TETRA TECH, INC.

August 19, 2021

John Karachewski
California Department of Toxic Substances Control
700 Heinz Avenue, Suite 200C
Berkeley, California 94710

Via email: john.karacheski@dtsc.ca.gov

**Subject: Implementation of Soil Management Plan**
**EBMUD Strong Floor Project, Building 277**
**Richmond Field Station, UC Berkeley**
**Sample Results Summary, Updated SMP Form B**

Dear Mr. Karachewski:

On behalf of the University of California, Berkeley, Tetra Tech, Inc. conducted soil sampling at Building 277 at the Richmond Field Station under the Soil Management Plan (SMP). The project involves East Bay Municipal Utility District (EBMUD) installing a "strong floor" for research inside of Building 277. 9,000 square feet of an existing concrete floor within the building will be demolished and recycled off-site, soil excavated to approximately 4.5 feet below ground surface (bgs), and then 3 to 4 feet of concrete will be placed in the excavation, creating the "strong floor." The soil to be excavated is approximately 1,500 cubic yards. This project is subject to the SMP as the excavated soil exceeds the 10 cubic yard *de minimis* criteria, as defined in the most current Final SMP, Revision 1, dated April 17, 2019.

UC Berkeley provided SMP Forms A and B to DTSC on May 19, 2021, which summarize the project information and proposed sampling. This letter provides the sample results summary and updated SMP Form B.

**Sample Locations**

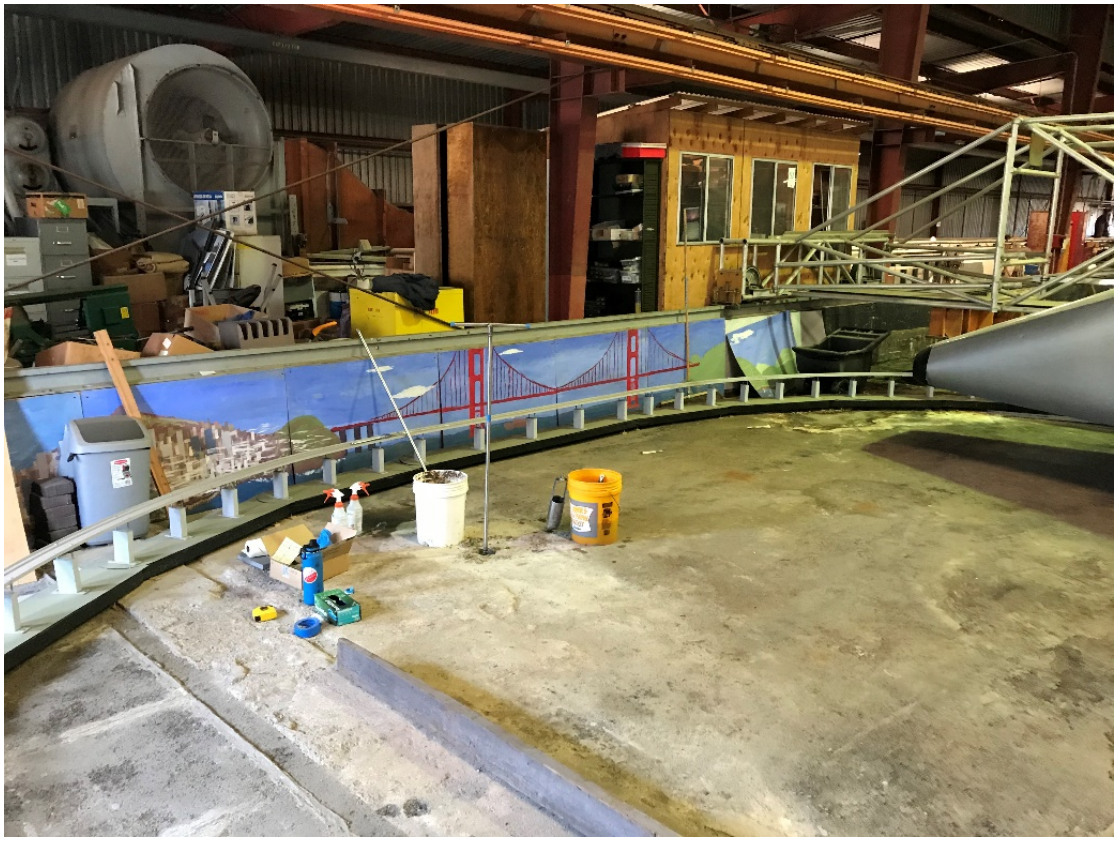
Building 277 is located in SMP Area 4, which is designated as High-Density Sampling Area: a minimum of one location to be sampled per 75-foot grid spacing or 5,625 square feet. Two sample locations at the east and west portions of the project area were identified to meet the frequency requirements since the project area is less than two grids (11,625 square feet.) Sampling was conducted on May 28, 2021. Soil samples were collected from depths of 0-0.5 and 2.5-3 feet bgs, consistent with the SMP. Samples were not proposed to be collected deeper than the project area, since there is no potential for future construction or maintenance work to breach the new slab, as noted in SMP Form B.

**Field Sampling Protocols**

Sample collection protocols were consistent with the Final Sampling and Analysis Plan for the Soil Management Plan, Removal Action Workplan, Exhibit C2, dated July 18, 2014.

The EBMUD project cored 13 4-inch diameter holes in an evenly-spaced grid pattern through the current concrete floor to allow sampling access. Two of the locations were identified for sampling: one on the eastern portion, and one on the western portion of the grid; photographs of the locations are shown below.

**Exhibit 1. B277 Eastern Sample Location**



1999 Harrison Street, Suite 500, Oakland, CA 94612
Tel 510.302.6300 Fax 510.433.0830
www.tetratech.com

**Exhibit 2. B277 Western Sample Location**


Loose subbase gravel was removed from beneath the current concrete floor with a disposable scoop, and a stainless-steel hand auger was then used to collect sample volumes at each of the two sample depths. The auger was decontaminated with Alconox and de-ionized water between each hole and each sample. Excess soil and disposable materials were placed in a 5-gallon bucket and remains within Building 277.

One 16-ounce glass jar of soil was collected for each sample. The jars were labeled and packed into an insulated cooler with ice and transported under chain-of custody procedures via FedEx to APPL, Inc laboratory in Clovis, California.

**Laboratory Analyses and Results**

Soil samples were analyzed according to the SMP for SMP Area 4 for arsenic, lead, mercury, polychlorinated biphenyls (PCB), and polycyclic aromatic hydrocarbons (PAH) using the methods listed below.

- Arsenic, lead, and mercury analysis by EPA 6010C/7471A
- PCB analysis by EPA 8082A with Soxhlet extraction
- PAH analysis by EPA 8270D SIM

Results were detected for arsenic, lead, and mercury; all PCB and PAH analyses were non-detect. All metals results are below the Category I criteria in the SMP, as shown on the table below.

| Sample ID | Sample Location | Depth (feet bgs) | Arsenic | Lead | Mercury |
|---|---|---|---|---|---|
| | | *Category I Criteria* | *16* | *320* | *77* |
| B277E-0-6 | East | 0.0 - 0.5 | 7.3 | 8.2 | 0.14 |
| B277E-2.5 | East | 2.5 - 3.0 | 9.9 | 4.9 | 0.06 J |
| B277W-0-6 | West | 0.0 - 0.5 | 4.9 | 3.9 | 0.075 J |
| B277W-2.5 | West | 2.5 - 3.0 | 4.2 | 6.3 | 0.042 J |

**Notes:**

Category I Criteria based on SMP Final Revision 1, April 17, 2017

All units milligrams per kilogram

J Estimated value

Complete analytical results are included as Attachment A, Analytical Results.

**Conclusions**

All soil sample results are below the SMP Category I Criteria, which allows the soil to be managed within the project boundary without further reporting. UC Berkeley will notify DTSC when the final excavated soil status placement or disposal has been determined.

If you have any questions or comments regarding this submittal, please call me at (415) 497-9060 or Greg Haet at (510) 812-1541.

Sincerely,

Jason Brodersen, PG
Program Manager

cc: Greg Haet, UC Berkeley EH&S

Attachments: Updated SMP Form B
Attachment A: Analytical Results

**SMP FORM B: SAMPLING, DATA EVALUATION, SOIL MANAGEMENT ACTION**

Project Name: B277 Strong Floor
Tracking Number: 20210511 Revision Number: NA
SMP Form B Initiation Date: 05/11/2021
EH&S Point of Contact: Greg Haet

*If this form has not been approved or no activities have occurred for 1 year, the information contained herein must be reviewed and updated as necessary prior to work occurring in the project area.*

| | |
|---|---|
| **1. Sampling Design (attach Sampling Strategy Memorandum)** | |
| a. SMP Areas Affected | SMP Areas 8/9 (split between two SMP areas) |
| b. Sampling Density and Planned Number of Sample Locations | Per SMP, B277 is split between "high" and "medium" sampling density areas. Will use requirement for "high" density (one sample per 5,625 sq ft), resulting in two samples since footprint of excavation is 9,000 sq ft. The purpose of the sampling is to evaluate worker protection during the excavation and ensure no unacceptable contaminants are deposited on-site. Given the depth of the incoming concrete slab (3 to 4 feet thick), there are no samples proposed beneath the slab, as there is no potential for future construction or maintenance work to breach the slab. |
| c. Chemicals of Concern and Summary of Existing Data | Possible presence of cinders; do not expect to encounter any other contaminants. Per SMP, propose to sample for arsenic, mercury, lead, PCBs and PAHs. |
| d. Sampling Depths and Intervals | Collect four soil samples beneath existing slab at two randomly chosen locations at the surface and 2.5 feet below surface at each location. |
| e. Project is within area of GW above screening criteria | Yes ☐ No ☒<br>If Yes, consult RAW, notify DTSC |
| f. Sampling design meets all SMP prescriptive requirements | Yes ☐ No ☒<br>UC Berkeley is not proposing to sample at the new surface or 2.5 feet below the new surface intended to evaluate future commercial or maintenance activities. If No, DTSC concurrence received?<br>Yes ☒ No ☐ |
| **2. Data Evaluation (Post-Sampling) (attach Data Summary Report)** | |
| a. Sampling Design Implemented | Yes ☒ No ☐<br>If No, describe deviations: |
| b. Sample Results Meet Category I | Yes ☒ No ☐ *Consult SMP Table 3*<br>If Yes, submit summary report with SMP Form B<br>If sample results indicate unanticipated contamination or discovery, notify DTSC |
| c. Soil Exceeding Category I is Defined Vertically and Laterally | Yes ☐ No ☐ NA ☐<br>If No, consult sampling requirements or defer to excavation confirmation sampling |
| d. Soil Meets Category II Criteria | Yes ☐ No ☐ NA ☐<br>Soil proposed for on-site management requires plan<br>Soil above Category II criteria requires excavation plan |
| **3. Soil Management Action (attach On-Site Management or Soil Excavation Plan)** | |
| a. On-Site Management Plan Meets SMP Requirements | Yes ☐ No ☐ *Consult SMP Section 4.3*<br>If No, provide explanation or contact DTSC: |
| b. Excavation Plan Meets SMP Requirements | Yes ☐ No ☐ *Consult SMP Section 4.3*<br>If No, provide explanation or contact DTSC: |

| | |
|---|---|
| **4. SMP Form B Approval**<br>a. Greg Haet, Project Coordinator, EH&S | 08/19/2021<br>(Signature, Date) |
| b. John Mitchell, Facilities Management, UCB, College of Engineering | 8/19/2021<br>(Signature, Date) |
| c. Jason Brodersen, PG No. 6262 Professional Civil Engineer or Geologist | Jason Brodersen, PG 6262 08/19/2021<br>(Name, Signature, Date, Stamp) |
| **5. References Used to Complete Form** | *Include names and dates of documents* |

# ATTACHMENT A

# ANALYTICAL RESULTS

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

# Data Validation Package

July 20, 2021

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, California 94612
Attn: Jason Brodersen

Title: Report of Data: Case 96391

Project: 103S582302.01

Dear Mr. Brodersen:

Four soil samples were received May 29, 2021. Written results for the requested analysis are being provided on this July 20, 2021.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Gregory Salata, gsalata@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Loren Portwood, Laboratory Director
APPL, Inc.

LP/gs
Enclosure
cc: File

# Data Validation Package
# for
# 103S582302.01
# ARF 96391

## TABLE OF CONTENTS

LABORATORY NAME: *APPL, Inc.*

# CASE NARRATIVE

# Case Narrative

ARF: 96391

Project: 103S582302.01

## Sample Receipt Information:

Four soil samples were received May 29, 2021 at 1.0°C. The samples were assigned Analytical Request Form (ARF) 96391. The sample numbers and requested analyses were compared to the chain of custody and e-mail correspondence. No exceptions were encountered.

## Sample Preparation and Analysis:

For the EPA 8082A analysis, the samples were purged according to EPA method 3540.

For the EPA 8270D SIM analysis, the samples were purged according to EPA method 3540.

For the EPA 6010C analysis, the sample was digested according to EPA method 3010A.

For the EPA 7471A analysis, the sample was digested according to the method.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

## Exceptions, Abnormalities and Deviations:

**EPA 8260C:** In the second source calibration 0408Z12.D, Chloroethane decreased in sensitivity at 26% Drift. The associated samples were re-analyzed past the recommended holding time to confirm the Chloroethane non-detect result.

| SDG | Received | Client ID | APPL ID | Collected DateTime | Matrix | Method | Method Description | Prep DateTime | Analysis DateTime |
|---|---|---|---|---|---|---|---|---|---|
| 96391 | 05/29/21 | B277W-0-6 | BA33591 | 05/28/21 11:40:00 AM | SOIL | 6010C/3050B | EPA 6010C SOILS | 06/18/21 9:45:00 AM | 06/22/21 6:08:44 PM |
| 96391 | 05/29/21 | B277W-0-6 | BA33591 | 05/28/21 11:40:00 AM | SOIL | EPA 8082A | EPA 8082A SOIL | 06/04/21 4:45:00 PM | 06/10/21 3:30:00 PM |
| 96391 | 05/29/21 | B277W-0-6 | BA33591 | 05/28/21 11:40:00 AM | SOIL | EPA 7471B | MERCURY BY EPA 7471B | 06/18/21 9:28:00 AM | 06/25/21 2:29:38 PM |
| 96391 | 05/29/21 | B277W-0-6 | BA33591 | 05/28/21 11:40:00 AM | SOIL | 8270D-SIM | EPA 8270D SIM | 06/11/21 4:50:00 PM | 06/29/21 12:33:00 PM |
| 96391 | 05/29/21 | B277W-0-6 | BA33591 | 05/28/21 11:40:00 AM | SOIL | CLP MOIST | Moisture | 06/03/21 3:53:00 PM | 06/04/21 3:20:00 PM |
| 96391 | 05/29/21 | B277W-2.5 | BA33592 | 05/28/21 12:00:00 PM | SOIL | 6010C/3050B | EPA 6010C SOILS | 06/18/21 9:45:00 AM | 06/22/21 6:13:07 PM |
| 96391 | 05/29/21 | B277W-2.5 | BA33592 | 05/28/21 12:00:00 PM | SOIL | EPA 8082A | EPA 8082A SOIL | 06/04/21 4:45:00 PM | 06/10/21 3:47:00 PM |
| 96391 | 05/29/21 | B277W-2.5 | BA33592 | 05/28/21 12:00:00 PM | SOIL | EPA 7471B | MERCURY BY EPA 7471B | 06/18/21 9:28:00 AM | 06/25/21 2:31:19 PM |
| 96391 | 05/29/21 | B277W-2.5 | BA33592 | 05/28/21 12:00:00 PM | SOIL | 8270D-SIM | EPA 8270D SIM | 06/11/21 4:50:00 PM | 06/28/21 11:55:00 AM |
| 96391 | 05/29/21 | B277W-2.5 | BA33592 | 05/28/21 12:00:00 PM | SOIL | CLP MOIST | Moisture | 06/03/21 3:53:00 PM | 06/04/21 3:20:00 PM |
| 96391 | 05/29/21 | B277E-0-6 | BA33593 | 05/28/21 12:25:00 PM | SOIL | 6010C/3050B | EPA 6010C SOILS | 06/18/21 9:45:00 AM | 06/22/21 6:17:31 PM |
| 96391 | 05/29/21 | B277E-0-6 | BA33593 | 05/28/21 12:25:00 PM | SOIL | EPA 8082A | EPA 8082A SOIL | 06/04/21 4:45:00 PM | 06/10/21 4:04:00 PM |
| 96391 | 05/29/21 | B277E-0-6 | BA33593 | 05/28/21 12:25:00 PM | SOIL | EPA 7471B | MERCURY BY EPA 7471B | 06/18/21 9:28:00 AM | 06/25/21 2:33:00 PM |
| 96391 | 05/29/21 | B277E-0-6 | BA33593 | 05/28/21 12:25:00 PM | SOIL | 8270D-SIM | EPA 8270D SIM | 06/11/21 4:50:00 PM | 06/28/21 12:17:00 PM |
| 96391 | 05/29/21 | B277E-0-6 | BA33593 | 05/28/21 12:25:00 PM | SOIL | CLP MOIST | Moisture | 06/03/21 3:53:00 PM | 06/04/21 3:20:00 PM |
| 96391 | 05/29/21 | B277E-2.5 | BA33594 | 05/28/21 12:55:00 PM | SOIL | 6010C/3050B | EPA 6010C SOILS | 06/18/21 9:45:00 AM | 06/22/21 6:21:56 PM |
| 96391 | 05/29/21 | B277E-2.5 | BA33594 | 05/28/21 12:55:00 PM | SOIL | EPA 8082A | EPA 8082A SOIL | 06/04/21 4:45:00 PM | 06/10/21 4:21:00 PM |
| 96391 | 05/29/21 | B277E-2.5 | BA33594 | 05/28/21 12:55:00 PM | SOIL | EPA 7471B | MERCURY BY EPA 7471B | 06/18/21 9:28:00 AM | 06/25/21 2:34:43 PM |
| 96391 | 05/29/21 | B277E-2.5 | BA33594 | 05/28/21 12:55:00 PM | SOIL | 8270D-SIM | EPA 8270D SIM | 06/11/21 4:50:00 PM | 06/28/21 12:39:00 PM |
| 96391 | 05/29/21 | B277E-2.5 | BA33594 | 05/28/21 12:55:00 PM | SOIL | CLP MOIST | Moisture | 06/03/21 3:53:00 PM | 06/04/21 3:20:00 PM |

**APPL Inc.**
**Abbreviations and Flags**

| FLAG | DESCRIPTION |
|---|---|
| # | Recovery or RPD outside control limits |
| * | Recovery or RPD outside control limits |
| B | Analyte detected in associated method blank |
| C1 | Reason for correction: wrote incorrect response |
| C2 | Reason for correction: calculated incorrectly |
| C3 | Reason for correction: needs to be rechecked |
| C4 | Reason for correction: data not usable |
| DO | Diluted out |
| E | Exceeds linear range |
| F | Estimated value |
| G1 | Includes a wide range of hydrocarbons which does not match our gasoline standard |
| G10 | Includes a match to hydrocarbon profiles within the range of mineral spirits |
| G11 | Includes a match to hydrocarbon profiles within the range of JP-4 |
| G12 | Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8 |
| G13 | Closely resembles the hydrocarbon profile of aviation gasoline |
| G14 | Analyte concentration may be biased due to carry over |
| G2 | Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline |
| G3 | Includes higher boiling hydrocarbons |
| G4 | Includes dominant peak(s) not indicative of petroleum hydrocarbons |
| G5 | Is mainly dominant peak(s) not indicative of petroleum hydrocarbons |
| G6 | Contains recognizable contaminant peak(s) which has been removed from quantitation |
| G7 | Is mainly a match to hydrocarbons within the range of gasoline |
| G8 | Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline |
| G9 | Includes hydrocarbons within the range of kerosene |
| J | Estimated value |
| M | Matrix effect |
| MI1 | Manual integration: integration does not follow baseline |
| MI2 | Manual integration: non-target peak interference |
| MI3 | Manual integration: to split a peak that was integrated as one peak by the computer. |
| MI4 | Manual integration: to integrate a split peak |
| MI5 | Manual integration: the whole peak or part of the peak was not integrated |
| MI6 | Manual integration: computer integrated wrong peak |
| MI7 | Manual integration: other – (See case narrative) |
| MDL | Method detection limit |
| ND | Not detected |
| NT | Non-target |
| Q | Acceptance criteria not met |
| T1 I | Includes wide range of hydrocarbons not indicative of diesel |
| T1 M | Is mainly wide range of hydrocarbons not necessarily indicative of diesel |
| T2 I | Includes lower boiling hydrocarbons, e.g. mineral spirits, kerosene, stoddard solvent, white gas |
| T2 M | Is mainly lower boiling hydrocarbons, e.g. mineral spirits, kerosene, stoddard solvent, white gas |
| T3 I | Includes higher boiling hydrocarbons, e.g. asphaltene, waste oil, motor oil, or weathered diesel fuel |
| T3 M | Is mainly higher boiling hydrocarbons, e.g. asphaltene, waste oil, motor oil, or weathered diesel fuel |
| T4 I | Includes dominant peak(s) not indicative of hydrocarbons |
| T4 M | Is mainly dominant peak(s) not indicative of hydrocarbons |
| T5 | Contains recognizable contaminant peak(s) which has been removed from quantitation |
| T6 | Is mainly a match to hydrocarbons within range of diesel fuel |
| T7 | Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel |
| T8 | Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel |
| T9 I | Includes non-diesel hydrocarbons within boiling point range of diesel fuel |
| T9 M | Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel |
| U | Not detected |
| Y | Percent difference between primary and confirmation column > 40% |

# SAMPLE MANAGEMENT RECORDS

## CHAIN OF CUSTODY,

## ARF, CRF, AND

## CLIENT COMMUNICATION

# APPL - Analysis Request Form 96391

Client: **Tetra Tech, Inc.**
Address: **1999 Harrison St., Suite 500**
**Oakland, CA 94612**
Attn: **Jason Brodersen**
Phone: **415-497-9060** Fax:
Job: **103S582302.01**
PO #: **NA**
Chain of Custody (Y/N): **Y** # **052821**
RAD Screen (Y/N): **Y** pH (Y/N): **N**
Turn Around Type: **STD**

Received by: **MSA**
Date Received: **05/29/21** Time: **09:30**
Delivered by: **FEDEX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-7**
Chest Temp(s): **1.0°C**
Color: **M-PurplePink**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Greg Salata**
QC Report Type: **DVP3/EDD/CA**
Due Date: **06/21/21**

Comments:
***AN: 'U' Prints MDL report, DVP3.***
***Login to Jason.Brodersen@tetratech.com***

***Prep using Soxhlet***
***FR: PDF to Jason.Broderen@tetratech.com***
***EDD: Excel to Jason.Brodersen@tetratech.com***

Sample Distribution:
***GC: 4-$82ADOD5S, 4-$PCBS, 4-$SIMDOD51S***
***Extractions: 4-_SON009S, 4-_SOX005***
***Metals: 4-$61CDOD5S(As,Pb), 4-$HGDOD5S***
***Wetlab: 4-MOIST***
***Other: 4-_M3050, 4-_M7471***

Charges:

Invoice To:

| | Client ID | APPL ID | Sampled | | Analyses Requested |
|---|---|---|---|---|---|
| 1. | B277W-0-6 | BA33591S | 05/28/21 | 11:40 | $61CDOD5S(As,Pb), $82ADOD5S, $HGDOD5S, $PCBS, $SIMDOD51S, MOIST |
| 2. | B277W-2.5 | BA33592S | 05/28/21 | 12:00 | $61CDOD5S(As,Pb), $82ADOD5S, $HGDOD5S, $PCBS, $SIMDOD51S, MOIST |
| 3. | B277E-0-6 | BA33593S | 05/28/21 | 12:25 | $61CDOD5S(As,Pb), $82ADOD5S, $HGDOD5S, $PCBS, $SIMDOD51S, MOIST |
| 4. | B277E-2.5 | BA33594S | 05/28/21 | 12:55 | $61CDOD5S(As,Pb), $82ADOD5S, $HGDOD5S, $PCBS, $SIMDOD51S, MOIST |

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -7 UTC

# APPL Sample Receipt Form

ARF# **96391**

| Sample | Container Type | Count | p |
|---|---|---|---|
| **BA33591** | 35 Plastic Bag | 1 | NA |
| **BA33592** | 35 Plastic Bag | 1 | NA |
| **BA33593** | 35 Plastic Bag | 1 | NA |
| **BA33594** | 35 Plastic Bag | 1 | NA |

| Sample | Container Type | Count | p |
|---|---|---|---|

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

# CHAIN OF CUSTODY RECORD 9634

C.O.C. _____

| Report to: PLEASE PRINT | | Invoice to: PLEASE PRINT | |
|---|---|---|---|
| Company Name: Tetra Tech | Phone: 415.497.9060 | Company Name: Tetra Tech | Phone: 415.497.9060 |
| Address: 1999 Harrison St. STE 500 Oakland, CA 94612 | Fax: | Address: 1999 Harrison St. STE 500 Oakland, CA 94612 | Fax: |
| Attn: Jason Brodersen | | Attn: Jason Brodersen | |
| Email: jason.brodersen@tetratech.com | | Email: jason.brodersen@tetratech.com | |

| Project Name/Number | Sampler (Print) | Date Shipped: |
|---|---|---|
| 1035582302.01 | Mike Fenif | Carrier: |
| Purchase Order Number | Sampler (Signature) | Waybill No.: |
| | | Comments: |

| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Matrix: Aq | Sed. | Soil | Analysis Requested/Method Number: LUFT (As, Hg, Pb) | PCB (8082) | Soxhlet ext. | PAH SIM (8270) | Date Shipped: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~Cy Dup~~ MF | — | — | — | — | | | | | | | | | |
| B277W-0-6 | B277 West | 5/28/21 | 1140 | PST | 1 | | | X | X | X | X | X | |
| B277W-2.5 | B277 West | | 1200 | | 1 | | | X | X | X | X | X | |
| B277E-0-6 | B277 East | | 1225 | | 1 | | | X | X | X | X | X | |
| B277E-2.5 | B277 East | | 1255 | | 1 | | | X | X | X | X | X | |

Shuttle Temperature: 13 @ 0.6 1.0/1.0

Turnaround Requested: Check one
[X] Standard 2-3 wk [ ] One week [ ] 3 days [ ] 24/48 Hrs. [ ] Other: * 2 weeks Prelim + 30 days data package

Sample Disposal: [ ] Return to client [ ] Disposal by Lab (30-day retention)

| Relinquished by sampler: | Date | Time | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| | 5/28/21 | 1415 | FedEx | FedEx | | | |
| Relinquished by: | Date | Time | Received by: | Relinquished by: | Date | Time | Received at lab by: |
| | | | | | 5/29/21 | 9:30 | |



See page 2 for Container Preservative and Sampling Information

**COOLER RECEIPT FORM** **ARF: 96391**

1) Project: 103S582302.01 Date Received: 05/29/21

**2) Coolers:** Number of Coolers: 1

3) YES Were custody seals present and intact?
How many? 2 Name/Date on seal? See below

4) YES Was there a shipping slip? Carrier name: FEDEX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags __ other
X wet ice __ dry ice __ no ice __ gel ice

6) YES Were cooler temperatures acceptable?

7) Serial number of calibrated thermometer used: R3 @ CF:+0.0°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp
1: 1.0/1.0 2: ____ 3: ____ 4: ____ 5: ____ 6: ____
7: ____ 8: ____ 9: ____ 10: ____ 11: ____ 12: ____

**Chain of custody:**

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

**Sample Labels:**

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

**Sample Containers:**

13) YES Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: ____
Smaller than a pea: ____

**Preservation Hold time:**

18) YES Was a sufficient amount of holding time remaining to analyze the samples?

19) NA Was the pH taken of all non-VOA preserved samples and written on the sample container?

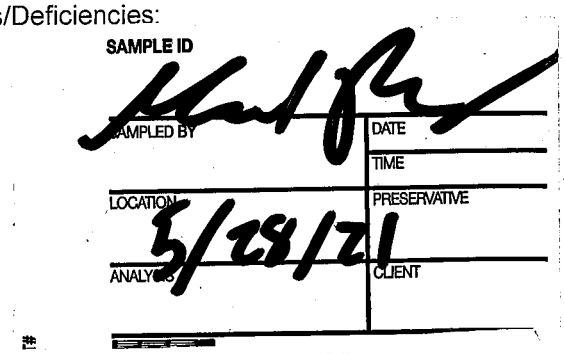
20) NA Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NA Were unpreserved VOA Vials received for VOA Dept analysis?

23) NA If "yes", are the unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: ____
Lab notified if pH was not adequate: ____

Notes/Deficiencies:




Personnel receiving samples: SS Second reviewer: SS

Personnel labeling samples: CG

Project manager notified: ____ Date/Time of notification ____

Name of client notified: ____ Date/Time of notification ____

# SAMPLE RESULTS

# EPA 8082A SOIL

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen

Project: 103S582302.01

ARF: 96391

**Sample ID: B277W-0-6**

**APPL ID: BA33591**

Sample Collection Date: 05/28/21

QCG: #82ADO-210604A1-264906

| Method | Analyte | Result | RL | MDL | Units | Extraction Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 13.8 Percent Moisture.) | | | | | | | |
| EPA 8082A | AROCLOR 1016 | 12.00 U | 58.0 | 12.00 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1221 | 7.00 U | 58.0 | 7.00 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1232 | 4.20 U | 58.0 | 4.20 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1242 | 4.20 U | 58.0 | 4.20 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1248 | 4.20 U | 58.0 | 4.20 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1254 | 4.20 U | 58.0 | 4.20 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1260 | 4.20 U | 58.0 | 4.20 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1262 | 7.00 U | 58.0 | 7.00 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1268 | 7.00 U | 58.0 | 7.00 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | TOTAL PCBS | 4.20 U | 58.0 | 4.20 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | SURROGATE: DECACHLOROBIPHEN | 97.4 | 60-125 | | % | 06/04/21 | 06/10/21 |

Quant Method: PCB0419.M
Run #: 0527099
Instrument: Lucy
Sequence: 210527
Dilution Factor: 1
Initials: BTI

*Printed: 06/11/21 11:08:53 AM*
*APPL-F1-SC-MCRes/MCPQL-REG MDLs*

# EPA 8082A SOIL

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen
Project: 103S582302.01
ARF: 96391
**Sample ID: B277W-2.5**
**APPL ID: BA33592**
Sample Collection Date: 05/28/21
QCG: #82ADO-210604A1-264906

| Method | Analyte | Result | RL | MDL | Units | Extraction Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 21.2 Percent Moisture.) | | | | | | | |
| EPA 8082A | AROCLOR 1016 | 13.00 U | 63.0 | 13.00 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1221 | 7.60 U | 63.0 | 7.60 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1232 | 4.60 U | 63.0 | 4.60 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1242 | 4.60 U | 63.0 | 4.60 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1248 | 4.60 U | 63.0 | 4.60 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1254 | 4.60 U | 63.0 | 4.60 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1260 | 4.60 U | 63.0 | 4.60 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1262 | 7.60 U | 63.0 | 7.60 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1268 | 7.60 U | 63.0 | 7.60 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | TOTAL PCBS | 4.60 U | 63.0 | 4.60 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | SURROGATE: DECACHLOROBIPHEN | 86.4 | 60-125 | | % | 06/04/21 | 06/10/21 |

Quant Method: PCB0419.M
Run #: 0527100
Instrument: Lucy
Sequence: 210527
Dilution Factor: 1
Initials: BTI

*Printed: 06/11/21 11:08:53 AM*
*APPL-F1-SC-MCRes/MCPQL-REG MDLs*

# EPA 8082A SOIL

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen
Project: 103S582302.01
ARF: 96391
**Sample ID: B277E-0-6**
**APPL ID: BA33593**
Sample Collection Date: 05/28/21
QCG: #82ADO-210604A1-264906

| Method | Analyte | Result | RL | MDL | Units | Extraction Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 11.3 Percent Moisture.) | | | | | | | |
| EPA 8082A | AROCLOR 1016 | 11.00 U | 56.0 | 11.00 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1221 | 6.80 U | 56.0 | 6.80 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1232 | 4.10 U | 56.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1242 | 4.10 U | 56.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1248 | 4.10 U | 56.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1254 | 4.10 U | 56.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1260 | 4.10 U | 56.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1262 | 6.80 U | 56.0 | 6.80 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1268 | 6.80 U | 56.0 | 6.80 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | TOTAL PCBS | 4.10 U | 56.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | SURROGATE: DECACHLOROBIPHEN | 95.4 | 60-125 | | % | 06/04/21 | 06/10/21 |

Quant Method: PCB0419.M
Run #: 0527101
Instrument: Lucy
Sequence: 210527
Dilution Factor: 1
Initials: BTI

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*APPL-F1-SC-MCRes/MCPQL-REG MDLs*

# EPA 8082A SOIL

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen
Project: 103S582302.01
ARF: 96391
**Sample ID: B277E-2.5**
**APPL ID: BA33594**
Sample Collection Date: 05/28/21
QCG: #82ADO-210604A1-264906

| Method | Analyte | Result | RL | MDL | Units | Extraction Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 11.7 Percent Moisture.) | | | | | | | |
| EPA 8082A | AROCLOR 1016 | 11.00 U | 57.0 | 11.00 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1221 | 6.80 U | 57.0 | 6.80 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1232 | 4.10 U | 57.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1242 | 4.10 U | 57.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1248 | 4.10 U | 57.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1254 | 4.10 U | 57.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1260 | 4.10 U | 57.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1262 | 6.80 U | 57.0 | 6.80 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | AROCLOR 1268 | 6.80 U | 57.0 | 6.80 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | TOTAL PCBS | 4.10 U | 57.0 | 4.10 | ug/kg | 06/04/21 | 06/10/21 |
| EPA 8082A | SURROGATE: DECACHLOROBIPHEN | 101 | 60-125 | | % | 06/04/21 | 06/10/21 |

Quant Method: PCB0419.M
Run #: 0527102
Instrument: Lucy
Sequence: 210527
Dilution Factor: 1
Initials: BTI

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*APPL-F1-SC-MCRes/MCPQL-REG MDLs*

# EPA 8270D SIM

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen

Project: 103S582302.01

ARF: 96391

**Sample ID: B277W-0-6**

**APPL ID BA33591**

Sample Collection Date: 05/28/21

QCG: #SIMDO-210611A-266103

| Method | Analyte | Result | RL | MDL | Units | Extraction Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 13.8 Percent Moisture.) | | | | | | | |
| 8270D-SIM | 1-METHYLNAPHTHALENE | 1.10 U | 5.8 | 1.10 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | 2-METHYLNAPHTHALENE | 1.10 U | 5.8 | 1.10 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | ACENAPHTHENE | 1.10 U | 5.8 | 1.10 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | ACENAPHTHYLENE | 1.00 U | 5.8 | 1.00 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | ANTHRACENE | 0.96 U | 5.8 | 0.96 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | BENZO(A)ANTHRACENE | 1.10 U | 5.8 | 1.10 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | BENZO(A)PYRENE | 1.10 U | 5.8 | 1.10 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | BENZO(B)FLUORANTHENE | 1.30 U | 5.8 | 1.30 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | BENZO(G,H,I)PERYLENE | 1.60 U | 5.8 | 1.60 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | BENZO(K)FLUORANTHENE | 1.20 U | 5.8 | 1.20 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | CHRYSENE | 0.99 U | 5.8 | 0.99 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | DIBENZ (A,H) ANTHRACENE | 1.10 U | 5.8 | 1.10 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | FLUORANTHENE | 1.40 U | 5.8 | 1.40 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | FLUORENE | 1.20 U | 5.8 | 1.20 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | INDENO(1,2,3-CD)PYRENE | 1.00 U | 5.8 | 1.00 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | NAPHTHALENE | 1.00 U | 5.8 | 1.00 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | PHENANTHRENE | 1.30 U | 5.8 | 1.30 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | PYRENE | 1.40 U | 5.8 | 1.40 | ug/kg | 06/11/21 | 06/29/21 |
| 8270D-SIM | SURROGATE: 2-METHYLNAPHTHAL | 43.5 | 39-114 | | % | 06/11/21 | 06/29/21 |
| 8270D-SIM | SURROGATE: FLUORANTHENE-D10 | 73.2 | 55-119 | | % | 06/11/21 | 06/29/21 |

Quant Method: L0324.M
Run #: 0624L079
Instrument: Linus
Sequence: L210624
Dilution Factor: 1
Initials: MA

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*APPL-F1-SC-MCRes/MCPQL-REG MDLs*

# EPA 8270D SIM

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen

Project: 103S582302.01

ARF: 96391

**Sample ID: B277W-2.5**

**APPL ID BA33592**

Sample Collection Date: 05/28/21

QCG: #SIMDO-210611A-266103

| Method | Analyte | Result | RL | MDL | Units | Extraction Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 21.2 Percent Moisture.) | | | | | | | |
| 8270D-SIM | 1-METHYLNAPHTHALENE | 1.20 U | 6.3 | 1.20 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | 2-METHYLNAPHTHALENE | 1.20 U | 6.3 | 1.20 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | ACENAPHTHENE | 1.20 U | 6.3 | 1.20 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | ACENAPHTHYLENE | 1.10 U | 6.3 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | ANTHRACENE | 1.10 U | 6.3 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(A)ANTHRACENE | 1.20 U | 6.3 | 1.20 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(A)PYRENE | 1.20 U | 6.3 | 1.20 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(B)FLUORANTHENE | 1.40 U | 6.3 | 1.40 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(G,H,I)PERYLENE | 1.70 U | 6.3 | 1.70 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(K)FLUORANTHENE | 1.30 U | 6.3 | 1.30 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | CHRYSENE | 1.10 U | 6.3 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | DIBENZ (A,H) ANTHRACENE | 1.20 U | 6.3 | 1.20 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | FLUORANTHENE | 1.50 U | 6.3 | 1.50 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | FLUORENE | 1.30 U | 6.3 | 1.30 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | INDENO(1,2,3-CD)PYRENE | 1.10 U | 6.3 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | NAPHTHALENE | 1.10 U | 6.3 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | PHENANTHRENE | 1.40 U | 6.3 | 1.40 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | PYRENE | 1.60 U | 6.3 | 1.60 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | SURROGATE: 2-METHYLNAPHTHAL | 56.0 | 39-114 | | % | 06/11/21 | 06/28/21 |
| 8270D-SIM | SURROGATE: FLUORANTHENE-D10 | 70.3 | 55-119 | | % | 06/11/21 | 06/28/21 |

Quant Method: L0324.M
Run #: 0624L055
Instrument: Linus
Sequence: L210624
Dilution Factor: 1
Initials: MA

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*APPL-F1-SC-MCRes/MCPQL-REG MDLs*

# EPA 8270D SIM

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen

Project: 103S582302.01

ARF: 96391

**Sample ID: B277E-0-6**

**APPL ID BA33593**

Sample Collection Date: 05/28/21

QCG: #SIMDO-210611A-266103

| Method | Analyte | Result | RL | MDL | Units | Extraction Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 11.3 Percent Moisture.) | | | | | | | |
| 8270D-SIM | 1-METHYLNAPHTHALENE | 1.10 U | 5.6 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | 2-METHYLNAPHTHALENE | 1.10 U | 5.6 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | ACENAPHTHENE | 1.10 U | 5.6 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | ACENAPHTHYLENE | 1.00 U | 5.6 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | ANTHRACENE | 0.94 U | 5.6 | 0.94 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(A)ANTHRACENE | 1.00 U | 5.6 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(A)PYRENE | 1.00 U | 5.6 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(B)FLUORANTHENE | 1.30 U | 5.6 | 1.30 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(G,H,I)PERYLENE | 1.50 U | 5.6 | 1.50 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(K)FLUORANTHENE | 1.20 U | 5.6 | 1.20 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | CHRYSENE | 0.96 U | 5.6 | 0.96 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | DIBENZ (A,H) ANTHRACENE | 1.00 U | 5.6 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | FLUORANTHENE | 1.40 U | 5.6 | 1.40 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | FLUORENE | 1.10 U | 5.6 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | INDENO(1,2,3-CD)PYRENE | 1.00 U | 5.6 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | NAPHTHALENE | 1.00 U | 5.6 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | PHENANTHRENE | 1.20 U | 5.6 | 1.20 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | PYRENE | 1.40 U | 5.6 | 1.40 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | SURROGATE: 2-METHYLNAPHTHAL | 54.8 | 39-114 | | % | 06/11/21 | 06/28/21 |
| 8270D-SIM | SURROGATE: FLUORANTHENE-D10 | 63.9 | 55-119 | | % | 06/11/21 | 06/28/21 |

Quant Method: L0324.M
Run #: 0624L056
Instrument: Linus
Sequence: L210624
Dilution Factor: 1
Initials: MA

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*APPL-F1-SC-MCRes/MCPQL-REG MDLs*

# EPA 8270D SIM

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen
Project: 103S582302.01
ARF: 96391
**Sample ID: B277E-2.5**
**APPL ID BA33594**
Sample Collection Date: 05/28/21
QCG: #SIMDO-210611A-266103

| Method | Analyte | Result | RL | MDL | Units | Extraction Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 11.7 Percent Moisture.) | | | | | | | |
| 8270D-SIM | 1-METHYLNAPHTHALENE | 1.10 U | 5.7 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | 2-METHYLNAPHTHALENE | 1.10 U | 5.7 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | ACENAPHTHENE | 1.10 U | 5.7 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | ACENAPHTHYLENE | 1.00 U | 5.7 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | ANTHRACENE | 0.94 U | 5.7 | 0.94 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(A)ANTHRACENE | 1.00 U | 5.7 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(A)PYRENE | 1.10 U | 5.7 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(B)FLUORANTHENE | 1.30 U | 5.7 | 1.30 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(G,H,I)PERYLENE | 1.50 U | 5.7 | 1.50 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | BENZO(K)FLUORANTHENE | 1.20 U | 5.7 | 1.20 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | CHRYSENE | 0.96 U | 5.7 | 0.96 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | DIBENZ (A,H) ANTHRACENE | 1.00 U | 5.7 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | FLUORANTHENE | 1.40 U | 5.7 | 1.40 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | FLUORENE | 1.10 U | 5.7 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | INDENO(1,2,3-CD)PYRENE | 1.00 U | 5.7 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | NAPHTHALENE | 1.00 U | 5.7 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | PHENANTHRENE | 1.20 U | 5.7 | 1.20 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | PYRENE | 1.40 U | 5.7 | 1.40 | ug/kg | 06/11/21 | 06/28/21 |
| 8270D-SIM | SURROGATE: 2-METHYLNAPHTHAL | 48.4 | 39-114 | | % | 06/11/21 | 06/28/21 |
| 8270D-SIM | SURROGATE: FLUORANTHENE-D10 | 63.2 | 55-119 | | % | 06/11/21 | 06/28/21 |

Quant Method: L0324.M
Run #: 0624L057
Instrument: Linus
Sequence: L210624
Dilution Factor: 1
Initials: MA

*Printed: 07/20/21 12:19:28 PM*
*APPL-F1-SC-MCRes/MCPQL-REG MDLs*

# Metals Analysis

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

Attn: Jason Brodersen
Project: 103S582302.01
**Sample ID: B277W-0-6**
Sample Collection Date: 05/28/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 96391
**APPL ID: BA33591**

| Method | Analyte | Result | RL | MDL | Units | DF | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 13.8 Percent Moisture.) | | | | | | | | |
| 6010C/3050B | ARSENIC (AS) | 4.9 | 2.9 | 0.46 | mg/kg | 1 | 06/18/21 | 06/22/21 |
| 6010C/3050B | LEAD (PB) | 3.9 | 1.0 | 0.29 | mg/kg | 1 | 06/18/21 | 06/22/21 |

*Printed: 06/23/21 10:41:05 AM*

*PL-F1-SC-MCRes/MCPQL-REG MDLs*

# Metals Analysis

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

Attn: Jason Brodersen
Project: 103S582302.01
**Sample ID: B277W-2.5**
Sample Collection Date: 05/28/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 96391
**APPL ID: BA33592**

| Method | Analyte | Result | RL | MDL | Units | DF | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 21.2 Percent Moisture.) | | | | | | | | |
| 6010C/3050B | ARSENIC (AS) | 4.2 | 3.2 | 0.51 | mg/kg | 1 | 06/18/21 | 06/22/21 |
| 6010C/3050B | LEAD (PB) | 6.3 | 1.1 | 0.32 | mg/kg | 1 | 06/18/21 | 06/22/21 |

*Printed: 06/23/21 10:41:05 AM*

*?L-F1-SC-MCRes/MCPQL-REG MDLs*

# Metals Analysis

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

Attn: Jason Brodersen

Project: 103S582302.01

**Sample ID: B277E-0-6**

Sample Collection Date: 05/28/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 96391

**APPL ID: BA33593**

| Method | Analyte | Result | RL | MDL | Units | DF | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 11.3 Percent Moisture.) | | | | | | | | |
| 6010C/3050B | ARSENIC (AS) | 7.3 | 2.8 | 0.45 | mg/kg | 1 | 06/18/21 | 06/22/21 |
| 6010C/3050B | LEAD (PB) | 8.2 | 1.0 | 0.28 | mg/kg | 1 | 06/18/21 | 06/22/21 |

*Printed: 06/23/21 10:41:05 AM*

*?L-F1-SC-MCRes/MCPQL-REG MDLs*

# Metals Analysis

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

Attn: Jason Brodersen
Project: 103S582302.01
**Sample ID: B277E-2.5**
Sample Collection Date: 05/28/21

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 96391
**APPL ID: BA33594**

| Method | Analyte | Result | RL | MDL | Units | DF | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 11.7 Percent Moisture.) | | | | | | | | |
| 6010C/3050B | ARSENIC (AS) | 9.9 | 2.8 | 0.45 | mg/kg | 1 | 06/18/21 | 06/22/21 |
| 6010C/3050B | LEAD (PB) | 4.9 | 1.0 | 0.28 | mg/kg | 1 | 06/18/21 | 06/22/21 |

*Printed: 06/23/21 10:41:05 AM*

*PL-F1-SC-MCRes/MCPQL-REG MDLs*

# Metals Analysis

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen

Project: 103S582302.01

ARF: 96391

**Sample ID: B277W-0-6**

**APPL ID: BA33591**

Sample Collection Date: 05/28/21

| Method | Analyte | Result | RL | MDL | Units | DF | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 13.8 Percent Moisture.) | | | | | | | | |
| EPA 7471B | MERCURY (HG) | 0.075 J | 0.12 | 0.012 | mg/Kg | 1 | 06/18/21 | 06/25/21 |

J = Estimated value.

*Printed: 07/15/21 5:12:50 PM*

*PL-F1-SC-MCRes/MCPQL-REG MDLs*

# Metals Analysis

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen

Project: 103S582302.01

ARF: 96391

**Sample ID: B277W-2.5**

**APPL ID: BA33592**

Sample Collection Date: 05/28/21

| Method | Analyte | Result | RL | MDL | Units | DF | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 21.2 Percent Moisture.) | | | | | | | | |
| EPA 7471B | MERCURY (HG) | 0.042 J | 0.13 | 0.013 | mg/Kg | 1 | 06/18/21 | 06/25/21 |

J = Estimated value.

*Printed: 07/15/21 5:12:50 PM*

*PL-F1-SC-MCRes/MCPQL-REG MDLs*

# Metals Analysis

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen

Project: 103S582302.01

ARF: 96391

**Sample ID: B277E-0-6**

**APPL ID: BA33593**

Sample Collection Date: 05/28/21

| Method | Analyte | Result | RL | MDL | Units | DF | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 11.3 Percent Moisture.) | | | | | | | | |
| EPA 7471B | MERCURY (HG) | 0.14 | 0.11 | 0.011 | mg/Kg | 1 | 06/18/21 | 06/25/21 |

*Printed: 07/15/21 5:12:50 PM*

*PL-F1-SC-MCRes/MCPQL-REG MDLs*

# Metals Analysis

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Jason Brodersen

Project: 103S582302.01

ARF: 96391

**Sample ID: B277E-2.5**

**APPL ID: BA33594**

Sample Collection Date: 05/28/21

| Method | Analyte | Result | RL | MDL | Units | DF | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| (Solid Concentrations and Limits have been adjusted to reflect 11.7 Percent Moisture.) | | | | | | | | |
| EPA 7471B | MERCURY (HG) | 0.060 J | 0.11 | 0.011 | mg/Kg | 1 | 06/18/21 | 06/25/21 |

J = Estimated value.

*Printed: 07/15/21 5:12:50 PM*

*PL-F1-SC-MCRes/MCPQL-REG MDLs*

# Wetlab Results

## ARF: 96391

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Tetra Tech, Inc.
1999 Harrison St., Suite 500
Oakland, CA 94612

Attn: Jason Brodersen

| Method | Analyte | Result | PQL | MDL | Units | Prep Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| ***APPL ID: BA33591*** | -Client Sample ID: B277W-0-6 | | -Sample Collection Date: 05/28/21 | | Project: 103S582302.01 | | |
| CLP MOIST | MOISTURE | 13.8 | 2.0 | | % | 06/03/21 | 06/04/21 |
| ***APPL ID: BA33592*** | -Client Sample ID: B277W-2.5 | | -Sample Collection Date: 05/28/21 | | Project: 103S582302.01 | | |
| CLP MOIST | MOISTURE | 21.2 | 2.0 | | % | 06/03/21 | 06/04/21 |
| ***APPL ID: BA33593*** | -Client Sample ID: B277E-0-6 | | -Sample Collection Date: 05/28/21 | | Project: 103S582302.01 | | |
| CLP MOIST | MOISTURE | 11.3 | 2.0 | | % | 06/03/21 | 06/04/21 |
| ***APPL ID: BA33594*** | -Client Sample ID: B277E-2.5 | | -Sample Collection Date: 05/28/21 | | Project: 103S582302.01 | | |
| CLP MOIST | MOISTURE | 11.7 | 2.0 | | % | 06/03/21 | 06/04/21 |

*Printed: 06/09/21 12:45:22 PM*

# QC FORMS

# EPA 8082A

Form 2 & 8

## Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 96391

Case No: 96391 Date Analyzed: 06/10/21

Matrix: SOIL Instrument: Lucy

| APPL ID. | Client Sample No. | SURROGATE: DECACHLOROBIPHENYL (S) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Limits | Result | Qualifier | Limits | Result | Qualifier |
| 210604A1-BLK | Blank | 60-125 | 99.0 | | | | |
| 210604A1-LCS | Lab Control Spike | 60-125 | 100 | | | | |
| BA33591 | B277W-0-6 | 60-125 | 97.4 | | | | |
| BA33592 | B277W-2.5 | 60-125 | 86.4 | | | | |
| BA33593 | B277E-0-6 | 60-125 | 95.4 | | | | |
| BA33594 | B277E-2.5 | 60-125 | 101 | | | | |

Comments: Batch: #82ADO-210604A1

# EPA 8082A

Form 4

## Blank Summary

| | | | |
|---|---|---|---|
| Lab Name: | APPL, Inc. | SDG No: | 96391 |
| Case No: | 96391 | Date Analyzed: | 06/10/21 |
| Matrix: | SOIL | Instrument: | Lucy |
| Blank ID: | 210604A1-BLK | Time Analyzed: | 1332 |

| APPL ID. | Client Sample No. | File ID. | Date Analyzed |
|---|---|---|---|
| 210604A1-BLK | Blank | 0527092 | 06/10/21 1332 |
| 210604A1-LCS | Lab Control Spike | 0527093 | 06/10/21 1349 |
| BA33591 | B277W-0-6 | 0527099 | 06/10/21 1530 |
| BA33592 | B277W-2.5 | 0527100 | 06/10/21 1547 |
| BA33593 | B277E-0-6 | 0527101 | 06/10/21 1604 |
| BA33594 | B277E-2.5 | 0527102 | 06/10/21 1621 |

Comments: Batch: #82ADO-210604A1

# Method Blank
## EPA 8082A SOIL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210604S-33591 - 264906**
Batch ID: #82ADO-210604A1

| Sample Type | Analyte | Result | RL | MDL | Units | Extraction Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| BLANK | AROCLOR 1016 | 10.00 U | 50.0 | 10.00 | ug/kg | 06/04/21 | 06/10/21 |
| BLANK | AROCLOR 1221 | 6.00 U | 50.0 | 6.00 | ug/kg | 06/04/21 | 06/10/21 |
| BLANK | AROCLOR 1232 | 3.60 U | 50.0 | 3.60 | ug/kg | 06/04/21 | 06/10/21 |
| BLANK | AROCLOR 1242 | 3.60 U | 50.0 | 3.60 | ug/kg | 06/04/21 | 06/10/21 |
| BLANK | AROCLOR 1248 | 3.60 U | 50.0 | 3.60 | ug/kg | 06/04/21 | 06/10/21 |
| BLANK | AROCLOR 1254 | 3.60 U | 50.0 | 3.60 | ug/kg | 06/04/21 | 06/10/21 |
| BLANK | AROCLOR 1260 | 3.60 U | 50.0 | 3.60 | ug/kg | 06/04/21 | 06/10/21 |
| BLANK | AROCLOR 1262 | 6.00 U | 50.0 | 6.00 | ug/kg | 06/04/21 | 06/10/21 |
| BLANK | AROCLOR 1268 | 6.00 U | 50.0 | 6.00 | ug/kg | 06/04/21 | 06/10/21 |
| BLANK | TOTAL PCBS | 3.60 U | 50.0 | 3.60 | ug/kg | 06/04/21 | 06/10/21 |
| BLANK | SURROGATE: DECACHLOROBIPHEN | 99.0 | 60-125 | | % | 06/04/21 | 06/10/21 |

Quant Method: PCB0419.M
Run #: 0527092
Instrument: Lucy
Sequence: 210527
Initials: BTI

*GC SC-Blank-REG MDLs*
*Printed: 06/11/21 11:08:57 AM*

# EPA 8082A

Form 4

## LCS Summary

| | | | |
|---|---|---|---|
| Lab Name: | APPL, Inc. | SDG No: | 96391 |
| Case No: | 96391 | Date Analyzed: | 06/10/21 |
| Matrix: | SOIL | Instrument: | Lucy |
| LCS ID: | 210604A1-LCS | Time Analyzed: | 1349 |

| APPL ID. | Client Sample No. | File ID. | Date Analyzed |
|---|---|---|---|
| 210604A1-BLK | Blank | 0527092 | 06/10/21 1332 |
| 210604A1-LCS | Lab Control Spike | 0527093 | 06/10/21 1349 |
| BA33591 | B277W-0-6 | 0527099 | 06/10/21 1530 |
| BA33592 | B277W-2.5 | 0527100 | 06/10/21 1547 |
| BA33593 | B277E-0-6 | 0527101 | 06/10/21 1604 |
| BA33594 | B277E-2.5 | 0527102 | 06/10/21 1621 |

Comments: Batch: #82ADO-210604A1

# Laboratory Control Spike Recovery
## EPA 8082A SOIL

APPL ID: **210604S-33591 LCS - 264906**
Batch ID: #82ADO-210604A1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

| Compound Name | Spike Level ug/kg | SPK Result ug/kg | SPK % Recovery | Recovery Limits |
|---|---|---|---|---|
| AROCLOR 1016 | 1250 | 1060 | 84.8 | 47-134 |
| AROCLOR 1260 | 1250 | 1220 | 97.6 | 53-140 |
| SURROGATE: DECACHLOROBIPHENYL | 500 | 501 | 100 | 60-125 |

| Primary | SPK |
|---|---|
| Quant Method : | PCB0419.M |
| Extraction Date : | 06/04/21 |
| Analysis Date : | 06/10/21 |
| Instrument : | Lucy |
| Run : | 0527093 |
| Initials : | BTI |

Comments:

*Printed: 06/11/21 11:08:49 AM*
*APPL Standard LCS*

# 8270D-SIM

Form 2 & 8

## Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 96391

Case No: 96391 Date Analyzed: 06/28/21

Matrix: SOIL Instrument: Linus

| APPL ID. | Client Sample No. | SURROGATE: 2-METHYLNAPHTHALENE-D10 (S) | | | SURROGATE: FLUORANTHENE-D10 (S) | | |
|---|---|---|---|---|---|---|---|
| | | Limits | Result | Qualifier | Limits | Result | Qualifier |
| 210611A-BLK | Blank | 39-114 | 49.7 | | 55-119 | 61.5 | |
| 210611A-LCS | Lab Control Spike | 39-114 | 66.4 | | 55-119 | 74.0 | |
| BA33592 | B277W-2.5 | 39-114 | 56.0 | | 55-119 | 70.3 | |
| BA33593 | B277E-0-6 | 39-114 | 54.8 | | 55-119 | 63.9 | |
| BA33594 | B277E-2.5 | 39-114 | 48.4 | | 55-119 | 63.2 | |
| BA33591 | B277W-0-6 | 39-114 | 43.5 | | 55-119 | 73.2 | |

Comments: Batch: #SIMDO-210611A

# 8270D-SIM

Form 4

## Blank Summary

Lab Name: APPL, Inc. SDG No: 96391

Case No: 96391 Date Analyzed: 06/28/21

Matrix: SOIL Instrument: Linus

Blank ID: 210611A-BLK Time Analyzed: 1027

| APPL ID. | Client Sample No. | File ID. | Date Analyzed |
|---|---|---|---|
| 210611A-BLK | Blank | 0624L051 | 06/28/21 1027 |
| 210611A-LCS | Lab Control Spike | 0624L052 | 06/28/21 1049 |
| BA33592 | B277W-2.5 | 0624L055 | 06/28/21 1155 |
| BA33593 | B277E-0-6 | 0624L056 | 06/28/21 1217 |
| BA33594 | B277E-2.5 | 0624L057 | 06/28/21 1239 |
| BA33591 | B277W-0-6 | 0624L079 | 06/29/21 1233 |

Comments: Batch: #SIMDO-210611A

# Method Blank
## EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **210611S-33591 - 266103**
Batch ID: #SIMDO-210611A

| Sample Type | Analyte | Result | RL | MDL | Units | Extraction Date | Analysis Date |
|---|---|---|---|---|---|---|---|
| BLANK | 1-METHYLNAPHTHALENE | 0.96 U | 5.0 | 0.96 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | 2-METHYLNAPHTHALENE | 0.94 U | 5.0 | 0.94 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | ACENAPHTHENE | 0.97 U | 5.0 | 0.97 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | ACENAPHTHYLENE | 0.89 U | 5.0 | 0.89 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | ANTHRACENE | 0.83 U | 5.0 | 0.83 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | BENZO(A)ANTHRACENE | 0.91 U | 5.0 | 0.91 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | BENZO(A)PYRENE | 0.93 U | 5.0 | 0.93 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | BENZO(B)FLUORANTHENE | 1.11 U | 5.0 | 1.11 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | BENZO(G,H,I)PERYLENE | 1.34 U | 5.0 | 1.34 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | BENZO(K)FLUORANTHENE | 1.04 U | 5.0 | 1.04 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | CHRYSENE | 0.85 U | 5.0 | 0.85 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | DIBENZ (A,H) ANTHRACENE | 0.92 U | 5.0 | 0.92 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | FLUORANTHENE | 1.20 U | 5.0 | 1.20 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | FLUORENE | 1.00 U | 5.0 | 1.00 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | INDENO(1,2,3-CD)PYRENE | 0.90 U | 5.0 | 0.90 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | NAPHTHALENE | 0.89 U | 5.0 | 0.89 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | PHENANTHRENE | 1.10 U | 5.0 | 1.10 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | PYRENE | 1.24 U | 5.0 | 1.24 | ug/kg | 06/11/21 | 06/28/21 |
| BLANK | SURROGATE: 2-METHYLNAPHTHAL | 49.7 | 39-114 | | % | 06/11/21 | 06/28/21 |
| BLANK | SURROGATE: FLUORANTHENE-D10 | 61.5 | 55-119 | | % | 06/11/21 | 06/28/21 |

Quant Method: L0324.M
Run #: 0624L051
Instrument: Linus
Sequence: L210624
Initials: MA

*GC SC-Blank-REG MDLs*
*Printed: 07/20/21 12:19:53 PM*

# 8270D-SIM

Form 4

## LCS Summary

| | | | |
|---|---|---|---|
| Lab Name: | APPL, Inc. | SDG No: | 96391 |
| Case No: | 96391 | Date Analyzed: | 06/28/21 |
| Matrix: | SOIL | Instrument: | Linus |
| LCS ID: | 210611A-LCS | Time Analyzed: | 1049 |

| APPL ID. | Client Sample No. | File ID. | Date Analyzed |
|---|---|---|---|
| 210611A-BLK | Blank | 0624L051 | 06/28/21 1027 |
| 210611A-LCS | Lab Control Spike | 0624L052 | 06/28/21 1049 |
| BA33592 | B277W-2.5 | 0624L055 | 06/28/21 1155 |
| BA33593 | B277E-0-6 | 0624L056 | 06/28/21 1217 |
| BA33594 | B277E-2.5 | 0624L057 | 06/28/21 1239 |
| BA33591 | B277W-0-6 | 0624L079 | 06/29/21 1233 |

Comments: Batch: #SIMDO-210611A

# Laboratory Control Spike Recovery
## EPA 8270D SIM

APPL ID: **210611S-33591 LCS - 266103**
Batch ID: #SIMDO-210611A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

| Compound Name | Spike Level ug/kg | SPK Result ug/kg | SPK % Recovery | Recovery Limits |
|---|---|---|---|---|
| 1-METHYLNAPHTHALENE | 250 | 166 | 66.4 | 43-111 |
| 2-METHYLNAPHTHALENE | 250 | 169 | 67.6 | 39-114 |
| ACENAPHTHENE | 250 | 149 | 59.6 | 44-111 |
| ACENAPHTHYLENE | 250 | 145 | 58.0 | 39-116 |
| ANTHRACENE | 250 | 176 | 70.4 | 50-114 |
| BENZO(A)ANTHRACENE | 250 | 190 | 76.0 | 54-122 |
| BENZO(A)PYRENE | 250 | 201 | 80.4 | 50-125 |
| BENZO(B)FLUORANTHENE | 250 | 199 | 79.6 | 53-128 |
| BENZO(G,H,I)PERYLENE | 250 | 203 | 81.2 | 49-127 |
| BENZO(K)FLUORANTHENE | 250 | 223 | 89.2 | 56-123 |
| CHRYSENE | 250 | 199 | 79.6 | 57-118 |
| DIBENZ (A,H) ANTHRACENE | 250 | 207 | 82.8 | 50-129 |
| FLUORANTHENE | 250 | 196 | 78.4 | 55-119 |
| FLUORENE | 250 | 164 | 65.6 | 47-114 |
| INDENO(1,2,3-CD)PYRENE | 250 | 194 | 77.6 | 49-130 |
| NAPHTHALENE | 250 | 149 | 59.6 | 38-111 |
| PHENANTHRENE | 250 | 174 | 69.6 | 49-113 |
| PYRENE | 250 | 184 | 73.6 | 55-117 |
| SURROGATE: 2-METHYLNAPHTHALEN | 250 | 166 | 66.4 | 39-114 |
| SURROGATE: FLUORANTHENE-D10 (S | 250 | 185 | 74.0 | 55-119 |

Comments:

| Primary | SPK |
|---|---|
| Quant Method : | L0324.M |
| Extraction Date : | 06/11/21 |
| Analysis Date : | 06/28/21 |
| Instrument : | Linus |
| Run : | 0624L052 |
| Initials : | MA |

*Printed: 07/20/21 12:20:07 PM*
*APPL Standard LCS*

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0324L002.D

SDG No:
Date Analyzed: 03/24/21
Instrument: Linus
Time Analyzed: 10:26

| | Client Sample No. | APPL ID. | File ID. | Date Analyzed |
|---|---|---|---|---|
| 1 | | 0.1 SIM 03/24/21 | 0324L003.D | 03/24/21 11:35 |
| 2 | | 0.2 SIM 03/24/21 | 0324L004.D | 03/24/21 11:57 |
| 3 | | 0.5 SIM 03/24/21 | 0324L005.D | 03/24/21 12:19 |
| 4 | | 1 SIM 03/24/21 | 0324L006.D | 03/24/21 12:41 |
| 5 | | 5 SIM 03/24/21 | 0324L007.D | 03/24/21 13:07 |
| 6 | | 10 SIM 03/24/21 | 0324L008.D | 03/24/21 13:29 |
| 7 | | 50 SIM 03/24/21 | 0324L009.D | 03/24/21 13:51 |
| 8 | | 100 SIM 03/24/21 | 0324L010.D | 03/24/21 14:13 |
| 9 | | SS SIM 03/24/21 | 0324L011.D | 03/24/21 14:59 |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
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| m/e | | |
|---|---|---|
| 51 | 9.95 - 80.1% of mass 198 | 26.4 |
| 68 | 0 - 2.05% of mass 69 | 0.0 |
| 70 | 0 - 2% of mass 69 | 0.7 |
| 127 | 10 - 80% of mass 198 | 50.7 |
| 197 | 0 - 2% of mass 198 | 0.0 |
| 198 | 100 - 100% of mass 198 | 100.0 |
| 199 | 5 - 9% of mass 198 | 6.8 |
| 275 | 10 - 60% of mass 198 | 30.5 |
| 365 | 1 - 100% of mass 198 | 3.9 |
| 441 | 0.01 - 24% of mass 442 | 15.2 |
| 442 | 50 - 500% of mass 198 | 142.7 |
| 443 | 15 - 24% of mass 442 | 19.6 |

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 96391
Case No: 96391 Date Analyzed: 06/28/21
Matrix: Soil Instrument: Linus
ID: 0624L049.D Time Analyzed: 9:02

| | Client Sample No. | APPL ID. | File ID. | Date Analyzed |
|---|---|---|---|---|
| 1 | | 5 SIM 6/17/21 (1) | 0624L050.D | 06/28/21 9:18 |
| 2 | Blank | 210611A BLK 1/20.82 | 0624L051.D | 06/28/21 10:27 |
| 3 | Lab Control Spike | 210611A LCS-1 1/20.3 | 0624L052.D | 06/28/21 10:49 |
| 4 | B277W-2.5 | BA33592S01 1/20.31 | 0624L055.D | 06/28/21 11:55 |
| 5 | B277E-0-6 | BA33593S01 1/20.83 | 0624L056.D | 06/28/21 12:17 |
| 6 | B277E-2.5 | BA33594S01 1/20.35 | 0624L057.D | 06/28/21 12:39 |
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| 22 | | | | |

| m/e | | |
|---|---|---|
| 51 | 9.95 - 80.1% of mass 198 | 23.4 |
| 68 | 0 - 2.05% of mass 69 | 0.0 |
| 70 | 0 - 2% of mass 69 | 0.2 |
| 127 | 10 - 80% of mass 198 | 46.0 |
| 197 | 0 - 2% of mass 198 | 0.0 |
| 198 | 100 - 100% of mass 198 | 100.0 |
| 199 | 5 - 9% of mass 198 | 7.0 |
| 275 | 10 - 60% of mass 198 | 34.6 |
| 365 | 1 - 100% of mass 198 | 4.7 |
| 441 | 0.01 - 24% of mass 442 | 15.9 |
| 442 | 50 - 500% of mass 198 | 188.8 |
| 443 | 15 - 24% of mass 442 | 19.1 |

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 96391
Matrix: Soil
ID: 0624L075.D

SDG No: 96391
Date Analyzed: 06/29/21
Instrument: Linus
Time Analyzed: 8:37

| | Client Sample No. | APPL ID. | File ID. | Date Analyzed |
|---|---|---|---|---|
| 1 | | 5 SIM 6/17/21 (1) | 0624L076.D | 06/29/21 8:53 |
| 2 | B277W-0-6 | BA33591S01 1/20.48 | 0624L079.D | 06/29/21 12:33 |
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| m/e | | |
|---|---|---|
| 51 | 9.95 - 80.1% of mass 198 | 26.5 |
| 68 | 0 - 2.05% of mass 69 | 0.0 |
| 70 | 0 - 2% of mass 69 | 0.4 |
| 127 | 10 - 80% of mass 198 | 48.0 |
| 197 | 0 - 2% of mass 198 | 0.0 |
| 198 | 100 - 100% of mass 198 | 100.0 |
| 199 | 5 - 9% of mass 198 | 6.8 |
| 275 | 10 - 60% of mass 198 | 31.4 |
| 365 | 1 - 100% of mass 198 | 4.2 |
| 441 | 0.01 - 24% of mass 442 | 15.8 |
| 442 | 50 - 500% of mass 198 | 159.9 |
| 443 | 15 - 24% of mass 442 | 19.3 |

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0624L050.D Date Analyzed: 06/28/21

Instrument ID: Linus Time Analyzed: 9:18

GC Column: ID: Heated Purge: (Y/N)

| | | Napthalene-D8(IS) | | Acenaphthene-D10(IS) | | Phenanthrene-D10(IS) | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| | 12 HOUR STD | 14540 | 4.09 | 9486 | 6.10 | 18852 | 7.81 |
| | UPPER LIMIT | 29080 | 4.26 | 18972 | 6.27 | 37704 | 7.98 |
| | LOWER LIMIT | 7270 | 3.92 | 4743 | 5.93 | 9426 | 7.64 |
| | SAMPLE NO. | | | | | | |
| 01 | 210611A BLK 1/20.82 | 14125 | 4.09 | 9252 | 6.10 | 18597 | 7.81 |
| 02 | 210611A LCS-1 1/20.39 | 14492 | 4.09 | 9676 | 6.08 | 18852 | 7.81 |
| 03 | BA33592S01 1/20.31 | 14435 | 4.09 | 9655 | 6.08 | 19298 | 7.81 |
| 04 | BA33593S01 1/20.83 | 14753 | 4.09 | 9833 | 6.08 | 19586 | 7.81 |
| 05 | BA33594S01 1/20.35 | 15387 | 4.09 | 10326 | 6.10 | 20445 | 7.81 |
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AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0624L050.D Date Analyzed: 06/28/21

Instrument ID: Linus Time Analyzed: 9:18

GC Column: ID: Heated Purge: (Y/N)

| | | Chrysene-D12(IS) | | Perylene-D12(IS) | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| | 12 HOUR STD | 24009 | 10.90 | 24508 | 13.29 | | |
| | UPPER LIMIT | 48018 | 11.07 | 49016 | 13.46 | | |
| | LOWER LIMIT | 12005 | 10.73 | 12254 | 13.12 | | |
| | SAMPLE NO. | | | | | | |
| 01 | 210611A BLK 1/20.82 | 22340 | 10.91 | 23629 | 13.30 | | |
| 02 | 210611A LCS-1 1/20.39 | 23898 | 10.90 | 25165 | 13.29 | | |
| 03 | BA33592S01 1/20.31 | 23363 | 10.90 | 24825 | 13.29 | | |
| 04 | BA33593S01 1/20.83 | 23832 | 10.90 | 25379 | 13.29 | | |
| 05 | BA33594S01 1/20.35 | 25206 | 10.90 | 27042 | 13.29 | | |
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AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0624L076.D Date Analyzed: 06/29/21

Instrument ID: Linus Time Analyzed: 8:53

GC Column: ID: Heated Purge: (Y/N)

| | | Chrysene-D12(IS) | | Perylene-D12(IS) | | | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| | 12 HOUR STD | 25658 | 10.90 | 26405 | 13.29 | | |
| | UPPER LIMIT | 51316 | 11.07 | 52810 | 13.46 | | |
| | LOWER LIMIT | 12829 | 10.73 | 13203 | 13.12 | | |
| | SAMPLE NO. | | | | | | |
| 01 | BA33591S01 1/20.48 | 33149 | 10.90 | 35808 | 13.29 | | |
| 02 | | | | | | | |
| 03 | | | | | | | |
| 04 | | | | | | | |
| 05 | | | | | | | |
| 06 | | | | | | | |
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AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0624L076.D Date Analyzed: 06/29/21

Instrument ID: Linus Time Analyzed: 8:53

GC Column: ID: Heated Purge: (Y/N)

| | | Napthalene-D8(IS) | | Acenaphthene-D10(IS) | | Phenanthrene-D10(IS) | |
|---|---|---|---|---|---|---|---|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| | 12 HOUR STD | 15576 | 4.09 | 10204 | 6.10 | 20435 | 7.81 |
| | UPPER LIMIT | 31152 | 4.26 | 20408 | 6.27 | 40870 | 7.98 |
| | LOWER LIMIT | 7788 | 3.92 | 5102 | 5.93 | 10218 | 7.64 |
| | SAMPLE NO. | | | | | | |
| 01 | BA33591S01 1/20.48 | 20274 | 4.09 | 13601 | 6.08 | 26906 | 7.81 |
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AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

# 6010C/3050B

Form 4

## Blank Summary

Lab Name: APPL, Inc. SDG No: 96391

Case No: 96391 Date Analyzed: 06/22/21

Matrix: SOIL Instrument: Cyrus

Blank ID: 210618A-BLK Time Analyzed: 1755

| APPL ID. | Client Sample No. | File ID. | Date Analyzed |
|---|---|---|---|
| 210618A-LCSD | Lab Control SpikeD | 210622A | 06/22/21 1804 |
| 210618A-LCS | Lab Control Spike | 210622A | 06/22/21 1759 |
| 210618A-BLK | Blank | 210622A | 06/22/21 1755 |
| BA33594 | B277E-2.5 | 210622A | 06/22/21 1821 |
| BA33593 | B277E-0-6 | 210622A | 06/22/21 1817 |
| BA33592 | B277W-2.5 | 210622A | 06/22/21 1813 |
| BA33591 | B277W-0-6 | 210622A | 06/22/21 1808 |

Comments: Batch: #61CDO-210618A

# METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

| Method | Analyte | Result | RL | MDL | Units | Prep Date | Analysis Date | QC Group |
|---|---|---|---|---|---|---|---|---|
| 6010C | ARSENIC (AS) | 0.40 U | 2.5 | 0.40 | mg/kg | 06/18/21 | 06/22/21 | #61CDO-210618A-BA33594 |
| 6010C | LEAD (PB) | 0.25 U | 0.9 | 0.25 | mg/kg | 06/18/21 | 06/22/21 | #61CDO-210618A-BA33594 |

*Metals SC-Blank-REG MDLs*
*Printed: 06/23/21 10:41:11 AM*

# 6010C/3050B

Form 4

## LCS Summary

Lab Name: APPL, Inc. SDG No: 96391

Case No: 96391 Date Analyzed: 06/22/21

Matrix: SOIL Instrument: Cyrus

LCS ID: 210618A-LCS Time Analyzed: 1759

| APPL ID. | Client Sample No. | File ID. | Date Analyzed |
|---|---|---|---|
| 210618A-LCSD | Lab Control SpikeD | 210622A | 06/22/21 1804 |
| 210618A-LCS | Lab Control Spike | 210622A | 06/22/21 1759 |
| 210618A-BLK | Blank | 210622A | 06/22/21 1755 |
| BA33594 | B277E-2.5 | 210622A | 06/22/21 1821 |
| BA33593 | B277E-0-6 | 210622A | 06/22/21 1817 |
| BA33592 | B277W-2.5 | 210622A | 06/22/21 1813 |
| BA33591 | B277W-0-6 | 210622A | 06/22/21 1808 |

Comments: Batch: #61CDO-210618A

*Printed: 06/23/21 10:40:53 AM*
*Form 4, LCS Summary*

# Laboratory Control Spike Recoveries

## METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

| Method | Compound Name | Spike Lvl mg/kg | SPK Res mg/kg | DUP Res mg/kg | SPK % Recov | DUP % Recov | RPD | RPD Max | QC Limits | Extract Date-Spk | Analysis Date-Spk | Extract Date-Dup | Analysis Date-Dup | QC Group |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EPA 6010C | ARSENIC (AS) | 25.0 | 21.8 | 22.8 | 87.2 | 91.2 | 4.5 | 20 | 82-111 | 06/18/21 | 06/22/21 | 06/18/21 | 06/22/21 | #61CDO-210618A-BA3359 |
| EPA 6010C | LEAD (PB) | 25.0 | 21.8 | 23.0 | 87.2 | 92.0 | 5.4 | 20 | 81-112 | 06/18/21 | 06/22/21 | 06/18/21 | 06/22/21 | #61CDO-210618A-BA3359 |

Comments: _____

# EPA 7471B

Form 4

## Blank Summary

| | | | |
|---|---|---|---|
| Lab Name: | APPL, Inc. | SDG No: | 96391 |
| Case No: | 96391 | Date Analyzed: | 06/25/21 |
| Matrix: | SOIL | Instrument: | Freddie |
| Blank ID: | 210618A-BLK | Time Analyzed: | 1422 |

| APPL ID. | Client Sample No. | File ID. | Date Analyzed |
|---|---|---|---|
| 210618A-LCSD | Lab Control SpikeD | 210625S | 06/25/21 1427 |
| 210618A-LCS | Lab Control Spike | 210625S | 06/25/21 1426 |
| BA33594 | B277E-2.5 | 210625S | 06/25/21 1434 |
| BA33593 | B277E-0-6 | 210625S | 06/25/21 1433 |
| BA33592 | B277W-2.5 | 210625S | 06/25/21 1431 |
| BA33591 | B277W-0-6 | 210625S | 06/25/21 1429 |
| 210618A-BLK | Blank | 210625S | 06/25/21 1422 |

Comments: Batch: #HGDOD-210618A

# METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

| Method | Analyte | Result | RL | MDL | Units | Prep Date | Analysis Date | QC Group |
|---|---|---|---|---|---|---|---|---|
| EPA 7471 | MERCURY (HG) | 0.010 U | 0.10 | 0.010 | mg/Kg | 06/18/21 | 06/25/21 | #HGDOD-210618A-BA33594 |

# EPA 7471B

Form 4

## LCS Summary

| | | | |
|---|---|---|---|
| Lab Name: | APPL, Inc. | SDG No: | 96391 |
| Case No: | 96391 | Date Analyzed: | 06/25/21 |
| Matrix: | SOIL | Instrument: | Freddie |
| LCS ID: | 210618A-LCS | Time Analyzed: | 1426 |

| APPL ID. | Client Sample No. | File ID. | Date Analyzed |
|---|---|---|---|
| 210618A-LCSD | Lab Control SpikeD | 210625S | 06/25/21 1427 |
| 210618A-LCS | Lab Control Spike | 210625S | 06/25/21 1426 |
| BA33594 | B277E-2.5 | 210625S | 06/25/21 1434 |
| BA33593 | B277E-0-6 | 210625S | 06/25/21 1433 |
| BA33592 | B277W-2.5 | 210625S | 06/25/21 1431 |
| BA33591 | B277W-0-6 | 210625S | 06/25/21 1429 |
| 210618A-BLK | Blank | 210625S | 06/25/21 1422 |

Comments: Batch: #HGDOD-210618A

# Laboratory Control Spike Recoveries

## METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

| Method | Compound Name | Spike Lvl mg/Kg | SPK Res mg/Kg | DUP Res mg/Kg | SPK % Recov | DUP % Recov | RPD | RPD Max | QC Limits | Extract Date-Spk | Analysis Date-Spk | Extract Date-Dup | Analysis Date-Dup | QC Group |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EPA 7471B | MERCURY (HG) | 0.667 | 0.73 | 0.74 | 109 | 111 | 1.4 | 20 | 80-124 | 06/18/21 | 06/25/21 | 06/18/21 | 06/25/21 | #HGDOD-210618A-BA335 |

Comments:

# ORGANICS

## Calibration Data

EPA 8082
PCB0419

## Form 6
## Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 04/19/21
Matrix: Water Instrument: Lucy

Initials:

| | | | 0419002.D | 0419003 D | 0419004 D | 0419005 D | 0419006.D | 0419007.D | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Compound | 1 | 2 | 3 | 4 | 5 | 6 | | | | | Avg | %RSD | Type | r^2 | Q |
| 1 | SAL | TCmX | 123652659 | 260072037 | 230289987 | 232886679 | 220834606 | 203047607 | | | | | 211797262 | 22 | SA | 0.998 | |
| 2 | SAL | DBC | 73152213 | 192372698 | 177525162 | 163853015 | 162296688 | 150545642 | | | | | 153290903 | 27 | SA | 0.998 | |
| 3 | SAL | DECA | 73619833 | 187111880 | 154719704 | 145343562 | 131213019 | 116062917 | | | | | 134678486 | 28 | SA | 0.995 | |
| 4 | BNMC | Total AR1016 | 40655282 | 40885628 | 32533129 | 31711930 | 29247129 | 24380580 | | | | | 33235613 | 20 | BNMC | | |
| 5 | L3BKCL | AR 1016 | 6614278 | 4538802 | 3814986 | 3614102 | 3368817 | 2805214 | | | | | 4126033 | 33 | L3BKC | 0.990 | |
| 6 | L3BKCL | AR 1016 (2) | 16177055 | 15983653 | 12707394 | 12309844 | 11370672 | 9506851 | | | | | 13009245 | 20 | L3BKC | 0.990 | |
| 7 | L3BKC | AR 1016 (3) | 7987188 | 8128889 | 6326068 | 6228579 | 5773068 | 4825747 | | | | | 6544923 | 20 | L3BKC | | |
| 8 | L3BKC | AR 1016 (4) | 3777238 | 5581428 | 4500634 | 4278720 | 3941470 | 3243058 | | | | | 4220425 | 19 | L3BKC | | |
| 9 | L3BKC | AR 1016 (5) | 6099523 | 6652855 | 5184047 | 5280685 | 4793102 | 3999710 | | | | | 5334987 | 18 | L3BKC | | |
| 10 | BNMCL | Total AR1260 | 64503565 | 51972996 | 43677266 | 42343382 | 39043907 | 33938725 | | | | | 45913307 | 24 | BNMC | 0.994 | |
| 11 | L9BKCL | AR 1260 | 14910266 | 9445026 | 8094313 | 7522338 | 6854444 | 5919812 | | | | | 8791033 | 37 | L9BKC | 0.994 | |
| 12 | L9BKCL | AR 1260 (2) | 17147118 | 14979782 | 13279833 | 12367843 | 11547531 | 9621766 | | | | | 13157312 | 20 | L9BKC | 0.990 | |
| 13 | L9BKC | AR 1260 (3) | 5870907 | 6981985 | 5657233 | 5691766 | 5289441 | 4392547 | | | | | 5647313 | 15 | L9BKC | | |
| 14 | L9BKCL | AR 1260 (4) | 18745749 | 14599909 | 11942164 | 12107478 | 10977739 | 10129611 | | | | | 13083775 | 24 | L9BKC | 0.998 | |
| 15 | L9BKCL | AR 1260 (5) | 7829526 | 5966294 | 4703723 | 4653957 | 4374752 | 3874989 | | | | | 5233873 | 28 | L9BKC | 0.996 | |
| 16 | | Signal #2 | | | | | | | | | | | 0 | 0 | | | |
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10.09918

EPA 8082
PCB0419

## Form 6
## Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 04/19/21
Matrix: Water Instrument: Lucy Initials:

| | | | 0419002.D | 0419003.D | 0419004 D | 0419005 D | 0419006.D | 0419007 D | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Compound | 1 | 2 | 3 | 4 | 5 | 6 | | | | | Avg | %RSD | Type | r^2 | Q |
| 36 | SAL | TCmX #2 | 448288786 | 903250416 | 737699926 | 750570433 | 717298922 | 626268246 | | | | | 697229455 | 22 | SA | 0.995 | |
| 37 | SAL | DBC #2 | 143390638 | 364928779 | 313212880 | 320109288 | 328686852 | 286382102 | | | | | 292785090 | 26 | SA | 0.995 | |
| 38 | SAL | DECA #2 | 152238352 | 403271100 | 333217581 | 328090849 | 321134149 | 276483784 | | | | | 302405969 | 28 | SA | 0.994 | |
| 39 | BNMC | Total AR1016 #2 | 52953117 | 68619054 | 57447711 | 56822214 | 51920196 | 45190593 | | | | | 55492148 | 14 | BNMC | | |
| 40 | L3BKCL | AR 1016 #2 | 18529136 | 12129775 | 9970108 | 9988091 | 9175797 | 8020050 | | | | | 11302159 | 34 | L3BKC | 0.995 | |
| 41 | L3BKCL | AR 1016 (2) #2 | 5533227 | 12655644 | 10669620 | 10437309 | 9641452 | 8289586 | | | | | 9537806 | 25 | L3BKC | 0.993 | |
| 42 | L3BKCL | AR 1016 (3) #2 | 777271 | 17723005 | 13623903 | 13411470 | 12063278 | 10513405 | | | | | 11352055 | 50 | L3BKC | 0.994 | |
| 43 | L3BKC | AR 1016 (4) #2 | 14056741 | 12946209 | 11509696 | 11110480 | 10298408 | 8886090 | | | | | 11467937 | 16 | L3BKC | | |
| 44 | L3BKC | AR 1016 (5) #2 | 14056741 | 13164421 | 11674385 | 11874863 | 10741261 | 9481462 | | | | | 11832189 | 14 | L3BKC | | |
| 45 | BNMC | Total AR1260 #2 | 71299422 | 76632121 | 67253095 | 65148150 | 62125774 | 53809994 | | | | | 66044759 | 12 | BNMC | | |
| 46 | L9BKC | AR 1260 #2 | 23147762 | 22656655 | 18873571 | 18255384 | 17464569 | 14613991 | | | | | 19168655 | 17 | L9BKC | | |
| 47 | L9BKC | AR 1260 (2) #2 | 11159855 | 10051104 | 9337411 | 9121590 | 8627156 | 7382238 | | | | | 9279893 | 14 | L9BKC | | |
| 48 | L9BKC | AR 1260 (3) #2 | 6140892 | 8626041 | 7024420 | 7038912 | 6768654 | 5622339 | | | | | 6870210 | 15 | L9BKC | | |
| 49 | L9BKC | AR 1260 (4) #2 | 25946988 | 24311926 | 21846730 | 20716777 | 19448982 | 17460597 | | | | | 21622000 | 14 | L9BKC | | |
| 50 | L9BKCL | AR 1260 (5) #2 | 4903925 | 10986394 | 10170962 | 10015487 | 9816413 | 8730829 | | | | | 9104002 | 24 | L9BKC | 0.996 | |
| 51 | | | | | | | | | | | | | | | | | |
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9.288163

EPA 8082
PCB0419

Form 7

# Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 04/19/21
Instrument: Lucy
Initial Cal. Date: 04/19/21
Data File: 0419008.D

| | | Compound | MEAN | CCRF | %D | | %Drift |
|---|---|---|---|---|---|---|---|
| 1 | BNMC | Total AR1016 | 33235600 | 31753900 | 4.5 | BNMC | |
| 2 | L3BKC | AR 1016 | 4126030 | 3589060 | 13 | L3BKCL | 10 |
| 3 | L3BKC | AR 1016 {2} | 13009200 | 12388100 | 4.8 | L3BKCL | 13 |
| 4 | L3BKC | AR 1016 {3} | 6544920 | 6255610 | 4.4 | L3BKC | |
| 5 | L3BKC | AR 1016 {4} | 4220420 | 4333740 | 2.7 | L3BKC | |
| 6 | L3BKC | AR 1016 {5} | 5334990 | 5187370 | 2.8 | L3BKC | |
| 7 | BNMC | Total AR1260 | 45913300 | 41352800 | 9.9 | BNMCL | 7.9 |
| 8 | L9BKC | AR 1260 | 8791030 | 7430770 | 15 | L9BKCL | 9.7 |
| 9 | L9BKC | AR 1260 {2} | 13157300 | 12301000 | 6.5 | L9BKCL | 10 |
| 10 | L9BKC | AR 1260 {3} | 5647310 | 5430960 | 3.8 | L9BKC | |
| 11 | L9BKC | AR 1260 {4} | 13083800 | 11512000 | 12 | L9BKCL | 4.2 |
| 12 | L9BKC | AR 1260 {5} | 5233870 | 4678050 | 11 | L9BKCL | 9.0 |
| 13 | | | | | | | |
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| 39 | | | | | | | |
| 40 | | | | | | | |
| | | Average | | | 7.5 | | |

EPA 8082
PCB0419

Form 7

## Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 04/19/21
Instrument: Lucy
Cal. Date: 04/19/21
Data File: 0419008.D

| | | Compound | MEAN | CCRF | %D | | %Drift |
|---|---|---|---|---|---|---|---|
| 41 | BNMC | Total AR1016 | 55492100 | 59110300 | 6.5 | BNMC | |
| 42 | L3BKC | AR 1016 | 11302200 | 10487900 | 7.2 | L3BKCL | 17 |
| 43 | L3BKC | AR 1016 {2} | 9537810 | 11050000 | 16 | L3BKCL | 19 |
| 44 | L3BKC | AR 1016 {3} | 11352100 | 13962800 | 23 | L3BKCL | 19 |
| 45 | L3BKC | AR 1016 {4} | 11467900 | 11422400 | 0.40 | L3BKC | |
| 46 | L3BKC | AR 1016 {5} | 11832200 | 12187200 | 3.0 | L3BKC | |
| 47 | BNMC | Total AR1260 | 66044800 | 68909300 | 4.3 | BNMC | |
| 48 | L9BKC | AR 1260 | 19168700 | 19768400 | 3.1 | L9BKC | |
| 49 | L9BKC | AR 1260 {2} | 9279890 | 9519240 | 2.6 | L9BKC | |
| 50 | L9BKC | AR 1260 {3} | 6870210 | 7537780 | 9.7 | L9BKC | |
| 51 | L9BKC | AR 1260 {4} | 21622000 | 21513900 | 0.50 | L9BKC | |
| 52 | L9BKC | AR 1260 {5} | 9104000 | 10570000 | 16 | L9BKCL | 12 |
| 53 | | | | | | | |
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| 79 | | | | | | | |
| 80 | | | | | | | |
| | | Average | | | 7.7 | | |

EPA 8082
PCB0419

Form 7

# Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 06/10/21
Instrument: Lucy
Initial Cal. Date: 04/19/21
Data File: 0527091.D

| | | Compound | MEAN | CCRF | %D | | %Drift | |
|---|---|---|---|---|---|---|---|---|
| 1 | SAL | TCmX | 211797000 | 187388000 | 12 | SAL | 22 | *NT |
| 2 | SAL | DBC | 153291000 | 143099000 | 6.6 | SAL | 17 | |
| 3 | SAL | DECA | 134678000 | 131064000 | 2.7 | SAL | 14 | |
| 4 | BNMC | Total AR1016 | 33235600 | 27299500 | 18 | BNMC | | |
| 5 | L3BKC | AR 1016 | 4126030 | 3278580 | 21 | L3BKCL | 18 | |
| 6 | L3BKC | AR 1016 {2} | 13009200 | 10259000 | 21 | L3BKCL | 26 | |
| 7 | L3BKC | AR 1016 {3} | 6544920 | 5247360 | 20 | L3BKC | | |
| 8 | L3BKC | AR 1016 {4} | 4220420 | 3925760 | 7.0 | L3BKC | | |
| 9 | L3BKC | AR 1016 {5} | 5334990 | 4588820 | 14 | L3BKC | | |
| 10 | BNMC | Total AR1260 | 45913300 | 36531400 | 20 | BNMCL | 20 | |
| 11 | L9BKC | AR 1260 | 8791030 | 6662170 | 24 | L9BKCL | 20 | |
| 12 | L9BKC | AR 1260 {2} | 13157300 | 10883700 | 17 | L9BKCL | 21 | |
| 13 | L9BKC | AR 1260 {3} | 5647310 | 4687580 | 17 | L9BKC | | |
| 14 | L9BKC | AR 1260 {4} | 13083800 | 10303700 | 21 | L9BKCL | 18 | |
| 15 | L9BKC | AR 1260 {5} | 5233870 | 3994100 | 24 | L9BKCL | 20 | |
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| 40 | | | | | | | | |
| | | Average | | | 16.4 | | | |

EPA 8082
PCB0419

Form 7

## Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 06/10/21
Instrument: Lucy
Cal. Date: 04/19/21
Data File: 0527091.D

| | | Compound | MEAN | CCRF | %D | %Drift | | |
|---|---|---|---|---|---|---|---|---|
| 41 | SAL | TCmX | 697230000 | 602773000 | 14 | SAL | 25 | *NT |
| 42 | SAL | DBC | 292785000 | 289658000 | 1.1 | SAL | 14 | |
| 43 | SAL | DECA | 302406000 | 299221000 | 1.1 | SAL | 14 | |
| 44 | BNMC | Total AR1016 | 55492100 | 47749300 | 14 | BNMC | | |
| 45 | L3BKC | AR 1016 | 11302200 | 8371460 | 26 | L3BKCL | 23 | |
| 46 | L3BKC | AR 1016 {2} | 9537810 | 8645650 | 9.4 | L3BKCL | 24 | |
| 47 | L3BKC | AR 1016 {3} | 11352100 | 10931400 | 3.7 | L3BKCL | 24 | |
| 48 | L3BKC | AR 1016 {4} | 11467900 | 9433240 | 18 | L3BKC | | |
| 49 | L3BKC | AR 1016 {5} | 11832200 | 10367500 | 12 | L3BKC | | |
| 50 | BNMC | Total AR1260 | 66044800 | 61425500 | 7.0 | BNMC | | |
| 51 | L9BKC | AR 1260 | 19168700 | 17386000 | 9.3 | L9BKC | | |
| 52 | L9BKC | AR 1260 {2} | 9279890 | 8651190 | 6.8 | L9BKC | | |
| 53 | L9BKC | AR 1260 {3} | 6870210 | 6533390 | 4.9 | L9BKC | | |
| 54 | L9BKC | AR 1260 {4} | 21622000 | 19471500 | 9.9 | L9BKC | | |
| 55 | L9BKC | AR 1260 {5} | 9104000 | 9383410 | 3.1 | L9BKCL | 9.7 | |
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| 80 | | | | | | | | |
| | | Average | | | 9.4 | | | |

EPA 8082
PCB0419

Form 7

## Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 06/10/21
Instrument: Lucy
Initial Cal. Date: 04/19/21
Data File: 0527098.D

| | | Compound | MEAN | CCRF | %D | | %Drift |
|---|---|---|---|---|---|---|---|
| 1 | SAL | TCmX | 211797000 | 197475000 | 6.8 | SAL | 17 |
| 2 | SAL | DBC | 153291000 | 149839000 | 2.3 | SAL | 12 |
| 3 | SAL | DECA | 134678000 | 133227000 | 1.1 | SAL | 12 |
| 4 | BNMC | Total AR1016 | 33235600 | 27603800 | 17 | BNMC | |
| 5 | L3BKC | AR 1016 | 4126030 | 3365690 | 18 | L3BKCL | 15 |
| 6 | L3BKC | AR 1016 {2} | 13009200 | 10514300 | 19 | L3BKCL | 23 |
| 7 | L3BKC | AR 1016 {3} | 6544920 | 5393530 | 18 | L3BKC | |
| 8 | L3BKC | AR 1016 {4} | 4220420 | 3951310 | 6.4 | L3BKC | |
| 9 | L3BKC | AR 1016 {5} | 5334990 | 4378950 | 18 | L3BKC | |
| 10 | BNMC | Total AR1260 | 45913300 | 38412500 | 16 | BNMCL | 15 |
| 11 | L9BKC | AR 1260 | 8791030 | 6919730 | 21 | L9BKCL | 15 |
| 12 | L9BKC | AR 1260 {2} | 13157300 | 11478400 | 13 | L9BKCL | 15 |
| 13 | L9BKC | AR 1260 {3} | 5647310 | 4971050 | 12 | L9BKC | |
| 14 | L9BKC | AR 1260 {4} | 13083800 | 10594200 | 19 | L9BKCL | 15 |
| 15 | L9BKC | AR 1260 {5} | 5233870 | 4449160 | 15 | L9BKCL | 8.7 |
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| 40 | | | | | | | |
| | | Average | | | 13.5 | | |

EPA 8082
PCB0419

Form 7

# Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 06/10/21
Instrument: Lucy
Cal. Date: 04/19/21
Data File: 0527098.D

| | | Compound | MEAN | CCRF | %D | | %Drift | |
|---|---|---|---|---|---|---|---|---|
| 41 | SAL | TCmX #2 | 697230000 | 586128000 | 16 | SAL | 28 | *NT |
| 42 | SAL | DBC #2 | 292785000 | 290668000 | 0.72 | SAL | 13 | |
| 43 | SAL | DECA #2 | 302406000 | 314416000 | 4.0 | SAL | 8.3 | |
| 44 | BNMC | Total AR1016 #2 | 55492100 | 46961800 | 15 | BNMC | | |
| 45 | L3BKC | AR 1016 #2 | 11302200 | 7977780 | 29 | L3BKCL | 27 | |
| 46 | L3BKC | AR 1016 {2} #2 | 9537810 | 8597620 | 9.9 | L3BKCL | 24 | |
| 47 | L3BKC | AR 1016 {3} #2 | 11352100 | 10836600 | 4.5 | L3BKCL | 25 | |
| 48 | L3BKC | AR 1016 {4} #2 | 11467900 | 9477960 | 17 | L3BKC | | |
| 49 | L3BKC | AR 1016 {5} #2 | 11832200 | 10071800 | 15 | L3BKC | | |
| 50 | BNMC | Total AR1260 #2 | 66044800 | 63632100 | 3.7 | BNMC | | |
| 51 | L9BKC | AR 1260 #2 | 19168700 | 18007700 | 6.1 | L9BKC | | |
| 52 | L9BKC | AR 1260 {2} #2 | 9279890 | 9337400 | 0.62 | L9BKC | | |
| 53 | L9BKC | AR 1260 {3} #2 | 6870210 | 6518950 | 5.1 | L9BKC | | |
| 54 | L9BKC | AR 1260 {4} #2 | 21622000 | 20001600 | 7.5 | L9BKC | | |
| 55 | L9BKC | AR 1260 {5} #2 | 9104000 | 9766430 | 7.3 | L9BKCL | 5.4 | |
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| 79 | | | | | | | | |
| 80 | | | | | | | | |
| | | Average | | | 9.4 | | | |

EPA 8082
PCB0419

Form 7

# Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 06/10/21
Instrument: Lucy
Initial Cal. Date: 04/19/21
Data File: 0527104.D

| | | Compound | MEAN | CCRF | %D | | %Drift |
|---|---|---|---|---|---|---|---|
| 1 | SAL | TCmX | 211797000 | 201981000 | 4.6 | SAL | 15 |
| 2 | SAL | DBC | 153291000 | 158142000 | 3.2 | SAL | 6.9 |
| 3 | SAL | DECA | 134678000 | 136459000 | 1.3 | SAL | 9.2 |
| 4 | BNMC | Total AR1016 | 33235600 | 28953600 | 13 | BNMC | |
| 5 | L3BKC | AR 1016 | 4126030 | 3456870 | 16 | L3BKCL | 12 |
| 6 | L3BKC | AR 1016 {2} | 13009200 | 10821300 | 17 | L3BKCL | 20 |
| 7 | L3BKC | AR 1016 {3} | 6544920 | 5581830 | 15 | L3BKC | |
| 8 | L3BKC | AR 1016 {4} | 4220420 | 4259490 | 0.93 | L3BKC | |
| 9 | L3BKC | AR 1016 {5} | 5334990 | 4834160 | 9.4 | L3BKC | |
| 10 | BNMC | Total AR1260 | 45913300 | 39102300 | 15 | BNMCL | 13 |
| 11 | L9BKC | AR 1260 | 8791030 | 7030150 | 20 | L9BKCL | 13 |
| 12 | L9BKC | AR 1260 {2} | 13157300 | 11791000 | 10 | L9BKCL | 12 |
| 13 | L9BKC | AR 1260 {3} | 5647310 | 5134500 | 9.1 | L9BKC | |
| 14 | L9BKC | AR 1260 {4} | 13083800 | 10924800 | 17 | L9BKCL | 12 |
| 15 | L9BKC | AR 1260 {5} | 5233870 | 4221860 | 19 | L9BKCL | 15 |
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| 39 | | | | | | | |
| 40 | | | | | | | |
| | | Average | | | 11.4 | | |

EPA 8082
PCB0419

Form 7

# Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 06/10/21
Instrument: Lucy
Cal. Date: 04/19/21
Data File: 0527104.D

| | | Compound | MEAN | CCRF | %D | %Drift | | |
|---|---|---|---|---|---|---|---|---|
| 41 | SAL | TCmX | 697230000 | 594496000 | 15 | SAL | 26 | *see front |
| 42 | SAL | DBC | 292785000 | 302826000 | 3.4 | SAL | 9.3 | |
| 43 | SAL | DECA | 302406000 | 328450000 | 8.6 | SAL | 3.3 | |
| 44 | BNMC | Total AR1016 | 55492100 | 46689200 | 16 | BNMC | | |
| 45 | L3BKC | AR 1016 | 11302200 | 8287040 | 27 | L3BKCL | 24 | |
| 46 | L3BKC | AR 1016 {2} | 9537810 | 8314480 | 13 | L3BKCL | 28 | |
| 47 | L3BKC | AR 1016 {3} | 11352100 | 10598700 | 6.6 | L3BKCL | 27 | |
| 48 | L3BKC | AR 1016 {4} | 11467900 | 9491870 | 17 | L3BKC | | |
| 49 | L3BKC | AR 1016 {5} | 11832200 | 9997160 | 16 | L3BKC | | |
| 50 | BNMC | Total AR1260 | 66044800 | 65044300 | 1.5 | BNMC | | |
| 51 | L9BKC | AR 1260 | 19168700 | 18985500 | 0.96 | L9BKC | | |
| 52 | L9BKC | AR 1260 {2} | 9279890 | 9133580 | 1.6 | L9BKC | | |
| 53 | L9BKC | AR 1260 {3} | 6870210 | 6701000 | 2.5 | L9BKC | | |
| 54 | L9BKC | AR 1260 {4} | 21622000 | 20338700 | 5.9 | L9BKC | | |
| 55 | L9BKC | AR 1260 {5} | 9104000 | 9885450 | 8.6 | L9BKCL | 4.0 | |
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| 79 | | | | | | | | |
| 80 | | | | | | | | |
| | | Average | | | 9.6 | | | |

# ORGANICS

## Raw Data

# Organic Extraction Worksheet

| Method | OCL/OP/Triaz Sox Extra 3540C | Extraction Set | 210604A | Extraction Method | SOX005 | Units | mL |
|---|---|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Spiked ID 1 | PCB SPIKE 4-13-21 4-13-22 | | Surrogate ID 1 | OCL/OP Soil Surrogate 5-12-21 3-22-22 | |
| Spiked ID 2 | | | Surrogate ID 2 | | |
| Spiked ID 3 | | | Surrogate ID 3 | | |
| Spiked ID 4 | | | Surrogate ID 4 | | |
| Spiked ID 5 | | | Surrogate ID 5 | | |
| Spiked ID 6 | | | Sufficient Vol for Matrix QC: | YES | |
| Spiked ID 7 | | | Ext. Start Time: | 06/04/21 17:05 | |
| Spiked ID 8 | | | Ext. End Time: | 06/05/21 11:05 | |
| | | | GC Requires Extract By: | | |

| | | | | |
|---|---|---|---|---|
| pH1 | | | Water Bath Temp 1 °C | |
| pH2 | | | Water Bath Temp 2 °C | |
| pH3 | | | Water Bath Temp 3 °C | |

**Spiked By:** YL **Date** 06/04/21 **Witnessed By:** SR **Date** 06/04/21

| | Sample | Sample Container | Spike Amount | Spike ID | Surrogate Amount | Surrogate ID | Extract Amount | Final Volume | pH | Extract Date/Time | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 210604A Blk | | | | 0.250 | 1 equip | 10.14 | 5 | NA | 06/04/21 16:45 | |
| 2 | 210604A LCS-1 | | 1 | 1 | 0.250 | 1 equip | 10.03 | 5 | NA | 06/04/21 16:45 | |
| 3 | 210604A LCSD-1 | | 1 | 1 | 0.250 | 1 equip | 10.16 | 5 | NA | 06/04/21 16:45 | |
| 4 | BA33591 | BA33591S01 | | | 0.250 | 1 equip | 10.62 | 5 | NA | 06/04/21 16:45 | 96391 |
| 5 | BA33592 | BA33592S01 | | | 0.250 | 1 equip | 10.22 | 5 | NA | 06/04/21 16:45 | 96391 |
| 6 | BA33593 | BA33593S01 | | | 0.250 | 1 equip | 10.05 | 5 | NA | 06/04/21 16:45 | 96391 |
| 7 | BA33594 | BA33594S01 | | | 0.250 | 1 equip | 10.11 | 5 | NA | 06/04/21 16:45 | 96391 |
| 8 | BA33770 MS-1 | BA33770S01 | 1 | 1 | 0.250 | 1 equip | 10.07 | 5 | NA | 06/04/21 16:45 | 96421 |
| 9 | BA33770 MSD-1 | BA33770S01 | 1 | 1 | 0.250 | 1 equip | 10.24 | 5 | NA | 06/04/21 16:45 | 96421 |
| 10 | BA33770 | BA33770S01 | | | 0.250 | 1 equip | 10.33 | 5 | NA | 06/04/21 16:45 | 96421 |
| 11 | BA33771 | BA33771S01 | | | 0.250 | 1 equip | 10.10 | 5 | NA | 06/04/21 16:45 | 96421 |

| Solvent and Lot# | |
|---|---|
| SCALE BALANCE ID | EB1 |
| DCM | 60338 |
| THIMBLE | 1712437302/97 |
| SAND | 201215202 |
| FILTER PAPER | 400181 |
| Na2SO4 | 2020210870 |
| HEXANE | * |
| SULFURIC ACID (*) | * |
| | |

| Extraction COC Transfer | |
|---|---|
| Extraction lab employee Initials | |
| GC analyst's initials | RB |
| Date | 6/6/21 |
| Time | 9:15 am |
| Refrigerator | Hobart 1 |

| | Technician's Initials |
|---|---|
| Scanned By | SR |
| Sample Preparation | YL |
| Extraction | YL |
| Concentration | |

| Modified | 06/05/21 6:52:56 PM |
|---|---|

**Reviewed By:** **Date**

06/11/21 11:00:49 AM

Ext_ID 71346

# Injection Log

Directory: G:\LUCY\DATA\210419\

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 2 | 0419002.D | 1 | PCB - 1 4/16/21 | water | 4-19-21 16:42:21 |
| 2 | 3 | 0419003.D | 1 | PCB - 2 4/16/21 | water | 4-19-21 16:59:15 |
| 3 | 4 | 0419004.D | 1 | PCB - 3 4/16/21 | water | 4-19-21 17:16:06 |
| 4 | 5 | 0419005.D | 1 | PCB - 4 4/16/21 | water | 4-19-21 17:33:06 |
| 5 | 6 | 0419006.D | 1 | PCB - 5 4/16/21 | water | 4-19-21 17:49:59 |
| 6 | 7 | 0419007.D | 1 | PCB - 6 4/16/21 | water | 4-19-21 18:06:51 |
| 7 | 8 | 0419008.D | 1 | PCB Second Source 4/16/21 | water | 4-19-21 18:23:43 |
| 8 | 9 | 0419009.D | 1 | AR1221 0.1ug/mL 5/22/20 | water | 4-19-21 18:40:41 |
| 9 | 10 | 0419010.D | 1 | AR1232 0.1ug/mL 4/23/20 | water | 4-19-21 18:57:33 |
| 10 | 11 | 0419011.D | 1 | AR1242 0.1ug/mL 2/14/20 | water | 4-19-21 19:14:25 |
| 11 | 12 | 0419012.D | 1 | AR1248 0.1ug/mL 5/28/20 | water | 4-19-21 19:31:17 |
| 12 | 13 | 0419013.D | 1 | AR1254 0.1ug/mL 8/31/20 | water | 4-19-21 19:48:15 |
| 13 | 14 | 0419014.D | 1 | AR1262 0.1ug/mL 2/14/19 | water | 4-19-21 20:05:06 |
| 14 | 15 | 0419015.D | 1 | AR1268 0.1ug/mL 2/14/19 | water | 4-19-21 20:21:59 |
| 15 | 91 | 0527091.D | 1 | PCB - 3 4/16/21 | water | 6-10-21 13:15:50 |
| 16 | 92 | 0527092.D | 4930.97 | 210604A BLK 5/10.14 DF10 | soil | 6-10-21 13:32:39 |
| 17 | 93 | 0527093.D | 4985.04 | 210604A LCS-1 5/10.03 DF10 | soil | 6-10-21 13:49:30 |
| 18 | 98 | 0527098.D | 1 | PCB - 3 4/16/21 | water | 6-10-21 15:13:59 |
| 19 | 99 | 0527099.D | 4708.1 | BA33591S01 5/10.62 DF10 | soil | 6-10-21 15:30:51 |
| 20 | 100 | 0527100.D | 4892.37 | BA33592S01 5/10.22 DF10 | soil | 6-10-21 15:47:44 |
| 21 | 1 | 0527101.D | 4975.12 | BA33593S01 5/10.05 DF10 | soil | 6-10-21 16:04:34 |
| 22 | 2 | 0527102.D | 4945.6 | BA33594S01 5/10.11 DF10 | soil | 6-10-21 16:21:32 |
| 23 | 4 | 0527104.D | 1 | PCB - 3 4/16/21 | water | 6-10-21 16:55:12 |

# ORGANICS

## Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

## Form 6
## Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/24/21
Matrix: Instrument: Linus Initials:

| | | | 0324L003.D | 0324L004 D | 0324L005 D | 0324L006.D | 0324L007.D | 0324L008.D | 0324L009 D | 0324L010.D | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Compound | 0.1 | 0.2 | 0.5 | 1 | 5 | 10 | 50 | 100 | | | Avg | %RSD | Type | r^2 | Q | MRF |
| 1 | I | Napthalene-D8(IS) | | | | | | | | | | | | | | | | |
| 2 | TM | Naphthalene | 1.022 | 1.015 | 0.9035 | 0.9513 | 0.9843 | 1.019 | 0.9028 | 0.8602 | | | 0.96 | 6.5 | TM | | | 0.700 |
| 3 | S | 2-Methylnaphthalene-D10 (2M | 1.331 | 1.252 | 1.112 | 1.149 | 1.072 | 1.112 | 1.093 | 1.049 | | | 1.1 | 8.4 | S | | | |
| 4 | TM | 2-Methylnaphthalene | 0.7019 | 0.6897 | 0.6045 | 0.6422 | 0.6662 | 0.6976 | 0.5974 | 0.5765 | | | 0.65 | 7.6 | TM | | | 0.400 |
| 5 | TM | 1-Methylnaphthalene | 0.6892 | 0.6822 | 0.6155 | 0.6531 | 0.6647 | 0.6924 | 0.5956 | 0.5664 | | | 0.64 | 7.3 | TM | | | |
| 6 | I | Acenaphthene-D10(IS) | | | | | | | | | | | | | | | | |
| 7 | TM | Acenaphthylene | 3.604 | 3.667 | 3.279 | 3.371 | 3.645 | 3.760 | 3.330 | 3.009 | | | 3.5 | 7.3 | TM | | | 0.900 |
| 8 | *TM | Acenaphthene | 1.189 | 1.175 | 1.014 | 1.032 | 1.084 | 1.108 | 0.9732 | 0.9638 | | | 1.1 | 8.1 | *TM | | | 0.900 |
| 9 | TM | Fluorene | 1.334 | 1.369 | 1.198 | 1.248 | 1.347 | 1.403 | 1.217 | 1.293 | | | 1.3 | 5.7 | TM | | | 0.900 |
| 10 | I | Phenanthrene-D10(IS) | | | | | | | | | | | | | | | | |
| 11 | TM | Phenanthrene | 1.074 | 1.083 | 0.9454 | 0.9774 | 1.054 | 1.067 | 0.9344 | 0.8540 | | | 1.00 | 8.4 | TM | | | 0.700 |
| 12 | TM | Anthracene | 0.9221 | 0.9704 | 0.8788 | 0.9342 | 1.012 | 1.017 | 0.8797 | 0.7857 | | | 0.92 | 8.4 | TM | | | 0.700 |
| 13 | S | Fluoranthene-D10 (FRT) | | | 1.398 | 1.363 | 1.256 | 1.224 | 1.279 | 1.208 | | | 1.3 | 5.9 | S | | | |
| 14 | *TM | Fluoranthene | 1.529 | 1.543 | 1.353 | 1.471 | 1.573 | 1.573 | 1.374 | 1.294 | | | 1.5 | 7.5 | *TM | | | 0.600 |
| 15 | I | Chrysene-D12(IS) | | | | | | | | | | | | | | | | |
| 16 | TM | Pyrene | 1.275 | 1.301 | 1.174 | 1.231 | 1.310 | 1.350 | 1.196 | 1.172 | | | 1.3 | 5.4 | TM | | | 0.600 |
| 17 | TM | Benz (a) anthracene | 1.219 | 1.234 | 1.133 | 1.145 | 1.214 | 1.256 | 1.151 | 1.132 | | | 1.2 | 4.2 | TM | | | 0.800 |
| 18 | TM | Chrysene | 1.221 | 1.273 | 1.124 | 1.165 | 1.214 | 1.226 | 1.087 | 1.013 | | | 1.2 | 7.4 | TM | | | 0.700 |
| 19 | TM | Indeno (1,2,3-cd) pyrene | 1.390 | 1.466 | 1.316 | 1.364 | 1.442 | 1.525 | 1.424 | 1.434 | | | 1.4 | 4.5 | TM | | | 0.500 |
| 20 | I | Perylene-D12(IS) | | | | | | | | | | | | | | | | |
| 21 | TM | Benzo (b) fluoranthene | 1.103 | 1.052 | 0.9778 | 1.038 | 1.110 | 1.264 | 1.210 | 1.111 | | | 1.1 | 8.3 | TM | | | 0.700 |
| 22 | TM | Benzo (k) fluoranthene | 1.055 | 1.236 | 1.122 | 1.143 | 1.263 | 1.170 | 1.020 | 1.027 | | | 1.1 | 8.1 | TM | | | 0.700 |
| 23 | *TM | Benzo (a) pyrene | 0.8447 | 1.010 | 0.9198 | 1.019 | 1.097 | 1.126 | 1.051 | 1.031 | | | 1.0 | 9.1 | *TM | | | 0.700 |
| 24 | TM | Dibenz (a,h) anthracene | 0.9240 | 1.119 | 0.9987 | 1.062 | 1.153 | 1.196 | 1.093 | 1.096 | | | 1.1 | 8.0 | TM | | | 0.400 |
| 25 | TM | Benzo (g,h,i) perylene | 0.9596 | 1.154 | 1.032 | 1.081 | 1.161 | 1.213 | 1.110 | 1.097 | | | 1.1 | 7.2 | TM | | | 0.500 |
| 26 | | | | | | | | | | | | | | | | | | |
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Form 7

# Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 03/24/21
Instrument: Linus
Initial Cal. Date: 03/24/21
Data File: 0324L011.D

| | | Compound | MEAN | CCRF | %D | %Drift | |
|---|---|---|---|---|---|---|---|
| 1 | TM | Naphthalene | 0.9573 | 0.9465 | 1.1 | TM | |
| 2 | TM | 2-Methylnaphthalene | 0.6470 | 0.6367 | 1.6 | TM | |
| 3 | TM | 1-Methylnaphthalene | 0.6449 | 0.6204 | 3.8 | TM | |
| 4 | TM | Acenaphthylene | 3.458 | 3.366 | 2.7 | TM | |
| 5 | *TM | Acenaphthene | 1.067 | 1.014 | 5.0 | *TM | |
| 6 | TM | Fluorene | 1.301 | 1.247 | 4.2 | TM | |
| 7 | TM | Phenanthrene | 0.9987 | 0.9475 | 5.1 | TM | |
| 8 | TM | Anthracene | 0.9250 | 0.9644 | 4.3 | TM | |
| 9 | *TM | Fluoranthene | 1.464 | 1.399 | 4.5 | *TM | |
| 10 | TM | Pyrene | 1.251 | 1.194 | 4.6 | TM | |
| 11 | TM | Benz (a) anthracene | 1.185 | 1.120 | 5.5 | TM | |
| 12 | TM | Chrysene | 1.166 | 1.095 | 6.1 | TM | |
| 13 | TM | Indeno (1,2,3-cd) pyrene | 1.420 | 1.373 | 3.3 | TM | |
| 14 | TM | Benzo (b) fluoranthene | 1.108 | 1.093 | 1.4 | TM | |
| 15 | TM | Benzo (k) fluoranthene | 1.129 | 1.113 | 1.5 | TM | |
| 16 | *TM | Benzo (a) pyrene | 1.012 | 1.061 | 4.8 | *TM | |
| 17 | TM | Dibenz (a,h) anthracene | 1.080 | 1.077 | 0.32 | TM | |
| 18 | TM | Benzo (g,h,i) perylene | 1.101 | 1.082 | 1.7 | TM | |
| 19 | | | | | | | |
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| 37 | | | | | | | |
| 38 | | | | | | | |
| | | Average | | | 3.4 | | |

PAH by GCMS SIM
EPA 8270 SIM

Form 7

## Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 06/28/21
Instrument: Linus
Initial Cal. Date: 03/24/21
Data File: 0624L050.D

| | | Compound | MEAN | CCRF | %D | | %Drift |
|---|---|---|---|---|---|---|---|
| 1 | I | Napthalene-D8(IS) | ISTD | | | I | |
| 2 | TM | Naphthalene | 0.9573 | 0.8875 | 7.3 | TM | |
| 3 | S | 2-Methylnaphthalene-D10 (2MN) | 1.146 | 1.203 | 5.0 | S | |
| 4 | TM | 2-Methylnaphthalene | 0.6470 | 0.6567 | 1.5 | TM | |
| 5 | TM | 1-Methylnaphthalene | 0.6449 | 0.6620 | 2.7 | TM | |
| 6 | I | Acenaphthene-D10(IS) | ISTD | | | I | |
| 7 | TM | Acenaphthylene | 3.458 | 3.064 | 11 | TM | |
| 8 | *TM | Acenaphthene | 1.067 | 0.9556 | 10 | *TM | |
| 9 | TM | Fluorene | 1.301 | 1.246 | 4.3 | TM | |
| 10 | I | Phenanthrene-D10(IS) | ISTD | | | I | |
| 11 | TM | Phenanthrene | 0.9987 | 0.9791 | 2.0 | TM | |
| 12 | TM | Anthracene | 0.9250 | 0.9242 | 0.09 | TM | |
| 13 | S | Fluoranthene-D10 (FRT) | 1.288 | 1.261 | 2.1 | S | |
| 14 | *TM | Fluoranthene | 1.464 | 1.558 | 6.4 | *TM | |
| 15 | I | Chrysene-D12(IS) | ISTD | | | I | |
| 16 | TM | Pyrene | 1.251 | 1.217 | 2.7 | TM | |
| 17 | TM | Benz (a) anthracene | 1.185 | 1.123 | 5.2 | TM | |
| 18 | TM | Chrysene | 1.166 | 1.238 | 6.3 | TM | |
| 19 | TM | Indeno (1,2,3-cd) pyrene | 1.420 | 1.418 | 0.13 | TM | |
| 20 | I | Perylene-D12(IS) | ISTD | | | I | |
| 21 | TM | Benzo (b) fluoranthene | 1.108 | 1.103 | 0.48 | TM | |
| 22 | TM | Benzo (k) fluoranthene | 1.129 | 1.353 | 20 | TM | |
| 23 | *TM | Benzo (a) pyrene | 1.012 | 1.140 | 13 | *TM | |
| 24 | TM | Dibenz (a,h) anthracene | 1.080 | 1.193 | 10 | TM | |
| 25 | TM | Benzo (g,h,i) perylene | 1.101 | 1.209 | 9.8 | TM | |
| 26 | | | | | | | |
| 27 | | | | | | | |
| 28 | | | | | | | |
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| 37 | | | | | | | |
| 38 | | | | | | | |
| 39 | | | | | | | |
| 40 | | | | | | | |
| | | Average | | | 6.0 | | |

PAH by GCMS SIM
EPA 8270 SIM

Form 7

## Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 06/29/21
Instrument: Linus
Initial Cal. Date: 03/24/21
Data File: 0624L076.D

| | | Compound | MEAN | CCRF | %D | | %Drift |
|---|---|---|---|---|---|---|---|
| 1 | I | Napthalene-D8(IS) | ISTD | | | I | |
| 2 | TM | Naphthalene | 0.9573 | 0.8840 | 7.7 | TM | |
| 3 | S | 2-Methylnaphthalene-D10 (2MN) | 1.146 | 1.178 | 2.8 | S | |
| 4 | TM | 2-Methylnaphthalene | 0.6470 | 0.6497 | 0.41 | TM | |
| 5 | TM | 1-Methylnaphthalene | 0.6449 | 0.6502 | 0.82 | TM | |
| 6 | I | Acenaphthene-D10(IS) | ISTD | | | I | |
| 7 | TM | Acenaphthylene | 3.458 | 3.055 | 12 | TM | |
| 8 | *TM | Acenaphthene | 1.067 | 0.9460 | 11 | *TM | |
| 9 | TM | Fluorene | 1.301 | 1.235 | 5.1 | TM | |
| 10 | I | Phenanthrene-D10(IS) | ISTD | | | I | |
| 11 | TM | Phenanthrene | 0.9987 | 0.9556 | 4.3 | TM | |
| 12 | TM | Anthracene | 0.9250 | 0.9156 | 1.0 | TM | |
| 13 | S | Fluoranthene-D10 (FRT) | 1.288 | 1.224 | 5.0 | S | |
| 14 | *TM | Fluoranthene | 1.464 | 1.517 | 3.7 | *TM | |
| 15 | I | Chrysene-D12(IS) | ISTD | | | I | |
| 16 | TM | Pyrene | 1.251 | 1.219 | 2.6 | TM | |
| 17 | TM | Benz (a) anthracene | 1.185 | 1.146 | 3.3 | TM | |
| 18 | TM | Chrysene | 1.166 | 1.224 | 5.0 | TM | |
| 19 | TM | Indeno (1,2,3-cd) pyrene | 1.420 | 1.457 | 2.6 | TM | |
| 20 | I | Perylene-D12(IS) | ISTD | | | I | |
| 21 | TM | Benzo (b) fluoranthene | 1.108 | 1.143 | 3.1 | TM | |
| 22 | TM | Benzo (k) fluoranthene | 1.129 | 1.352 | 20 | TM | |
| 23 | *TM | Benzo (a) pyrene | 1.012 | 1.144 | 13 | *TM | |
| 24 | TM | Dibenz (a,h) anthracene | 1.080 | 1.228 | 14 | TM | |
| 25 | TM | Benzo (g,h,i) perylene | 1.101 | 1.226 | 11 | TM | |
| 26 | | | | | | | |
| 27 | | | | | | | |
| 28 | | | | | | | |
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| 37 | | | | | | | |
| 38 | | | | | | | |
| 39 | | | | | | | |
| 40 | | | | | | | |
| | | Average | | | 6.4 | | |

# ORGANICS

## Raw Data

_SON009S

# Organic Extraction Worksheet

| Method | SIM Sonicat Ext. Methylene c 3550 | Extraction Set | 210611A | Extraction Method | SON009S | Units | mL |
|---|---|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Spiked ID 1 | PAH Sim Spike 5-28-21 5-28-22 | | Surrogate ID 1 | Sim Surrogate 11-30-20 11-30-21 | |
| Spiked ID 2 | | | Surrogate ID 2 | | |
| Spiked ID 3 | | | Surrogate ID 3 | | |
| Spiked ID 4 | | | Surrogate ID 4 | | |
| Spiked ID 5 | | | Surrogate ID 5 | | |
| Spiked ID 6 | | | Sufficient Vol for Matrix QC: | YES | |
| Spiked ID 7 | | | Ext. Start Time: | 06/11/21 16:50 | |
| Spiked ID 8 | | | Ext. End Time: | 06/23/21 14:37 | |
| | | | **GC Requires Extract By:** | | |

| | | | | |
|---|---|---|---|---|
| pH1 | | | Water Bath Temp 1 °C | 76/74 E-WB6 °C |
| pH2 | | | Water Bath Temp 2 °C | |
| pH3 | | | Water Bath Temp 3 °C | |

**Spiked By:** SB **Date** 06/11/21 **Witnessed By:** SR **Date** 06/11/21

| | Sample | Sample Container | Spike Amount | Spike ID | Surrogate Amount | Surrogate ID | Extract Amount | Final Volume | pH | Extract Date/Time | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 210611A Blk | | | | 0.050 | 1 equip | 20.82 E-S1.1 E-WB6 | 1 | NA | 06/11/21 16:50 | |
| 2 | 210611A LCS-1 | | 0.125 | 1 | 0.050 | 1 equip | 20.39 E-S1.2 E-WB6 | 1 | NA | 06/11/21 16:50 | |
| 3 | 210611A LCSD-1 | | 0.125 | 1 | 0.050 | 1 equip | 20.97 E-S2 E-WB6 | 1 | NA | 06/11/21 16:50 | |
| 4 | BA33591 | BA33591S01 | | | 0.050 | 1 equip | 20.48 E-S6 E-WB6 | 1 | NA | 06/11/21 16:50 | 96391 |
| 5 | BA33592 | BA33592S01 | | | 0.050 | 1 equip | 20.31 E-S7 E-WB6 | 1 | NA | 06/11/21 16:50 | 96391 |
| 6 | BA33593 | BA33593S01 | | | 0.050 | 1 equip | 20.83 E-S8 E-WB6 | 1 | NA | 06/11/21 16:50 | 96391 |
| 7 | BA33594 | BA33594S01 | | | 0.050 | 1 equip | 20.35 E-S1.1 E-WB6 | 1 | NA | 06/11/21 16:50 | 96391 |
| 8 | BA33963 | BA33963S03 | | | 0.050 | 1 equip | 20.54 E-S1.2 E-WB6 | 1 | NA | 06/11/21 16:50 | 96435 |
| 9 | BA33965 MS-1 | BA33965S17 | 0.125 | 1 | 0.050 | 1 equip | 20.20 E-S2 E-WB6 | 1 | NA | 06/11/21 16:50 | 96435 |
| 10 | BA33965 MSD-1 | BA33965S17 | 0.125 | 1 | 0.050 | 1 equip | 20.57 E-S6 E-WB6 | 1 | NA | 06/11/21 16:50 | 96435 |
| 11 | BA33965 | BA33965S17 | | | 0.050 | 1 equip | 20.12 E-S7 E-WB6 | 1 | NA | 06/11/21 16:50 | 96435 |
| 12 | BA33966 | BA33966S06 | | | 0.050 | 1 equip | 20.10 E-S8 E-WB6 | 1 | NA | 06/11/21 16:50 | 96435 |
| 13 | BA33967 | BA33967S03 | | | 0.050 | 1 equip | 20.36 E-S1.1 E-WB6 | 1 | NA | 06/11/21 16:50 | 96435 |
| 14 | BA33969 | BA33969S06 | | | 0.050 | 1 equip | 20.05 E-S1.2 E-WB6 | 1 | NA | 06/11/21 16:50 | 96435 |
| 15 | BA33970 | BA33970S06 | | | 0.050 | 1 equip | 20.51 E-S2 E-WB6 | 1 | NA | 06/11/21 16:50 | 96435 |
| 16 | BA33971 | BA33971S03 | | | 0.050 | 1 equip | 20.79 E-S6 E-WB6 | 1 | NA | 06/11/21 16:50 | 96435 |

| Solvent and Lot# | |
|---|---|
| BALANCE | EB1 |
| SAND | 201215202 |
| Dichloromethane (DCM) | 60338 |
| Na2SO4 | 2020120870 |
| Filter Paper | 17222226 |
| | |
| | |
| | |
| | |

| Extraction COC Transfer | |
|---|---|
| Extraction lab employee Initials | KY |
| GC analyst's initials | CW |
| Date | 6/24/21 |
| Time | 12:35 |
| Refrigerator | HOBART |

| | Technician's Initials |
|---|---|
| Scanned By | SB |
| Sample Preparation | SB |
| Extraction | SR |
| Concentration | SR |

| Modified | 07/12/21 10:49:51 AM |
|---|---|

**Reviewed By:** KY **Date** 07/12/21

# Organic Extraction Worksheet

| Method | SIM Sonicat Ext. Methylene c 3550 | Extraction Set | 210611A | Extraction Method | SON009S | Units | mL |
|---|---|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Spiked ID 1 | PAH Sim Spike 5-28-21 5-28-22 | | Surrogate ID 1 | Sim Surrogate 11-30-20 11-30-21 | |
| Spiked ID 2 | | | Surrogate ID 2 | | |
| Spiked ID 3 | | | Surrogate ID 3 | | |
| Spiked ID 4 | | | Surrogate ID 4 | | |
| Spiked ID 5 | | | Surrogate ID 5 | | |
| Spiked ID 6 | | | Sufficient Vol for Matrix QC: | YES | |
| Spiked ID 7 | | | Ext. Start Time: | 06/11/21 16:50 | |
| Spiked ID 8 | | | Ext. End Time: | 06/23/21 14:37 | |
| | | | GC Requires Extract By: | | |

| | | | | |
|---|---|---|---|---|
| pH1 | | | Water Bath Temp 1 °C | 76/74 E-WB6 °C |
| pH2 | | | Water Bath Temp 2 °C | |
| pH3 | | | Water Bath Temp 3 °C | |

**Spiked By:** SB **Date** 06/11/21 **Witnessed By:** SR **Date** 06/11/21

| | Sample | Sample Container | Spike Amount | Spike ID | Surrogate Amount | Surrogate ID | Extract Amount | Final Volume | pH | Extract Date/Time | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | BA33973 | BA33973S06 | | | 0.050 | 1 | 20.04 | 1 | NA | 06/11/21 16:50 | 96435 |
| | | | | | | equip | E-S7 E-WB6 | | | | |
| 18 | BA33974 | BA33974S06 | | | 0.050 | 1 | 20.47 | 1 | NA | 06/11/21 16:50 | 96435 |
| | | | | | | equip | E-S8 E-WB6 | | | | |
| 19 | BA33975 | BA33975S03 | | | 0.050 | 1 | 20.16 | 1 | NA | 06/11/21 16:50 | 96435 |
| | | | | | | equip | E-S1.1 E-WB6 | | | | |
| 20 | BA33977 | BA33977S06 | | | 0.050 | 1 | 20.51 | 1 | NA | 06/11/21 16:50 | 96435 |
| | | | | | | equip | E-S1.2 E-WB6 | | | | |
| 21 | BA33978 | BA33978S06 | | | 0.050 | 1 | 20.55 | 1 | NA | 06/11/21 16:50 | 96435 |
| | | | | | | equip | E-S2 E-WB6 | | | | |

| Solvent and Lot# | |
|---|---|
| BALANCE | EB1 |
| SAND | 201215202 |
| Dichloromethane (DCM) | 60338 |
| Na2SO4 | 2020120870 |
| Filter Paper | 17222226 |
| | |
| | |
| | |
| | |

| Extraction COC Transfer | |
|---|---|
| Extraction lab employee Initials | KY |
| GC analyst's initials | CW |
| Date | |
| Time | |
| Refrigerator | HOBART |

| | Technician's Initials |
|---|---|
| Scanned By | SB |
| Sample Preparation | SB |
| Extraction | SR |
| Concentration | SR |

| Modified | 07/12/21 10:49:51 AM |
|---|---|

**Reviewed By:** KY **Date** 07/12/21

# Injection Log

Directory: M:\LINUS\DATA\L210324\

| Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|
| 2 | 0324L002.D | 1 | SV Tune 10/02/20 | | 24 Mar 21 10:26 |
| 3 | 0324L003.D | 1 | 0.1 SIM 03/24/21 | | 24 Mar 21 11:35 |
| 4 | 0324L004.D | 1 | 0.2 SIM 03/24/21 | | 24 Mar 21 11:57 |
| 5 | 0324L005.D | 1 | 0.5 SIM 03/24/21 | | 24 Mar 21 12:19 |
| 6 | 0324L006.D | 1 | 1 SIM 03/24/21 | | 24 Mar 21 12:41 |
| 7 | 0324L007.D | 1 | 5 SIM 03/24/21 | | 24 Mar 21 13:07 |
| 8 | 0324L008.D | 1 | 10 SIM 03/24/21 | | 24 Mar 21 13:29 |
| 9 | 0324L009.D | 1 | 50 SIM 03/24/21 | | 24 Mar 21 13:51 |
| 10 | 0324L010.D | 1 | 100 SIM 03/24/21 | | 24 Mar 21 14:13 |
| 11 | 0324L011.D | 1 | SS SIM 03/24/21 | | 24 Mar 21 14:59 |
| 49 | 0624L049.D | 1 | SV TUNE 10/2/20 | | 28 Jun 21 9:02 |
| 50 | 0624L050.D | 1 | 5 SIM 6/17/21 (1) | | 28 Jun 21 9:18 |
| 51 | 0624L051.D | 48.0307 | 210611A BLK 1/20.82 | | 28 Jun 21 10:27 |
| 52 | 0624L052.D | 49.0437 | 210611A LCS-1 1/20.39 | | 28 Jun 21 10:49 |
| 55 | 0624L055.D | 49.2368 | BA33592S01 1/20.31 | | 28 Jun 21 11:55 |
| 56 | 0624L056.D | 48.0538 | BA33593S01 1/20.83 | | 28 Jun 21 12:17 |
| 57 | 0624L057.D | 49.1401 | BA33594S01 1/20.35 | | 28 Jun 21 12:39 |
| 75 | 0624L075.D | 1 | SV TUNE 10/2/20 | | 29 Jun 21 8:37 |
| 76 | 0624L076.D | 1 | 5 SIM 6/17/21 (1) | | 29 Jun 21 8:53 |
| 79 | 0624L079.D | 48.8281 | BA33591S01 1/20.48 | | 29 Jun 21 12:33 |

# METALS

## Calibration Data

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech, Inc.

ARF No: 96391 SDG: 96391

Analysis Date: 06/22/21 Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | | M |
|---|---|---|---|---|---|---|---|---|---|---|
| | True | Found 9:19 | %R(1) | True CCV1 | Found 17:46 | %R(1) | True CCV1 | Found 18:26 | %R(1) | |
| Arsenic (As) | 500 | 510.42 | 102 | 500 | 527.83 | 106 | 500 | 522.52 | 105 | P |
| Lead (Pb) | 500 | 495.7 | 99.1 | 500 | 519.62 | 104 | 500 | 517.68 | 104 | P |

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech, Inc.

ARF No.: 96391 SDG: 96391

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/kg

Analysis Date: 06/22/21

| Analyte | Initial Calibration Blank (ug/L) | C | Continuing Calibration Blank (ug/L) 1 | C | 2 | C | 3 | C | Preparation Blank | C | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 09:40 | | 17:51 | | 18:30 | | | | 17:55 | | |
| Arsenic (As) | 1.86 | J | 2.72 | * | 1.79 | J | | | 173.00 | * | * |
| Lead (Pb) | .90 | U | 1.79 | * | 2.54 | * | | | 163.00 | * | * |

A.P.P.L. INC.

3

BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech, Inc.

ARF No.: 96391 SDG: 96391

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/kg

Analysis Date: 06/22/21

| Analyte | Initial Calibration Blank (ug/L) | C | Continuing Calibration Blank (ug/L) 1 | C | 2 | C | 3 | C | Preparation Blank | C | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 09:40 | | 17:51 | | 18:30 | | | | 17:55 | | |
| Arsenic (As) | 2.50 | U | 2.50 | U | 2.50 | U | | | 2.50 | U | P |
| Lead (Pb) | .90 | U | .90 | U | .90 | U | | | .90 | U | P |

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

| | | | |
|---|---|---|---|
| Lab Name: | A.P.P.L. INC. | Contract: | Tetra Tech, Inc. |
| ARF No.: | 96391 | SDG: | 96391 |
| ICP ID Number: | Cyrus | ICS Source: | Environmental Express |

Analysis Date: 06/22/21 Concentration Units: ug/L

| Analyte | True | | Initial Found | | |
|---|---|---|---|---|---|
| | Sol A | Sol AB | Sol A 10:02 | Sol AB 10:06 | %R(1) |
| Arsenic (As) | | 250 | 0.2 | 257.12 | 103 |
| Lead (Pb) | | 500 | -1.24 | 488.6 | 97.7 |

(1) Control Limits: Metals 80-120

# METALS

## Raw Data

## ICP-OES Calibration Standard Prep

Prepared: 06/22/21
Expires: 06/29/21
1% HNO3 / 5% HCl Prep: 06/22/21
Prepared By (Initials): PW

### Calibration Standard 6

| Initial Standard Information | | | | | | Final Standard Information | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Initial Standard (QAU Label) | Supplier | Supplier Part No | Conc. Range (ug/mL) | Lot Number - QA Number/ APPL Prep Date | Exp Date | Aliquot From Stock | Final Volume | Solvent | Final Standard Conc. Range (ug/L) |
| Solution A | Inorganic Ventures | HP1810-250 | 200 - 5,000 | m2meb662248-38391 | 09/04/24 | 500uL | 100mL | 1% HNO3 / 5% HCl | 1000 - 25,000 |
| Solution B | Inorganic Ventures | HP1810-250 | 4000 - 10,000 | m2meb662249-38389 | 09/04/24 | 500uL | | | 2000 - 50,000 |
| Solution C | Inorganic Ventures | HP1810-250 | 100 - 200 | m2meb662250-38394 | 09/04/24 | 500uL | | | 500 - 1000 |
| **Calibration Standard 5** | | | | | | | | | |
| ICP-OES Calib Standard 3 | Inorganic Ventures | Standard 2/CCV1 | 0.5 - 50 | Prepared 06/22/21 | 06/29/21 | 25mL | 50mL | 1% HNO3 / 5% HCl | 250 - 25,000 |
| **Calibration Standard 1** | | | | | | | | | |
| 200 7 LDL | O2SI | 160634-01-01 | 0 05 - 100 | 10080366-3-41267 | 03/18/22 | 250uL | 50mL | 1% HNO3 / 5% HCl | 0 25 - 200 |

## ICP-OES ICV (SS)

Prepared: 06/19/21
Expires: 07/03/21
1% HNO3 / 5% HCl Prep: 06/19/21
Prepared By (Initials): PW

### ICP-OES ICV 1

| Initial Standard Information | | | | | | Final Standard Information | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Initial Standard (QAU Label) | Supplier | Supplier Part No. | Conc. Range (ug/mL) | Lot Number - QA Number | Exp Date | Aliquot From Stock | Final Volume | Solvent | Final Standard Conc Range (ug/mL) |
| QCS ICV Soln A | CPI | 4400-070615RH01 | 50 - 500 | 10062445-13-52340 | 11/11/22 | 250uL | 50mL | 1% HNO3 / 5% HCl | 0.25 - 2.5 |
| QCS ICV Soln B | CPI | 4400-070615RH01 | 2,500 | 10062445-14-52341 | 11/11/22 | 250uL | | | 12 5 |

### ICP-OES CCV2

| Initial Standard Information | | | | | | Final Standard Information | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Initial Standard (QAU Label) | Supplier | Supplier Part No. | Conc. Range (ug/mL) | APPL Prep Date | Exp Date | Aliquot From Stock | Final Volume | Solvent | Final Standard Conc Range (ug/mL) |
| ICP-OES Calib Standard 3 | Inorganic Ventures | CCV2 | 0.5 - 50 | Prepared 06/22/21 | 06/29/21 | 15mL | 40mL | 1% HNO3 / 5% HCl | 0.15 - 15 |

## ICP-OES Low Levels (LLICV)

Prepared: 06/22/21
Expires: 07/06/21
1% HNO3 / 5% HCl Prep: 06/22/21
Prepared By (Initials): PW

### LLICV

| Initial Standard Information | | | | | | Final Standard Information | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Initial Standard (QAU Label) | Supplier | Supplier Part No | Conc. Range ug/mL | Lot Number - QA Number | Exp Date | Aliquot From Stock | Final Volume | Solvent | Final Standard Conc Range (ug/L) |
| 200 7 LDL | O2SI | 160634-01-01 | 0 05 - 100 | 10080366-3-41267 | 03/18/22 | 250uL | 50mL | 1% HNO3 / 5% HCl | 0 25 - 200 |
| **LLICVX2 / Standard 2** | | | | | | | | | |
| 200 7 LDL | O2SI | 160634-01-01 | 0.05 - 100 | 10080366-3-41267 | 03/18/22 | 500uL | 50mL | 1% HNO3 / 5% HCl | 0.50 - 400 |
| **LLICVX6 / Standard 3** | | | | | | | | | |
| 200.7 LDL | O2SI | 160634-01-01 | 0 05 - 100 | 10080366-3-41267 | 03/18/22 | 1.5mL | 50mL | 1% HNO3 / 5% HCl | 1.5 - 1,200 |
| **LLICVX10 / Standard 4** | | | | | | | | | |
| 200 7 LDL | O2SI | 160634-01-01 | 0.05 - 100 | 10080366-3-41267 | 03/18/22 | 2.5mL | 50mL | 1% HNO3 / 5% HCl | 2 5 - 2,000 |
| **LLICV 10** | | | | | | | | | |
| ICP-OES Calib Standard 3 | Inorganic Ventures | HP1810-250 | 0.5 - 50 | 10080366-3-41267 | 06/29/21 | 500uL | 50mL | 1% HNO3 / 5% HCl | 5 - 500 |
| **LLICV 50** | | | | | | | | | |
| ICP-OES Calib Standard 3 | Inorganic Ventures | HP1810-250 | 0 5 - 50 | 10080366-3-41267 | 06/29/21 | 2.5mL | 50mL | 1% HNO3 / 5% HCl | 25 - 2,500 |

## ICP-OES Interference Check Solution A

**Prepared: 06/15/21**
**Expires: 06/29/21**
**1% HNO3 / 5% HCl Prep: 06/15/21**

Prepared By (Initials): PW

| Initial Standard Information | | | | | | Final Standard Information | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Initial Standard (QAU Label) | Supplier | Supplier Part No. | Conc (ug/mL) | Lot Number - QA Number | Exp Date | Aliquot From Stock | Final Volume | Solvent | Final Standard Conc. (ug/mL) |
| Aluminum | Inorganic Ventures | 35-APPLTSP-6010ICSA | 10,000 | N2-MEB670092-39414 | 07/25/22 | 500uL | 50mL | 1% HNO3 / 5% HCl | 100 |
| Calcium | | | 10,000 | | | | | | 100 |
| Magnesium | | | 10,000 | | | | | | 100 |
| Iron | | | 10,000 | | | | | | 100 |
| **ICP-OES Interference Check Solution AB** | | | | | | | | | |
| Aluminum | Inorganic Ventures | 35-APPLTSP-6010ICSA | 10,000 | N2-MEB670092-39414 | 07/25/22 | 500uL | 50mL | 1% HNO3 / 5% HCl | 100 |
| Calcium | | | 10,000 | | | | | | 100 |
| Magnesium | | | 10,000 | | | | | | 100 |
| Iron | | | 10,000 | | | | | | 100 |
| Special Mix (Interference) | O2SI | 160495-01-01 | 100 | 10081266-2-49725 | 07/13/21 | 250uL | | | 0.5 |

## ICP-OES Internal Standards

**Prepared: 06/18/21**
**Expires: 07/13/21**
**1% HNO3 / 5% HCl Prep: 06/18/21**

Prepared By (Initials): PW

| Initial Standard Information | | | | | | Final Standard Information | | | |
|---|---|---|---|---|---|---|---|---|---|
| Name of Initial Standard (QAU Label) | Supplier | Supplier Part No. | Conc. (mg/L) | Lot Number - QA Number | Exp Date | Aliquot From Stock | Final Volume | Solvent | Final Standard Conc. (mg/L) |
| Yttrium | O2SI | 060039-04-03 | 1,000 | 10083563-2-49726 | 07/13/21 | 4mL | 2L | 1% HNO3 / 5% HCl | 2 |

# Metals Digestion Worksheet

**Method Name** 3050B Digestion **Prep Method** M3050 **Set** 210618A **Units** mL

| Spikes | |
|---|---|
| Spiked ID 1 | LCSW LOT# 10064561-19-52291 Pipette AP-21 |
| Spiked ID 2 | LCSW LOT# 10064561-18-52292 |
| Spiked ID 3 | Li HDL #AU-01003-40046 |
| Spiked ID 4 | |
| **Spiked By** | NM Date: 06/18/21 9:45:00 AM |
| **Witnessed By** | JG Date: 06/18/21 9:45:00 AM |

| | |
|---|---|
| Starting Temp: | SLOT 29 THERM:9104 94C/91C |
| Ending Temp: | SLOT 29 95C/92C |
| Temperature Type: | Mod Block |
| Sufficient Vol for Matrix QC: | YES |
| **End Date/Time** | 06/18/21 14:34 |

| | Sample | Sample Container | Spike Amount | Spike ID | Digested Amount | Final Volume | Start Date/Time | Comments |
|---|---|---|---|---|---|---|---|---|
| 1 | 210618A Blk | | | | 1.00g | 100mL | 06/18/21 9:45 | equip: Modblock4 |
| 2 | 210618A LCS | | 1mL | 1+2 | 1.07g | 100mL | 06/18/21 9:45 | equip: Modblock4 |
| 3 | 210618A LCSD | | 1mL | 1+2 | 1.01g | 100mL | 06/18/21 9:45 | equip: Modblock4 |
| 4 | BA33591 | BA33591S01 | | | 0.96g | 100mL | 06/18/21 9:45 | equip: Modblock4 96391 |
| 5 | BA33592 | BA33592S01 | | | 0.98g | 100mL | 06/18/21 9:45 | equip: Modblock4 96391 |
| 6 | BA33593 | BA33593S01 | | | 0.98g | 100mL | 06/18/21 9:45 | equip: Modblock4 96391 |
| 7 | BA33594 | BA33594S01 | | | 1.02g | 100mL | 06/18/21 9:45 | equip: Modblock4 96391 |
| 8 | BA33669 | BA33669S03 | | | 1.06g | 100mL | 06/18/21 9:45 | equip: Modblock4 96393 |
| 9 | BA33670 | BA33670S03 | | | 1.07g | 100mL | 06/18/21 9:45 | equip: Modblock4 96393 |
| 10 | BA33673 | BA33673S06 | | | 1.01g | 100mL | 06/18/21 9:45 | equip: Modblock4 96393 |
| 11 | BA33674 | BA33674S06 | | | 1.04g | 100mL | 06/18/21 9:45 | equip: Modblock4 96393 |
| 12 | BA33675 | BA33675S03 | | | 1.06g | 100mL | 06/18/21 9:45 | equip: Modblock4 96393 |
| 13 | BA33677 | BA33677S06 | | | 1.07g | 100mL | 06/18/21 9:45 | equip: Modblock4 96393 |
| 14 | BA33678 | BA33678S06 | | | 0.98g | 100mL | 06/18/21 9:45 | equip: Modblock4 96393 |
| 15 | BA33679 | BA33679S03 | | | 1.01g | 100mL | 06/18/21 9:45 | equip: Modblock4 96393 |
| 16 | BA33681 | BA33681S06 | | | 1.05g | 100mL | 06/18/21 9:45 | equip: Modblock4 96393 |
| 17 | BA33682 | BA33682S06 | | | 1.04g | 100mL | 06/18/21 9:45 | equip: Modblock4 96393 |
| 18 | BA34327 | BA34327S04 | | | 0.98g | 100mL | 06/18/21 9:45 | equip: Modblock4 96499 |
| 19 | BA34328 | BA34328S04 | | | 0.99g | 100mL | 06/18/21 9:45 | equip: Modblock4 96499 |
| 20 | BA34329 | BA34329S05 | | | 0.99g | 100mL | 06/18/21 9:45 | equip: Modblock4 96499 |
| 21 | BA34330 | BA34330S04 | | | 0.98g | 100mL | 06/18/21 9:45 | equip: Modblock4 96499 |
| 22 | BA34331 | BA34331S10 | | | 1.00g | 100mL | 06/18/21 9:45 | equip: Modblock4 96499 |
| 23 | BA34331 MS | BA34331S10 | 2mL | 1+2 | 0.97g | 100mL | 06/18/21 9:45 | equip: Modblock4 |

| Solvent and Lot# |
|---|
| 1:1 HNO3 2-16-21 |
| HNO3 BDH 1120090 20287 |
| H202 276731 |
| HCL BDH 4121012 20293 |
| 100mL vessel 0090000032 |

| Sample COC Transfer | |
|---|---|
| Sample prep employee Initials | nm |
| Analyst's initials | pw |
| Date | 6/22/21 |
| Time | 1505 |
| Moved to | metals |

| Technician's Initials | |
|---|---|
| Scanned By | nm |
| Sample Preparation | nm |
| Digestion | nm |
| Bring up to volume | |
| Modified | 06/18/21 12:41:11 PM |

Reviewed By: pw Date: 6/22/21

# Metals Digestion Worksheet

**Method Name** 3050B Digestion **Prep Method** M3050 **Set** 210618A **Units** mL

| Spikes | |
|---|---|
| Spiked ID 1 | LCSW LOT# 10064561-19-52291 Pipette AP-21 |
| Spiked ID 2 | LCSW LOT# 10064561-18-52292 |
| Spiked ID 3 | Li HDI. #AU-01003-40046 |
| Spiked ID 4 | |
| Spiked By | NM Date: 06/18/21 9:45:00 AM |
| Witnessed By | JG Date: 06/18/21 9:45:00 AM |

| | |
|---|---|
| Starting Temp: | SLOT 29 THERM:9104 94C/91C |
| Ending Temp: | SLOT 29 95C/92C |
| Temperature Type: | Mod Block |
| Sufficient Vol for Matrix QC: | YES |
| End Date/Time | 06/18/21 14:34 |

| | Sample | Sample Container | Spike Amount | Spike ID | Digested Amount | Final Volume | Start Date/Time | Comments |
|---|---|---|---|---|---|---|---|---|
| 24 | BA34331 MSD | BA34331S10 | 2mL | 1+2 | 0.97g | 100mL | 06/18/21 9:45 | equip: Modblock4 |
| 25 | BA34332 | BA34332S04 | | | 1.03g | 100mL | 06/18/21 9:45 | equip: Modblock4 96499 |

| Solvent and Lot# |
|---|
| 1:1 HNO3 2-16-21 |
| HNO3 BDH 1120090 20287 |
| H202 276731 |
| HCL BDH 4121012 20293 |
| 100mL vessel 0090000032 |

| Sample COC Transfer | |
|---|---|
| Sample prep employee Initials | nm |
| Analyst's initials | AD |
| Date | 6/22/21 |
| Time | 1505 |
| Moved to | Meta0 |

| Technician's Initials | |
|---|---|
| Scanned By | nm |
| Sample Preparation | nm |
| Digestion | nm |
| Bring up to volume | |
| Modified | 06/18/21 12:41:11 PM |

Reviewed By: AD Date: 6/22/21

# 6010C/3010A Injection Log

Directory: K:\ICP-OES Cyrus\Backup Excel\

| RunID | Injected | | Sample Name | Misc Info | FileName | Multiplier |
|---|---|---|---|---|---|---|
| 1 | 22 Jun 2021 | 08:48 | CalBlk 210622 | | 210622A200 | 1. |
| 2 | 22 Jun 2021 | 08:53 | STD1 210622 | | 210622A200 | 1. |
| 3 | 22 Jun 2021 | 08:57 | STD2 210622 | | 210622A200 | 1. |
| 4 | 22 Jun 2021 | 09:01 | STD3 210622 | | 210622A200 | 1. |
| 5 | 22 Jun 2021 | 09:06 | STD4 210622 | | 210622A200 | 1. |
| 6 | 22 Jun 2021 | 09:10 | STD5 210622 | | 210622A200 | 1. |
| 7 | 22 Jun 2021 | 09:15 | STD6 210622 | | 210622A200 | 1. |
| 8 | 22 Jun 2021 | 09:19 | ICV 210622 | | 210622A200 | 1. |
| 10 | 22 Jun 2021 | 09:40 | ICB 210622 | | 210622A200 | 1. |
| 15 | 22 Jun 2021 | 10:02 | ICSA 210622 | | 210622A200 | 1. |
| 16 | 22 Jun 2021 | 10:06 | ICSAB 210622 | | 210622A200 | 1. |
| 99 | 22 Jun 2021 | 17:46 | CCV 210622 | | 210622A200 | 1. |
| 100 | 22 Jun 2021 | 17:51 | CCB 210622 | | 210622A200 | 1. |
| 101 | 22 Jun 2021 | 17:55 | 210618A BLK | | 210622A200 | 1. |
| 102 | 22 Jun 2021 | 17:59 | 210618A LCS | | 210622A200 | 1. |
| 103 | 22 Jun 2021 | 18:04 | 210618A LCSD | | 210622A200 | 1. |
| 104 | 22 Jun 2021 | 18:08 | BA33591S01 DF2 | | 210622A200 | 2. |
| 105 | 22 Jun 2021 | 18:13 | BA33592S01 DF2 | | 210622A200 | 2. |
| 106 | 22 Jun 2021 | 18:17 | BA33593S01 DF2 | | 210622A200 | 2. |
| 107 | 22 Jun 2021 | 18:21 | BA33594S01 DF2 | | 210622A200 | 2. |
| 108 | 22 Jun 2021 | 18:26 | CCV 210622 | | 210622A200 | 1. |
| 109 | 22 Jun 2021 | 18:30 | CCB 210622 | | 210622A200 | 1. |

# METALS

## Calibration Data

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Tetra Tech, Inc.

ARF No: 96391 SDG: 96391

Analysis Date: 06/25/21 Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | | M |
|---|---|---|---|---|---|---|---|---|---|---|
| | True | Found 14:14 | %R(1) | True CCV1 | Found 14:19 | %R(1) | True CCV1 | Found 14:48 | %R(1) | |
| Mercury (Hg) | 4.17 | 4.221 | 101 | 5.208 | 5.188 | 99.6 | 5.208 | 5.193 | 99.7 | P |

(1) Control Limits: Metals 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Tetra Tech, Inc.

ARF No.: 96391 SDG: 96391

Preparation Blank Matrix (soil/water): soil

Preparation Blank Concentration Units (ug/L or mg/kg): mg/Kg

Analysis Date: 06/25/21

| Analyte | Initial Calibration Blank (ug/L) | | Continuing Calibration Blank (ug/L) | | | | | | Preparation Blank | | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | C | 1 | C | 2 | C | 3 | C | | C | |
| | 14:16 | | 14:20 | | 14:49 | | | | 14:22 | | |
| Mercury (Hg) | .63 | U | .63 | U | .63 | U | | | .10 | U | P |

A.P.P.L. INC.

LLQC Check

Lab Name: A.P.P.L. INC. Contract: Tetra Tech, Inc.

ARF No: 96391 SDG: 96391

Concentration Units: ug/L

Analysis Date: 06/25/21

| Analyte | LLQC | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | True | Found | %R(1) |
| | LLICV | 14:17 | | | | | | | |
| Mercury (Hg) | 0.208 | 0.1874 | 90.1 | | | | | | |

# METALS

# Raw Data

# Mercury Digestion Worksheet

**Method Name** 7471A Mercury Digestion **Prep Method** M7471 **Set** 210618A **Units** mL

| Spikes | | | |
|---|---|---|---|
| Spiked ID 1 | Hg WORKING STANDARD PREP 6-18-21 Pipette M12 | | |
| Spiked ID 2 | Hg WORKING ICV PREP 6-18-21 | | |
| Spiked ID 3 | BALANCE WB2 | | |
| Spiked ID 4 | | | |
| **Spiked By** | sm | Date: | 06/18/21 9:28:00 AM |
| **Witnessed By** | na | Date: | 06/18/21 9:28:00 AM |

| | |
|---|---|
| Starting Temp: | SLOT 23 THERM:Kahn 95C |
| Ending Temp: | SLOT 23 96C |
| Temp Type: | Modblock1 |
| **End Date/Time** | 06/18/21 10:25:00 AM |

**Mercury Calibration**

| Sample | Spike Amount | Spike ID | Final Volume |
|---|---|---|---|
| 0 ppb | | 1 | 96 ml |
| 0.2083 ppb | 0.4 ml | 1 | 96 ml |
| 0.5208 ppb | 1 ml | 1 | 96 ml |
| 1.0417 ppb | 2 ml | 1 | 96 ml |
| 2.083 ppb | 4ml | 1 | 96 ml |
| 5.208 ppb | 10 ml | 1 | 96 ml |
| 5.208 ppb | 10 ml | 1 | 96 ml |
| 10.417 ppb | 20 ml | 1 | 96 ml |
| ICV | 8 ml | 2 | 96 ml |

**Start Date/Time of Calibration** 06/18/21 9:28

| | |
|---|---|
| Sufficient Vol for Matrix QC: | Yes |

| | Sample | Sample Container | Spike Amount | Spike ID | Digested Amount | Final Volume | Start Date/Time | Comments |
|---|---|---|---|---|---|---|---|---|
| 1 | 210618A Blk | | | | | 96mL | 06/18/21 9:28 | equip: Modblock1 |
| 2 | 210618A LCS | | 8mL | 1 | | 96mL | 06/18/21 9:28 | equip: Modblock1 |
| 3 | 210618A LCSD | | 8mL | 1 | | 96mL | 06/18/21 9:28 | equip: Modblock1 |
| 4 | BA33591 | BA33591S01 | | | .60g | 96mL | 06/18/21 9:28 | equip: Modblock1 96391 |
| 5 | BA33592 | BA33592S01 | | | .60g | 96mL | 06/18/21 9:28 | equip: Modblock1 96391 |
| 6 | BA33593 | BA33593S01 | | | .62g | 96mL | 06/18/21 9:28 | equip: Modblock1 96391 |
| 7 | BA33594 | BA33594S01 | | | .61g | 96mL | 06/18/21 9:28 | equip: Modblock1 96391 |
| 8 | BA33669 | BA33669S03 | | | .64g | 96mL | 06/18/21 9:28 | equip: Modblock1 96393 |
| 9 | BA33670 | BA33670S03 | | | .60g | 96mL | 06/18/21 9:28 | equip: Modblock1 96393 |
| 10 | BA33673 | BA33673S06 | | | .62g | 96mL | 06/18/21 9:28 | equip: Modblock1 96393 |
| 11 | BA33674 | BA33674S06 | | | .61g | 96mL | 06/18/21 9:28 | equip: Modblock1 96393 |
| 12 | BA33675 | BA33675S03 | | | .64g | 96mL | 06/18/21 9:28 | equip: Modblock1 96393 |
| 13 | BA33677 | BA33677S06 | | | .62g | 96mL | 06/18/21 9:28 | equip: Modblock1 96393 |
| 14 | BA33678 | BA33678S06 | | | .64g | 96mL | 06/18/21 9:28 | equip: Modblock1 96393 |
| 15 | BA33679 | BA33679S03 | | | .60g | 96mL | 06/18/21 9:28 | equip: Modblock1 96393 |
| 16 | BA33681 | BA33681S06 | | | .65g | 96mL | 06/18/21 9:28 | equip: Modblock1 96393 |
| 17 | BA33682 | BA33682S06 | | | .61g | 96mL | 06/18/21 9:28 | equip: Modblock1 96393 |
| 18 | BA33682 MS | BA33682S06 | 8mL | 1 | .63g | 96mL | 06/18/21 9:28 | equip: Modblock1 |
| 19 | BA33682 MSD | BA33682S06 | 8mL | 1 | .61g | 96mL | 06/18/21 9:28 | equip: Modblock1 |

| Solvent and Lot# |
|---|
| HNO3 BDH 1120090 20282 |
| HCL BDH 4120012 20289 |
| KMnO4 6-14-21 |
| DECOLORIZER 6-11-21 |
| 100mL vessels 0090000032 |

| Sample COC Transfer | |
|---|---|
| **Sample prep employee Initials** | sm |
| **Analyst's initials** | |
| **Date** | |
| **Time** | |
| **Moved to** | |

| Technician's Initials | |
|---|---|
| **Scanned By** | sm |
| **Sample Preparation** | sm |
| **Digestion** | sm |
| **Bring up to volume** | |
| **Modified** | 06/18/21 10:25:10 AM |

**Reviewed By:** **Date:**

# EPA 7471B Injection Log

Directory: K:\FIMS Freddie\Backup Excel\

| RunID | Injected | | Sample Name | Misc Info | FileName | Multiplier |
|---|---|---|---|---|---|---|
| 1 | 25 Jun 2021 | 13:33 | Calib. Blank | | 210625S2 96 | 1. |
| 2 | 25 Jun 2021 | 13:35 | ICAL 0.208ppb 210625 | | 210625S2 96 | 1. |
| 3 | 25 Jun 2021 | 13:36 | ICAL 0.521ppb 210625 | | 210625S2 96 | 1. |
| 4 | 25 Jun 2021 | 13:38 | ICAL 1.042ppb 210625 | | 210625S2 96 | 1. |
| 5 | 25 Jun 2021 | 13:40 | ICAL 2.083ppb 210625 | | 210625S2 96 | 1. |
| 6 | 25 Jun 2021 | 13:41 | ICAL 5.21ppb 210625 | | 210625S2 96 | 1. |
| 7 | 25 Jun 2021 | 13:43 | ICAL10.42ppb 210625 | | 210625S2 96 | 1. |
| 8 | 25 Jun 2021 | 14:14 | ICV 210625 | | 210625S2 96 | 1. |
| 9 | 25 Jun 2021 | 14:16 | ICB 210625 | | 210625S2 96 | 1. |
| 10 | 25 Jun 2021 | 14:17 | LLICV 210625 | | 210625S2 96 | 1. |
| 11 | 25 Jun 2021 | 14:19 | CCV 210625 | | 210625S2 96 | 1. |
| 12 | 25 Jun 2021 | 14:20 | CCB 210625 | | 210625S2 96 | 1. |
| 13 | 25 Jun 2021 | 14:22 | 210618A BLK | | 210625S2 96 | 1. |
| 14 | 25 Jun 2021 | 14:26 | 210618A LCS | | 210625S2 96 | 1. |
| 15 | 25 Jun 2021 | 14:27 | 210618A LCSD | | 210625S2 96 | 1. |
| 16 | 25 Jun 2021 | 14:29 | BA33591S01 | | 210625S2 96 | 1. |
| 17 | 25 Jun 2021 | 14:31 | BA33592S01 | | 210625S2 96 | 1. |
| 18 | 25 Jun 2021 | 14:33 | BA33593S01 | | 210625S2 96 | 1. |
| 19 | 25 Jun 2021 | 14:34 | BA33594S01 | | 210625S2 96 | 1. |
| 25 | 25 Jun 2021 | 14:48 | CCV 210625 | | 210625S2 96 | 1. |
| 26 | 25 Jun 2021 | 14:49 | CCB 210625 | | 210625S2 96 | 1. |

# INORGANIC ANALYSIS
# Calibration and Raw Data

# % Moisture

**Batch:** QCG 210603-M008677

**Method:** CLP 4.0

**Date:** 06/03/21 15:53

| Sample | Container | Pan (g) | Pan+Wet (g) | Pan+Dry 1 (g) | Pan+Dry 2 (g) | Moisture (%) | Comments |
|---|---|---|---|---|---|---|---|
| BA33608 | S01 | 0.8185 | 9.0956 | 8.1465 | 8.1465 | 11.467 | |
| | | 06/03/21 15:53 | 06/03/21 15:54 | 06/04/21 15:20 | | | |
| BA33559D | S01 | 0.8155 | 6.9070 | 6.4194 | 6.4198 | 7.998 | |
| | | 06/03/21 15:32 | 06/03/21 15:34 | 06/04/21 15:11 | 06/04/21 15:11 | | |
| BA33588 | S05 | 0.8226 | 8.5909 | 8.3963 | 8.3962 | 2.506 | |
| | | 06/03/21 15:34 | 06/03/21 15:35 | 06/04/21 15:11 | | | |
| BA33589 | S04 | 0.8262 | 6.7294 | 6.4805 | 6.4804 | 4.218 | |
| | | 06/03/21 15:35 | 06/03/21 15:36 | 06/04/21 15:11 | 06/04/21 15:11 | | |
| BA33590 | S05 | 0.8357 | 7.4938 | 7.1258 | 7.1262 | 5.521 | |
| | | 06/03/21 15:36 | 06/03/21 15:42 | | 06/04/21 15:12 | | |
| BA33591 | S01 | 0.8275 | 6.4391 | 5.6650 | 5.6650 | 13.795 | |
| | | 06/03/21 15:43 | 06/03/21 15:44 | 06/04/21 15:15 | 06/04/21 15:15 | | |
| BA33592 | S01 | 0.8238 | 8.9320 | 7.2101 | 7.2108 | 21.228 | |
| | | 06/03/21 15:44 | 06/03/21 15:44 | | 06/04/21 15:15 | | |
| BA33593 | S01 | 0.8261 | 7.5368 | 6.7765 | 6.7765 | 11.330 | |
| | | 06/03/21 15:45 | 06/03/21 15:45 | 06/04/21 15:16 | 06/04/21 15:16 | | |
| BA33594 | S01 | 0.8237 | 7.5263 | 6.7423 | 6.7432 | 11.684 | |
| | | 06/03/21 15:46 | 06/03/21 15:47 | | 06/04/21 15:17 | | |
| BA33559 | S01 | 0.8338 | 6.0663 | 5.6496 | 5.6496 | 7.964 | |
| | | 06/03/21 15:31 | 06/03/21 15:32 | 06/04/21 15:10 | 06/04/21 15:10 | | |
| BA33606 | S01 | 0.8186 | 6.6538 | 6.3515 | 6.3517 | 5.177 | |
| | | 06/03/21 15:51 | 06/03/21 15:52 | | 06/04/21 15:19 | | |
| BA33617 | S01 | 0.8410 | 8.4368 | 8.3337 | 8.3338 | 1.356 | |
| | | 06/03/21 16:04 | 06/03/21 16:05 | 06/04/21 15:24 | | | |
| BA33609 | S01 | 0.8356 | 7.3559 | 6.9371 | 6.9372 | 6.421 | |
| | | 06/03/21 15:55 | 06/03/21 15:56 | 06/04/21 15:20 | | | |
| BA33610 | S01 | 0.8285 | 6.6861 | 6.1293 | 6.1294 | 9.504 | |
| | | 06/03/21 15:56 | 06/03/21 15:57 | 06/04/21 15:21 | | | |
| BA33611 | S01 | 0.8431 | 7.7203 | 7.6160 | 7.6161 | 1.515 | |
| | | 06/03/21 15:58 | 06/03/21 15:59 | 06/04/21 15:21 | | | |
| BA33612 | S01 | 0.8358 | 8.9701 | 7.3192 | 7.3192 | 20.296 | |
| | | 06/03/21 15:47 | 06/03/21 15:48 | 06/04/21 15:22 | 06/04/21 15:22 | | |
| BA33613 | S01 | 0.8322 | 7.4693 | 7.0997 | 7.0997 | 5.569 | |
| | | 06/03/21 15:59 | 06/03/21 16:00 | 06/04/21 15:22 | | | |
| BA33614 | S01 | 0.8258 | 6.8193 | 6.6847 | 6.6847 | 2.246 | |
| | | 06/03/21 16:00 | 06/03/21 16:01 | 06/04/21 15:23 | 06/04/21 15:23 | | |
| BA33615 | S01 | 0.8275 | 7.0589 | 6.6197 | 6.6199 | 7.045 | |
| | | 06/03/21 16:02 | 06/03/21 16:03 | | 06/04/21 15:24 | | |
| BA33616 | S01 | 0.8326 | 6.6891 | 6.6104 | 6.6104 | 1.344 | |
| | | 06/03/21 16:03 | 06/03/21 16:03 | 06/04/21 15:24 | 06/04/21 15:24 | | |
| BA33604 | S01 | 0.8240 | 6.5494 | 6.1834 | 6.1834 | 6.393 | |
| | | 06/03/21 15:50 | 06/03/21 15:50 | 06/04/21 15:18 | 06/04/21 15:18 | | |

| Date/Time InOven@104ºC | Date/Time OutOven@104ºC | Date/Time InOven@104ºC | Date/Time OutOven@104ºC |
|---|---|---|---|
| 06/03/21 3:53:00 PM | | | 06/04/21 3:20:00 PM |