.0079	100.0	105.7	ug/L	6	10	
Magnesium	A	0.0081	0.0054	10000	10450	ug/L	5	10	
Molybdenum	A	0.0019	0.0018	100.0	98.35	ug/L	-2	10	
Potassium	A	0.0318	0.0060	10000	10530	ug/L	5	10	
Silver	A	0.0028	0.0027	100.0	96.81	ug/L	-3	10	
Thallium	A	0.0067	0.0066	50.00	48.34	ug/L	-3	10	
Arsenic	E	0.0045	0.0037	100.0	97.63	ug/L	-2	10	
Chromium	E	0.0270	0.0238	100.0	102.4	ug/L	2	10	
Cobalt	E	0.0386	0.0357	100.0	101.9	ug/L	2	10	
Copper	E	0.1008	0.0494	100.0	98.15	ug/L	-2	10	
Manganese	E	0.0151	0.0137	100.0	105.2	ug/L	5	10	
Nickel	E	0.0330	0.0092	100.0	101.3	ug/L	1	10	
Sodium	E	0.0333	0.0067	10000	9582	ug/L	-4	10	
Vanadium	E	0.0445	0.0182	100.0	102.4	ug/L	2	10	
Zinc	E	0.0097	0.0074	100.0	100.1	ug/L	0	10	
Iron	H	0.0091	0.0070	10000	10530	ug/L	5	10	
Selenium	H	0.0012	0.0012	100.0	97.17	ug/L	-3	10	

ISTD (ICALBLK 15d30f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	367151	174611	-52.44
Scandium	A	367692	210224	-42.83
Scandium	E	12265	7378	-39.85
Scandium	H	129426	78107	-39.65
Germanium	H	30355	17170	-43.44
Germanium	E	6614	3717	-43.80
Indium	A	691513	366043	-47.07
Bismuth	A	1231339	700265	-43.13
Yttrium	A	606346	321970	-46.90
Terbium	A	1468795	822687	-43.99

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
Seqnum : 895173160078
Cal : 895173160001

File : 15d30f00078
Caldate : 30-APR-2015

IDF : 1.0
Time : 30-APR-2015 14:15

Analyte	Ch	Quant	IQL	LOD	Units	Flags
Aluminum	A	ND	10.00	5.000	ug/L	
Antimony	A	ND	0.1000	0.1000	ug/L	
Barium	A	ND	0.1000	0.1000	ug/L	
Beryllium	A	ND	0.1000	0.1000	ug/L	
Cadmium	A	ND	0.1000	0.05000	ug/L	
Calcium	A	ND	10.00	10.00	ug/L	
Lead	A	ND	0.1000	0.05000	ug/L	
Magnesium	A	ND	10.00	5.000	ug/L	
Molybdenum	A	ND	0.1000	0.2000	ug/L	
Potassium	A	63.71	10.00	10.00	ug/L	CCB ***
Silver	A	ND	0.1000	0.05000	ug/L	
Thallium	A	ND	0.05000	0.02500	ug/L	
Arsenic	E	ND	0.1000	0.1000	ug/L	
Chromium	E	ND	0.1000	0.05000	ug/L	
Cobalt	E	ND	0.1000	0.1000	ug/L	
Copper	E	ND	0.1000	0.2000	ug/L	
Manganese	E	ND	0.1000	0.1000	ug/L	
Nickel	E	ND	0.1000	0.1000	ug/L	
Sodium	E	ND	10.00	100.0	ug/L	
Vanadium	E	0.4152	0.1000	0.05000	ug/L	CCB ***
Zinc	E	ND	0.5000	0.5000	ug/L	
Iron	H	ND	10.00	15.00	ug/L	
Selenium	H	ND	0.1000	0.1000	ug/L	

ISTD (ICALBLK 15d30f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	367151	180333	-50.88
Scandium	A	367692	214671	-41.62
Scandium	E	12265	7713	-37.11
Scandium	H	129426	80690	-37.66
Germanium	H	30355	17820	-41.29
Germanium	E	6614	3857	-41.68
Indium	A	691513	378924	-45.20
Bismuth	A	1231339	730940	-40.64
Yttrium	A	606346	326362	-46.18
Terbium	A	1468795	819842	-44.18

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD A FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895173160079 File : 15d30f00079
 Cal : 895173160001 Caldate : 30-APR-2015
 Standards: S26727, S26751

IDF : 1.0
 Time : 30-APR-2015 14:21

Analyte	Ch	Quant	IQL	Units	Flags
Antimony	A	0.4952	0.1000	ug/L	
Barium	A	1.869	0.1000	ug/L	
Beryllium	A	[0.05090]	0.1000	ug/L	
Cadmium	A	4.745	0.1000	ug/L	
Lead	A	0.2519	0.1000	ug/L	
Silver	A	[0.07830]	0.1000	ug/L	
Thallium	A	[0.01760]	0.05000	ug/L	
Arsenic	E	0.8701	0.1000	ug/L	
Chromium	E	0.8655	0.1000	ug/L	
Cobalt	E	1.080	0.1000	ug/L	
Copper	E	1.153	0.1000	ug/L	
Manganese	E	6.830	0.1000	ug/L	
Nickel	E	[0.002100]	0.1000	ug/L	
Vanadium	E	0.5743	0.1000	ug/L	
Zinc	E	3.071	0.5000	ug/L	
Selenium	H	0.1579	0.1000	ug/L	

Interferent	Ch	Spiked	Quant	Units	%Rec
Aluminum	A	100000	100700	ug/L	101
Calcium	A	300000	299500	ug/L	100
Magnesium	A	100000	98860	ug/L	99
Molybdenum	A	2000	2028	ug/L	101
Potassium	A	100000	101500	ug/L	102
Sodium	E	250000	241200	ug/L	96
Phosphorus	E	100000	103200	ug/L	103
Iron	H	250000	230700	ug/L	92

ISTD (ICALBLK 15d30f00004)	Ch	ICALBLK Abund	Abund	%Drift
Lithium	A	367151	164564	-55.18
Scandium	A	367692	208710	-43.24
Scandium	E	12265	7590	-38.12
Scandium	H	129426	79202	-38.81
Germanium	H	30355	14790	-51.28
Germanium	E	6614	3649	-44.83
Indium	A	691513	322551	-53.36
Bismuth	A	1231339	581819	-52.75
Yttrium	A	606346	304898	-49.72
Terbium	A	1468795	771549	-47.47

CURTIS & TOMPKINS INTERFERENCE CHECK STANDARD AB FOR 266161 METALS Filtrate
EPA 6020

Inst : MET16
 Seqnum : 895173160080 File : 15d30f00080
 Cal : 895173160001 Caldate : 30-APR-2015
 Standards: S26728, S26751

IDF : 1.0
 Time : 30-APR-2015 14:28

Analyte	Ch	Spiked	Quant	Units	%D	Max %D	Flags
Aluminum	A	100000	102200	ug/L	2		
Cadmium	A	100.0	98.22	ug/L	-2	20	
Calcium	A	300000	305400	ug/L	2		
Magnesium	A	100000	100100	ug/L	0		
Molybdenum	A	2000	1994	ug/L	0		
Potassium	A	100000	103700	ug/L	4		
Silver	A	50.00	46.07	ug/L	-8	20	
Arsenic	E	100.0	103.2	ug/L	3	20	
Chromium	E	200.0	203.2	ug/L	2	20	
Cobalt	E	200.0	191.6	ug/L	-4	20	
Copper	E	200.0	172.3	ug/L	-14	20	
Manganese	E	200.0	211.7	ug/L	6	20	
Nickel	E	200.0	185.2	ug/L	-7	20	
Sodium	E	250000	253900	ug/L	2		
Vanadium	E	200.0	207.4	ug/L	4	20	
Zinc	E	100.0	83.88	ug/L	-16	20	
Iron	H	250000	260100	ug/L	4		
Selenium	H	100.0	103.8	ug/L	4	20	

ISTD (ICALBLK 15d30f00004)	Ch	ICALBLK Abund	Abund	%Drift
Scandium	H	129426	72756	-43.79
Scandium	A	367692	198136	-46.11
Scandium	E	12265	7098	-42.13
Germanium	H	30355	15631	-48.51
Germanium	E	6614	3637	-45.01
Indium	A	691513	317366	-54.11
Yttrium	A	606346	300318	-50.47

SAMPLE PREPARATION SUMMARY

Batch # : 222621
 Started By : RFC
 Method : METHOD
 Spike #1 ID : S26229

Prep Date : 27-APR-2015 17:25
 Spike #2 ID : S26230

Analysis : ICPMS
 Finished By : RFC
 Units : mL
 Spike #3 ID : S26912

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266161-004		Filtrate	50	50	1	1.0						6020	
266161-005		Filtrate	50	50	1	1.0						6020	
266161-006		Filtrate	50	50	1	1.0						6020	
266161-007		Filtrate	50	50	1	1.0						6020	
266161-008		Filtrate	50	50	1	1.0						6020	
266161-009		Filtrate	50	50	1	1.0						6020	
266161-013		Filtrate	50	50	1	1.0						6020	
266161-016		Filtrate	50	50	1	1.0						6020	
266161-017		Filtrate	50	50	1	1.0						6020	
266161-018		Filtrate	50	50	1	1.0						6020	
266161-019		Filtrate	50	50	1	1.0						6020	
266161-020		Filtrate	50	50	1	1.0						6020	
266161-021		Filtrate	50	50	1	1.0						6020	
266161-023		Filtrate	50	50	1	1.0						6020	
266161-025		Filtrate	50	50	1	1.0						6020	
266161-026		Filtrate	50	50	1	1.0						6020	
266258-001		Filtrate	50	50	1	1.0						6020	
266263-002		Filtrate	50	50	1	1.0						6020	
QC785676	BLANK	Filtrate	50	50	1	1.0							
QC785677	BS	Filtrate	50	50	1	1.0	.5	.5	.5				
QC785678	BSD	Filtrate	50	50	1	1.0	.5	.5	.5				
QC785679	MS	Filtrate	50	50	1	1.0	.5	.5	.5				
QC785680	MSD	Filtrate	50	50	1	1.0	.5	.5	.5				
QC785681	SER	Filtrate	50	50	1	1.0							
QC785682	PDS	Filtrate	50	50	1	1.0							

Analyst: NT

Date: 04/28/15

Reviewer: PRW

Date: 04/28/15

Water Digestion for ICP-MS

Curtis & Tompkins, Ltd.

LIMS Batch #: 222621
 Digested by: RFC
 Date Digested: 4/27/15

Digestion Method **BK3678**
 EPA 200.8 for ICP-M Page 13
 EPA 3005A for ICP-MS
 FILTRATE

Lvl.	Sample #	Container ID	Volume Sample(mL)	Final Volume (mL)	Filtered? (y/n)	ID ✓	Comments
	BLANK		50 <input type="checkbox"/>	50 <input type="checkbox"/>	N	✓	QC785676
	BS		50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	-677
	BSD		50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	-678
	MS		50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	-679
5	MSD		50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	-680
IV	266161-004	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-005	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-006	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-007	J	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	MSS
10	-008	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-009	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-013	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-016	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-017	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
15	-018	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-019	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-020	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-021	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-023	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
20	-025	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
	-026	D	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
III	266258-001	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
II	266263-002	A	50 <input type="checkbox"/>	50 <input type="checkbox"/>		✓	
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			
			50 <input type="checkbox"/>	50 <input type="checkbox"/>			

Digestion tubes, lot # ACCUFLOW Reagent ID or LIMS # S26229 Initials / Date RFC 4/27/15

0.50 mL of spike solution (Std1) was added to all spikes S26230

0.50 mL of spike solution (Std2) was added to all spikes S26912

0.50 mL of spike solution (Std3) was added to all spikes

Digestion Temperature (°C), Block and Probe Location

digestion begun at (time)


concentrated HCl JTB 97264

concentrated HNO3 JTB 88969

digestion ended at (time)

filtered thru' Whatman # 541

Relinquished to ICP group ICP-MS

 4/27/15
 Prep Chemist / Date

Continued from page 8
 Continued on page _____

Reviewed Online / See LIMS

CURTIS & TOMPKINS SEQUENCE SUMMARY FOR 1075163565

Instrument : MET54
 Method : EPA 7470A

Begun : 04/23/15 14:05
 SOP Version : hg_water_rv16

#	File	Type	Sample ID	Matrix	Batch	Analyzed	IDF	Std's Used
001	met54	ICALBLK				04/23/15 14:05	1.0	
002	met54	ICAL	ICAL1			04/23/15 14:07	1.0	1
003	met54	ICAL	ICAL2			04/23/15 14:08	1.0	1
004	met54	ICAL	ICAL3			04/23/15 14:09	1.0	1
005	met54	ICAL	ICAL4			04/23/15 14:10	1.0	1
006	met54	ICAL	ICAL5			04/23/15 14:11	1.0	1
007	met54	ICV				04/23/15 14:17	1.0	2
008	met54	ICB				04/23/15 14:18	1.0	
009	met54	BLANK	QC785259	Filtrate	222510	04/23/15 14:20	1.0	
010	met54	BS	QC785260	Filtrate	222510	04/23/15 14:21	1.0	
011	met54	BSD	QC785261	Filtrate	222510	04/23/15 14:22	1.0	
012	met54	MSS	266161-007	Filtrate	222510	04/23/15 14:23	1.0	
013	met54	MS	QC785262	Filtrate	222510	04/23/15 14:24	1.0	
014	met54	MSD	QC785263	Filtrate	222510	04/23/15 14:25	1.0	
015	met54	SER	QC785264	Filtrate	222510	04/23/15 14:26	5.0	
016	met54	SAMPLE	266161-004	Filtrate	222510	04/23/15 14:27	1.0	
017	met54	SAMPLE	266161-005	Filtrate	222510	04/23/15 14:28	1.0	
018	met54	SAMPLE	266161-006	Filtrate	222510	04/23/15 14:30	1.0	
019	met54	CCV				04/23/15 14:31	1.0	3
020	met54	CCB				04/23/15 14:32	1.0	
021	met54	SAMPLE	266161-008	Filtrate	222510	04/23/15 14:33	1.0	
022	met54	SAMPLE	266161-009	Filtrate	222510	04/23/15 14:34	1.0	
023	met54	SAMPLE	266161-013	Filtrate	222510	04/23/15 14:35	1.0	
024	met54	SAMPLE	266161-016	Filtrate	222510	04/23/15 14:36	1.0	
025	met54	SAMPLE	266161-017	Filtrate	222510	04/23/15 14:38	1.0	
026	met54	SAMPLE	266161-018	Filtrate	222510	04/23/15 14:39	1.0	
027	met54	SAMPLE	266161-019	Filtrate	222510	04/23/15 14:40	1.0	
028	met54	SAMPLE	266161-020	Filtrate	222510	04/23/15 14:41	1.0	
029	met54	SAMPLE	266161-021	Filtrate	222510	04/23/15 14:42	1.0	
030	met54	SAMPLE	266161-023	Filtrate	222510	04/23/15 14:43	1.0	
031	met54	CCV				04/23/15 14:44	1.0	3
032	met54	CCB				04/23/15 14:45	1.0	
033	met54	SAMPLE	266161-025	Filtrate	222510	04/23/15 14:47	1.0	
034	met54	SAMPLE	266161-026	Filtrate	222510	04/23/15 14:48	1.0	
035	met54	CCV				04/23/15 14:49	1.0	3
036	met54	CCB				04/23/15 14:50	1.0	
037	met54	SAMPLE	266263-002	Filtrate	222475	04/23/15 15:05	1.0	
038	met54	SAMPLE	266266-009	Water	222475	04/23/15 15:06	1.0	
039	met54	SAMPLE	266270-003	Water	222475	04/23/15 15:07	1.0	
040	met54	SAMPLE	266274-005	Water	222475	04/23/15 15:08	1.0	
041	met54	SAMPLE	266274-006	Water	222475	04/23/15 15:10	1.0	
042	met54	SAMPLE	266274-007	Water	222475	04/23/15 15:11	1.0	
043	met54	SAMPLE	266274-008	Water	222475	04/23/15 15:12	1.0	
044	met54	CCV				04/23/15 15:13	1.0	3
045	met54	CCB				04/23/15 15:14	1.0	

ARD 04/24/15 : I verified that the vials loaded on the instrument matched the sequence data entry, for runs 1 through 45.

Standards used: 1=S27092 2=S27094 3=S27095

CURTIS & TOMPKINS INITIAL CALIBRATION FOR 266161 METALS Filtrate: EPA 7470A

Inst : MET54
 Calnum : 1075163565001
 Units : ug/L
 Date : 23-APR-2015 14:05
 X Axis : R

Level File	Seqnum	Sample ID	Analyzed	Stds
L1	met54	1075163565002	ICAL1 23-APR-2015 14:07	S27092 (500X)
L2	met54	1075163565003	ICAL2 23-APR-2015 14:08	S27092 (200X)
L3	met54	1075163565004	ICAL3 23-APR-2015 14:09	S27092 (50X)
L4	met54	1075163565005	ICAL4 23-APR-2015 14:10	S27092 (20X)
L5	met54	1075163565006	ICAL5 23-APR-2015 14:11	S27092 (10X)

Analyte	L1	L2	L3	L4	L5	Type	a0	a1	a2	Avg	r^2	%RSD	Mnr^2	Flg
Mercury	0.0080	0.0092	0.0091	0.0095	0.0094	LIN0	0.02242	105.562		0.0091	1.000	.99		

Spiked Amounts / Drifts	L1	L2	L3	L4	L5	%D	L3	L4	L5	%D
Mercury	0.2000	0.5000	-4	2.0000	5.0000	-3	10.000	1	10.000	0

Instrument amount = a0 + response * a1 + response^2 * a2; LIN0=Linear regression including 0,0 point

CURTIS & TOMPKINS 2ND SOURCE CALIBRATION SUMMARY FOR 266161 METALS Filtrate
EPA 7470A

Inst : MET54
Calnum : 1075163565001

Cal Date : 23-APR-2015

ICV 1075163565007 (23-APR-2015) stds: S27094

Analyte	Spiked	Quant	Units	%D	Max	Flags
Mercury	5.000	4.984	ug/L	0	10	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075163565008
Cal : 1075163565001
File : met54
Caldate : 23-APR-2015
IDF : 1.0
Time : 23-APR-2015 14:18

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
 EPA 7470A

Inst : MET54
 Seqnum : 1075163565019
 Cal : 1075163565001
 Standards: S27095

File : met54
 Caldate : 23-APR-2015

IDF : 1.0
 Time : 23-APR-2015 14:31

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	0.0091	0.0096	5.000	5.100	ug/L	2	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075163565020
Cal : 1075163565001
File : met54
Caldate : 23-APR-2015
IDF : 1.0
Time : 23-APR-2015 14:32

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 7470A

Inst : MET54 IDF : 1.0
 Seqnum : 1075163565031 File : met54 Time : 23-APR-2015 14:44
 Cal : 1075163565001 Caldate : 23-APR-2015
 Standards: S27095

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	0.0091	0.0097	5.000	5.142	ug/L	3	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075163565032
Cal : 1075163565001
File : met54
Caldate : 23-APR-2015
IDF : 1.0
Time : 23-APR-2015 14:45

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

CURTIS & TOMPKINS CONTINUING CALIBRATION FOR 266161 METALS Filtrate
EPA 7470A

Inst : MET54
 Seqnum : 1075163565035
 Cal : 1075163565001
 Standards: S27095

IDF : 1.0
 Time : 23-APR-2015 14:49

File : met54
 Caldate : 23-APR-2015

Analyte	Avg RF/CF	RF/CF	Spiked	Quant	Units	%D	Max %D	Flags
Mercury	0.0091	0.0097	5.000	5.163	ug/L	3	20	

CURTIS & TOMPKINS INSTRUMENT BLANK FOR 266161 METALS Filtrate
EPA 7470A

Inst : MET54
Seqnum : 1075163565036
Cal : 1075163565001
File : met54
Caldate : 23-APR-2015
IDF : 1.0
Time : 23-APR-2015 14:50

Analyte	Quant	IQL	LOD	Units	Flags
Mercury	ND	0.2000	0.1000	ug/L	

SAMPLE PREPARATION SUMMARY

Batch # : 222510
 Started By : ARD
 Method : METHOD
 Spike #1 ID : S27092

Prep Date : 22-APR-2015 14:05

Analysis : HG
 Finished By : ARD
 Units : mL

Sample	Stype	Matrix	Initial	Final	Clean DF	Prep DF	pH	Sp 1 Vol	Sp 2 Vol	Sp 3 Vol	Clean Method	Analysis	Comments
266161-004		Filtrate	50	50	1	1.0						TAL/HG	
266161-005		Filtrate	50	50	1	1.0						TAL/HG	
266161-006		Filtrate	50	50	1	1.0						TAL/HG	
266161-007		Filtrate	50	50	1	1.0						TAL/HG	
266161-008		Filtrate	50	50	1	1.0						TAL/HG	
266161-009		Filtrate	50	50	1	1.0						TAL/HG	
266161-013		Filtrate	50	50	1	1.0						TAL/HG	
266161-016		Filtrate	50	50	1	1.0						TAL/HG	
266161-017		Filtrate	50	50	1	1.0						TAL/HG	
266161-018		Filtrate	50	50	1	1.0						TAL/HG	
266161-019		Filtrate	50	50	1	1.0						TAL/HG	
266161-020		Filtrate	50	50	1	1.0						TAL/HG	
266161-021		Filtrate	50	50	1	1.0						TAL/HG	
266161-023		Filtrate	50	50	1	1.0						TAL/HG	
266161-025		Filtrate	50	50	1	1.0						TAL/HG	
266161-026		Filtrate	50	50	1	1.0						TAL/HG	
QC785259	BLANK	Filtrate	50	50	1	1.0							
QC785260	BS	Filtrate	50	50	1	1.0		1.25					
QC785261	BSD	Filtrate	50	50	1	1.0		1.25					
QC785262	MS	Filtrate	50	50	1	1.0		1.25					
QC785263	MSD	Filtrate	50	50	1	1.0		1.25					
QC785264	SER	Filtrate	50	50	1	1.0							

Analyst: ARD

Date: 04/23/15

Reviewer: PRW

Date: 04/30/15

Water Digestion for Mercury

Curtis & Tompkins, Ltd.

LIMS Batch #: 222510
 Date Digested: 4/22/15

Digestion Method BK3651
 EPA 7470A/ EPA 245.1 Page 84

Sample #	container ID	Volume Sample (mL)	Final Volume (mL)	Filtered? (y/n)	Comments
Blank		<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	N	QC785259
Blank (wet ARD 4/22/15)		<input type="checkbox"/> 50 <input type="checkbox"/>	<input type="checkbox"/> 50 <input type="checkbox"/>		
BS	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	N	QC785260
BSD	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		↓ 261
5 MSS 266161-007	L	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
MS	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
MSD	*	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
ARD 4/22/15 266166 266161-004	D	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
266161-005	A	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
10 -006	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
-008	D	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
-009	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
-013	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
-016	A	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
15 -017	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
-018	D	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
-019	A	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
-020	D	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
-021	A	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
20 -023	D	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
-025	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
↓ -026	↓	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>	<input checked="" type="checkbox"/> 50 <input type="checkbox"/>		
266202-001		<input type="checkbox"/> 50 <input type="checkbox"/>	<input type="checkbox"/> 50 <input type="checkbox"/>		ARD 4/22/15
		<input type="checkbox"/> 50 <input type="checkbox"/>	<input type="checkbox"/> 50 <input type="checkbox"/>		
		<input type="checkbox"/> 50 <input type="checkbox"/>	<input type="checkbox"/> 50 <input type="checkbox"/>		

Reagent ID/ LIMS# / Time Initials / Date

Digestion Tube Lot #	EK14178	ARD 4/22/15
<u>1.25</u> mL of spike solution was added to all spikes	ARD 4/22/15 S27092 *	
<input type="checkbox"/> CAL digested with this batch	S27093	
ICAL Source LIMS #	S27094/S27093	
ICV / CCV LIMS #	96° B34	
Digestion Temperature (°C), Block and Probe Location	14:05	
Digestion Started at (time)	BDH - 2014120218	
concentrated H ₂ SO ₄	JTB - 102053	
concentrated HNO ₃	ARD 4/22/15 040915	
5% KMnO ₄	030215	↓
5% K ₂ S ₂ O ₈	040915	ARD 4/23/15
NaCl.hydroxylamine hydrochloride	042115	↓
Stannous Chloride	17:05	ARD 4/22/15
Digestion Completed at (time)		↓
<input type="checkbox"/> filtered thru' 0.45 um syringe filter (lot #)		

[Signature] 4/22/15
 Prep Chemist / Date

Continued from page 8
 Continued on page _____

Reviewed Online / See LIMS