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February 26, 2010 EM009359.0058.00002

Ms. Barbara Cook, P.E.
Chief, Northern California – Coastal Cleanup
c/o Lynn Nakashima
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, California 94710

Subject: Letter Work Plan for Step-Out Sampling Locations on the University Of California Richmond Field Station, MW-25 Pilot Test Area, Lots 1 and 2, Former Zeneca Facility, Campus Bay Project, Richmond, California

Dear Ms. Cook:

LFR Inc. an ARCADIS company (LFR; now fully integrated and known as ARCADIS) has prepared this step-out sampling letter work plan ("the Work Plan") to describe additional groundwater sampling in support of the pilot testing activities currently being completed in the vicinity of MW-25, on Lots 1 and 2, of the former Zeneca facility, (now referred to as Campus Bay) located in Richmond, California ("the Site"; Figure 1). This Work Plan has been prepared in accordance with the requirements of the Department of Toxic Substances Control (DTSC) Site Investigation Order, Docket No. 04/05-006 ("DTSC Order") on behalf of Cherokee Simeon Venture I, LLC (CSV); Zeneca Inc.; and Bayer Crop Science Inc., collectively known as "the Respondents." The Regents of the University of California is also a respondent to the DTSC Order.

In a November 30, 2009 meeting with the DTSC ("the DTSC Meeting"), the Respondents presented preliminary baseline groundwater analytical data collected in the MW-25 pilot study area. Based on the concentrations of certain volatile organic compounds (VOCs), in particular trichloroethene (TCE), at piezometers PZ-11 and PZ-12 (Figure 2), the DTSC required additional sampling on the University of California Richmond Field Station property in order to further assess concentrations of VOCs detected in groundwater west of MW-25. In accordance with DTSC's requirements, the step-out field sampling activities will include advancing four soil borings using Membrane Interface Probe (MIP) and Cone Penetrometer Test (CPT) technology at the approximate locations illustrated in Figure 2 (UCB-MIP-1, UCB-MIP-2, UCB-MIP-3, and UCB-MIP-4). Grab groundwater samples will be collected from each CPT/MIP soil boring to verify the MIP results. An additional shallow grab groundwater sample (approximately 10 feet to 20 feet below ground surface [bgs]) will be collected south of PZ-11 at proposed location UCB-11 (Figure 2). The data will be used to further assess the lateral and vertical extent of the VOC concentrations detected in groundwater samples collected from PZ-11 and PZ-12.

Scope of Work

The field activities discussed in this Work Plan will be conducted in accordance with the procedures and methodologies set forth in the following LFR documents previously approved by the DTSC:

- "Revised Quarterly Monitoring, Well Installation/Repair, and Lot 1/Lot 2 Field Sampling and Analysis Plan, Campus Bay Site, Former Zeneca, Inc., Richmond Facility, Richmond, California," dated September 19, 2005 ("Lots 1 and 2 FSAP");
- "Revised Health and Safety Plan, Environmental and Associated Activities, Campus Bay Site, Former Zeneca, Inc., Richmond Facility, Richmond, California," dated January 7, 2008;
- "Revised Quality Assurance Project Plan Approval, Former Zeneca Property, Campus Bay Site," dated July 18, 2005; and
- "Treatability and Pilot Study Work Plan for Localized Occurrences of Volatile Organic Compounds in Groundwater, Lots 1 and 2, Former Zeneca Facility, Campus Bay Project, Richmond, California," dated September 6, 2006 ("Pilot Study Work Plan").

The approximate sample locations are illustrated on Figure 2. The field sampling and reporting activities are described below.

Pre-Field Activities

Prior to implementing field activities, Underground Service Alert (USA) will be notified at least 48 hours in advance of mobilization to the field. A private utility locator will also be contracted to identify underground utilities at each sample location. ARCADIS will obtain the applicable county and state permits required for the work.

Sampling Activities

In accordance with the procedures described in the Lots 1 and 2 FSAP, a licensed drilling contractor will advance four soil borings using MIP and CPT technology at the approximate locations illustrated on Figure 2 (UCB-MIP-1, UCB MIP-2, UCB-MIP-3, and UCB-MIP-4). The MIP/CPT technology will be used to assess the lateral and vertical extent of the VOC concentrations detected at PZ-11 and PZ-12 (Figure 2). The MIP data will provide qualitative information regarding the vertical distribution of VOC's in groundwater at each soil boring. The CPT/MIP soil borings will be advanced to a maximum depth of approximately 50 feet bgs. To obtain quantitative analytical data and confirm the MIP data, two grab groundwater samples will be collected at a soil boring adjacent to each MIP/CPT boring. One grab groundwater sample will be collected from a water-bearing zone shallower than 20 feet bgs and the second grab groundwater sample will be collected from a water-bearing zone identified at a depth greater than 20 feet bgs. The precise sampling zones will be identified by assessing the real time MIP/CPT data.

The vertical extent of VOCs in groundwater south of PZ-11 has been previously characterized by grab groundwater samples collected from UCP-CPT-2 (Figure 2). To further assess the lateral extent of VOCs detected in shallow groundwater (less than 20 feet bgs) south of PZ-11, a grab groundwater sample will be collected (between approximately 10 to 20 feet bgs) at proposed location UCB-11 (Figure 2). A limited access drill rig will be used for this sample location due to the access limitations caused by a nearby eucalyptus grove.

In accordance with the procedures described in the Lots 1 and 2 FSAP, the grab groundwater samples will be collected using a hollow-rod assembly with a 3-foot long stainless steel screen attached at the leading end of the assembly (Hydropunch). Grab groundwater samples will be collected in clean, laboratory-provided sample containers, stored in an ice-chilled cooler, and transported to Curtis & Tompkins, Ltd., a California-certified laboratory for analysis of VOCs using EPA method 8260B.

After groundwater sampling is complete, the soil borings will be abandoned with a cement slurry using the procedures described in the Lots 1 and 2 FSAP. Investigation-derived waste (IDW) will be disposed of in accordance with the procedures described in the Lots1 and 2 FSAP. Soil or water waste will be containerized in clean Department of Transportation-approved 55-gallon drums or similar. An adhesive label will be affixed to each container, noting the following information: container number, waste type, location where the IDW was generated, and date of waste generation. The location of the soil borings will be surveyed using geographic positioning systems (GPS) technology.

Reporting

Upon completion of the sampling activities, ARCADIS will prepare a summary letter report for submittal to the DTSC. The report will include a description of the drilling and sampling procedures and a summary of the groundwater data.

Currently, the activities described in this Work Plan are scheduled to take place in March 2010, pending DTSC approval of this Work Plan. If you have any questions regarding the information provided above, please do not hesitate to call the undersigned at (510) 652-4500.

Sincerely,

Andrew M. Romolo, P.G. (8110)
Senior Associate Geologist

cc: Ms. Lynn Nakashima, DTSC
Mr. Doug Mosteller, Cherokee Simeon Venture I, LLC

Mr. Bill Marsh, Esq.
Mr. Tom Kambe, Brooks Street
Mr. Tony Garvin, University Counsel for UC
Mr. Brian Spiller, Zeneca, Inc.
Mr. Nicholas Targ, Esq.
Mr. Karl Hans, UC

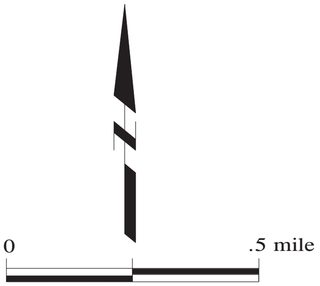
Attachments:

Figure 1. Site Vicinity Map
Figure 2. Proposed Step-Out Sampling Locations

SOURCE: THOMAS BROS MAP - Bay Area 2001

Approximate Campus Bay Property Boundary

Approximate HEA Boundary



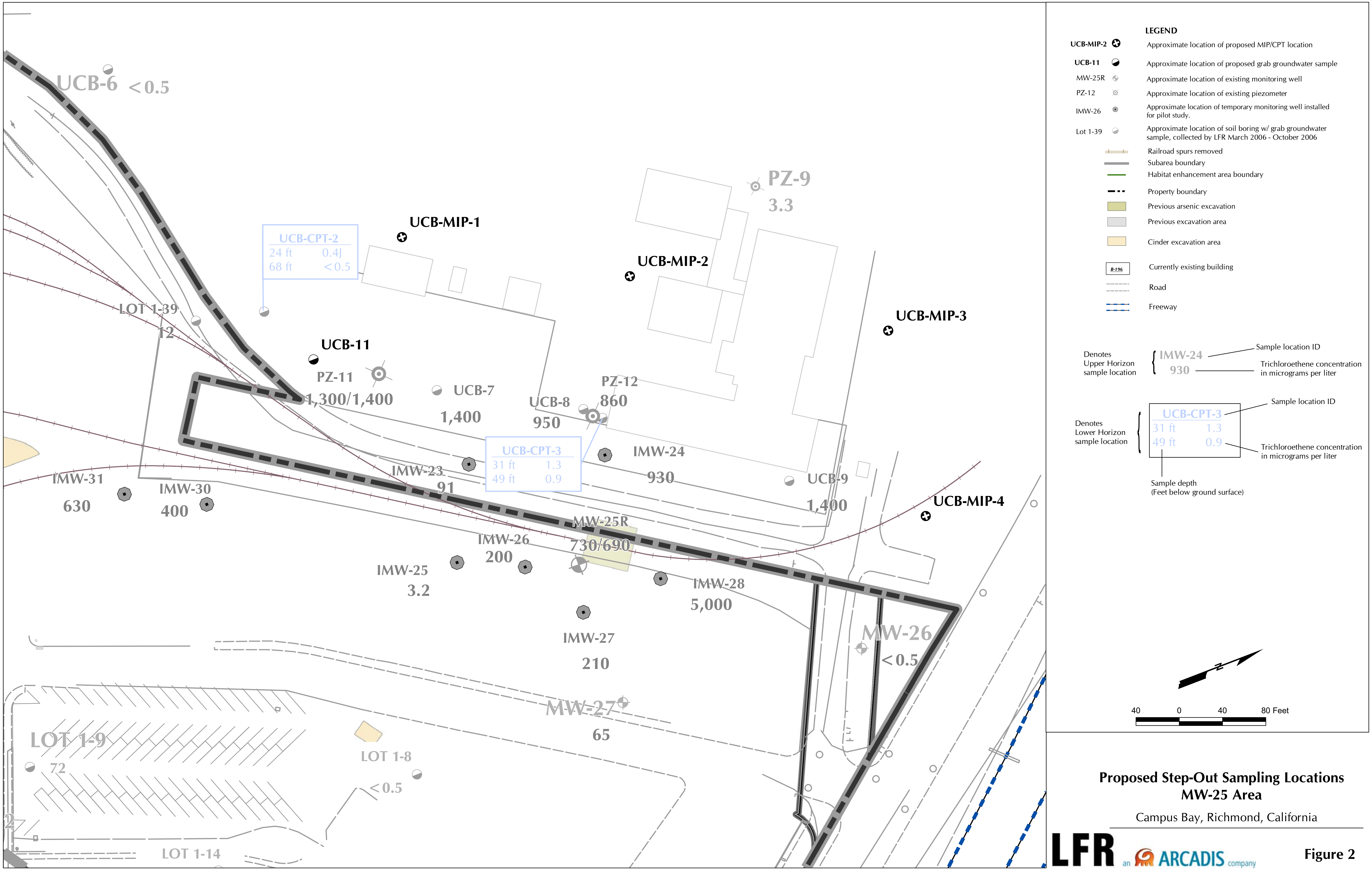
DESIGN\001\09358\Campus Bay Site Vicinity Map.CDR 120203

Site Vicinity Map

Campus Bay, Richmond, California

LFR

Figure 1



Proposed Step-Out Sampling Locations
MW-25 Area

Campus Bay, Richmond, California

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Figure 2