April 21, 2014
Project No. 401823001

RECEIVED
By Alameda County Environmental Health at 3:43 pm, Apr 23, 2014

Mr. Walter R. Pierce
Western Forge & Flange
687 County Road 2201
Cleveland, Texas 77328

Subject: Response to Technical Comments, Alameda County Environmental Health Comments and Approval of Corrective Actions; Site Cleanup Program (SCP) Case No. RO3009, Geotracker Global ID # T10000001598; Western Forge & Flange 540 Cleveland Avenue, Albany, CA 94706

Dear Mr. Pierce:

Enclosed is our response to technical comments prepared by the Alameda County Environmental Health (ACEH) in a letter issued on April 14, 2014. The technical comments were a response to the Ninyo Moore's Removal Action Cleanup Report (RACR) dated February 6, 2014, and 1st Quarter 2014 Groundwater Monitoring Report (groundwater monitoring report) dated April 7, 2014, which were prepared for the property located at 540 Cleveland Avenue in Albany, California (site).

Should you have any questions regarding this letter need additional information, please contact the undersigned at your convenience.

Sincerely,
NINYO & MOORE

Peter Sims
Project Environmental Geologist

Professional Geologist
Kristopher M. Larson
No. 8059
State of California

Kris M. Larson, PG 8059
Principal Environmental Geologist

CRA/KML/caa

Distribution: (1) Addressee
(1) Mark E. Detterman, ACEH

Attachments: ACEH April 14, 2014 Comments and Approval of Corrective Actions
Table 1 – RACR Analytical Results for Metals
Table 2 – RACR Analytical Results for Petroleum Hydrocarbons, VOCs, and pH
Table 3 – RACR Analytical Results for PAHs and SVOCs
Table 4 – RACR Analytical Results for PCBs
Table 5 – 1st Quarter 2014 Groundwater Monitoring Analytical Results for Metals and Total Dissolved Solids
Table 6 - 1st Quarter 2014 Groundwater Monitoring Analytical Results for TPHho and PAHs
Tables D-1 through D-4, 95% UCL Calculations for Arsenic, Lead, Nickel and benzo(a)pyrene

April 21, 2014
Project No. 401823001

To: Mr. Mark E. Detterman
Alameda County Environmental Health Department
Health Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Perjury Statement
Response to ACEH Technical Comments
540 Cleveland Avenue
Albany, California 94706

I declare, under penalty of perjury, that the information or recommendations contained in the attached response letter are true or correct to the best of my knowledge.

Walter R. Pierce
President and CEO
Western Forge & Flange Company

RESPONSE TO ACEH COMMENTS

The ACEH prepared a letter of technical comments dated April 14, 2014, discussing several issues with Ninyo & Moore's RACR dated February 6, 2014. A copy of the ACEH letter is attached. The following six responses relate directly to each of the six technical comments in the letter.

1) Groundwater Cleanup Goals – The ACEH requests that we evaluate existing groundwater monitoring data using the ***Summary Table A, Environmental Screening Levels (ESLs) for Shallow Soils Where Groundwater is a Current or Potential Source of Drinking Water***. Ninyo & More recommended in the RACR and groundwater monitoring report that drinking water ESLs should be the applicable groundwater cleanup goals (CGs) for the site rather the May 2013 aquatic habitat goal ESLs (the previously established groundwater CGs) based on results of total dissolved solids (TDS) analysis and the relatively minor residual impacts detected in groundwater monitoring wells which generally decrease towards the sites western (down-gradient) boundary that is closest to San Francisco Bay. ACEH requested that aquatic habitat goals still be considered when reviewing groundwater monitoring results based on the site's proximity to the bay; however ACEH is also in general agreement that it is unlikely that the low concentrations of metals in site groundwater would impact ecological receptors in the bay. Therefore, it is Ninyo & Moore's understanding that this request for comparison to aquatic habitat goals is not intended to show that the site requires further remedial action to prevent impacts to the aquatic habitat of San Francisco Bay, but merely to provide a comparison of groundwater monitoring results to the current (December 2013) aquatic habitat goal ESLs, rather than the May 2013 aquatic habitat goal ESLs which were the previous groundwater CGs. Ninyo & Moore has revised our groundwater monitoring data tables to include the Table A ESLs as the revised cleanup goals, which accounts for aquatic habitat goals.

2) Soil Cleanup Goals - The ACEH requests that we evaluate post-remediation remaining soil data using the ***Summary Table A, Environmental Screening Levels (ESLs) for Shallow Soils Where Groundwater is a Current or Potential Source of Drinking Water***. The ACEH request is based on the changes in ESLs from May 2013 (which were used for most of the soil CGs) to December 2013. Ninyo & Moore has revised our confirmation soil sample data tables to include the Table A ESLs for comparison. The only ESL which was used as a cleanup goal and decreased between May and December 2013 is the ESL for total petroleum hydrocarbons as hydraulic oil (TPHho), which decreased from 2,500 mg/kg to 500 mg/kg. This ESL for TPHho is based on nuisance odors, and is not based on actual risk to human health or the environment. There are three confirmation sample locations that exceed the new ESL, including EX7-S-5-5.5 (570 mg/kg), EX8-B-3-3.0 (2,400 mg/kg), and EX8-S-2-1.0 (980 mg/kg). Regarding the concern for worker exposure, the December 2013 ESL for TPHho for direct exposure (human health risk) is 100,000 mg/kg for a Commercial/Industrial Worker Scenario. This indicates that, because the existing TPHho concentrations are below 2,500 mg/kg, there should be no health risk to future construction workers during site development by the City of Albany. The only other real potential issue is TPHho leaching to groundwater. Because of the following factors TPHho should not present a leaching potential to groundwater: 1) nearly all of the significant TPHho was removed during soil and groundwater during our remediation activities, 2) the most recent groundwater

monitoring report (First Quarter 2014) has not reported any detection of TPHho in the three site groundwater monitoring wells, and 3) the entire site will be paved over thus creating a barrier between the remaining impacted soil and surface water, retarding any leaching potential. In addition, although this is not a LUST case, much of the cleanup criteria included in the SWRCB Low-Threat UST Case Closure Policy has been met, including:

- unauthorized release has been stopped;
- free product has been removed;
- secondary source has been removed to the maximum extent practicable;
- MTBE has not been detected;
- there is no TPHho groundwater plume and the nearest well or surface water body (San Francisco Bay) is greater than 250 feet from the defined boundary; and
- because the remaining TPHho in soil will not volatilize, there will be no petroleum vapor intrusion to indoor air.

3) Sensitivity Analysis – A sensitivity analysis was requested in order to refine our results for several 95% Upper Confident Limit (UCL) statistical analyses we prepared for post excavation site soils. The sensitivity analysis was requested because of the uncertainty of using 50% of the reporting limit for samples that were non-detectable for certain constituents. Ninyo & Moore originally conducted the 95% UCLs on three Title 22 metals, including nickel, lead, and arsenic as well as benzo(a)pyrene (BAP). All four 95% UCLs were below their respective cleanup goals using the original Pro UCL software (version 4.0). Of the four 95% UCLs prepared, nickel and lead concentrations used for inputting into the version 4.0 Pro UCL software were all above the laboratory reporting limit, so there is no need to prepare an updated statistical analysis. For the two remaining constituents, arsenic and BAP, there were several non-detections for each. Therefore, we've decided to revise the statistical analyses for each using version 5.0 of the Pro-UCL package that accounts for non-detectable samples.

Singh, Maichle, and Lee (EPA, 2006) concluded that UCLs obtained by substituting half the detection limit do not perform well. They recommended avoiding the use of substitution methods to compute 95% UCLs based on data sets with non-detect results and instead using normal distribution based 95% UCLs computed using Kaplan-Meier estimates in the Student's t-distribution method or percentile bootstrap method. As a result, non-detect arsenic and BAP data were excluded from the goodness-of-fit tests performed by ProUCL and replaced with estimated values generated to match the distribution of detected arsenic and BAP data.

Results from the ProUCL software version 5.0 recommended 95% UCL for arsenic included values of 4.819 milligrams per kilogram (mg/kg) based on the Kaplan-Meier estimates using the Student's t-distribution critical value, and 5.083 mg/kg based on the Kaplan-Meier estimates us-

ing the percentile bootstrap method. Both recommended 95% UCLs are below the cleanup goal for arsenic of 7.0 mg/kg.

Results from the ProUCL software version 5.0 recommended 95% UCL for BAP included values of 18.35 micrograms per kilogram (ug/kg) based on the Kaplan-Meier estimates using the Student's t-distribution critical value and 18.42 ug/kg based on the Kaplan-Meier estimates using the percentile bootstrap method. Both recommended 95% UCLs are below the cleanup goal for BAP of 130 ug/kg.

4) Downgradient Delineation of Contaminants – The groundwater flow direction evaluated during the February 2013 groundwater monitoring was toward the west. The groundwater flow direction discussed in the RACR may have been anomalous, and future monitoring events will provide a clearer picture of site groundwater flow direction and gradient.

5) Groundwater Monitoring – The groundwater tables have been revised to include Table A ESLs and are attached. We will remove hexavalent chromium from the sampling suite and we still propose to remove PAHs from the sampling suite based on the few detected concentrations of PAHs being below the Table A ESLs.

6) Site Management Plan – Our re-evaluation has basically confirmed that the remaining constituents of concern left in site soil and groundwater will not create a health risk or threat to either site construction workers or occupants. The remaining concentrations of TPHho and metals in soil, and metals in groundwater should not affect construction workers due to their limited time on site exposed to site contaminants. The most likely route of exposure for construction workers would be through ingestion or inhalation, both of which can be prevented with proper use of personal protective equipment and dust controls during construction activities. City of Albany staff occupying the site subsequent to site development will not be exposed to any site contaminants due to an asphalt and concrete cap covering the entire site with the exception of planter boxes in the eastern portion of the property. In addition, we have recently completed a Soil Management Plan, which includes a discussion of worker protocols if contaminated soils are encountered during site activities. Therefore, we propose that a Site Management Plan is not needed.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

April 14, 2014

Mr. Walter Pierce
Western Forge & Flange Co.
687 Country Rd 2201
Cleveland, TX 77327
(sent via electronic mail to wpierce@western-forge.com)

Subject: Comments and Approval of Corrective Actions; Site Cleanup Program (SCP) Case No. RO0003009 and Geotracker, Global ID # T10000001598; Western Forge & Flange, 540 Cleveland Ave. Albany, CA 94706

Dear Mr. Pierce:

Alameda County Environmental Health (ACEH) staff has reviewed the case file including the *Removal Action Completion Report*, dated February 6, 2014, and the *1st Quarter 2014 Groundwater Monitoring Report,* dated April 7, 2014, and the *Soil Management Plan,* dated April 7, 2014. The documents were prepared on your behalf by Ninyo & Moore. Thank you for submitting the documents.

The *Removal Action Completion Report* documents the results of corrective actions at the subject site that included the removal of 1,313 tons of contaminated soil, 12.5 tons of groundwater, and 7 tons of treated wood waste from the site from 15 excavations primarily located on the western half of the subject property.

Three groundwater monitoring wells were installed at the site and low concentrations of Total Petroleum Hydrocarbons as hydraulic oil (TPHho) and several dissolved metal concentrations were detected at concentrations above cleanup goals. Groundwater flow was documented to the east; however, several extenuating reasons suggest this could be a temporary condition. The report stated that concentrations may decrease further with additional groundwater sampling, but if concentrations did not reach cleanup goals a deed restriction prohibiting the use of groundwater as drinking water should be considered. While several metals exceeded the cleanup goals, the report reasoned that it was unlikely for these metals to impact ecologic receptors given the distance (approximately 240 feet) to the margin of the San Francisco Bay.

The *1st Quarter 2014 Groundwater Monitoring Report* generally documented decreasing contaminant trends in site monitoring wells, and establishment of groundwater flow to the west, as generally anticipated. Decreases in TPHho and PAHs were documented; however, several metals remained over cleanup goals. The report recommended use of Drinking Water cleanup goals (not drinking water Environmental Screening Level [ESLs], which also consider ecotoxicity), cessation of groundwater monitoring, public notification of potential closure, and well destruction thereafter if no objections were documented.

The *Soil Management Plan* is a plan for the current redevelopment scenario, and it appears appropriate to manage soil during site redevelopment. A Site Management Plan will be required for the future management of residually contaminated soil and groundwater when planned or unplanned underground construction or repair is necessary in the future at the site.

Based on the review of the case file ACEH requests that you address the following technical comments and send us the documents requested below.

TECHNICAL COMMENTS

1. **Groundwater Cleanup Goals** – Soil and groundwater cleanup goals for the site were defined based on limited total dissolved solids (TDS) data at the site obtained from grab groundwater collected from a number of soil bores. The limited data indicated that TDS concentrations in groundwater were over groundwater beneficial-use concentrations defined in the *San Francisco Bay Basin (Region 2) Water Quality Control Plan*, dated July 2013, and generally known as the Basin Plan (TDS greater than 3,000 milligrams per liter [mg/l]). Subsequent data collected from the three groundwater monitoring wells installed at the site (which were developed and are capable of providing reproducible values and concentrations) indicate TDS ranges between 1,100 and 1,800 mg/l. Therefore the cleanup goals proposed in the *Revised Data Gap Investigation Report and Corrective Action Plan* are no longer valid as TDS concentrations are below the non-beneficial use designation criteria.

   Based on the TDS values, the *Removal Action Completion Report* recommends revising groundwater cleanup goals to meet Drinking Water standards as, in general, groundwater concentrations of various contaminants decrease towards the west, the presumed, and most likely, downgradient direction.

   Because the margin of the San Francisco Bay is approximately 240 feet west of the site, ACEH is not in agreement that drinking water standards are appropriate, and that aquatic habitat goals and ecotoxicity, must be considered as is done in ESL Tables A or C (*Groundwater is Current or Potential Source of Drinking Water),* promulgated by the San Francisco Regional Water Quality Control Board (RWQCB). The existing groundwater cleanup goals were derived using the May 2013 ESLs; however, these screening levels were revised in December 2013, and the revised ESLs are now the appropriate levels to use going forward.

   However, according to the *ESL User's Guide: Derivation and Application of Environmental Screening Levels*, (December 2013), "...the ESLs provide a tiered approach to environmental risk assessments". ACEH is in general agreement that it is unlikely that the low concentrations of metals will impact ecologic receptors in the Bay given the distance and given the likely affects of Interstate 580 directly west of the subject property. However to reflect and evaluate these goals, ACEH requests revision of the cleanup goals to "Current or Potential Source of Drinking Water Drinking Water" ESLs that consider ecotoxicity, supported by a Tier 2 evaluation and continued monitoring to determine contaminant trends at the site, in an addendum to the *Removal Action Completion Report* in accordance with the schedule listed below. The Department of Toxic Substances Control (DTSC) *Preliminary Endangerment Assessment Guidance Manual*, dated October 2013, is one available evaluation tool.

2. **Soil Cleanup Goals** – ACEH is in agreement that soil cleanup goals defined using the May 2013 ESLs were likely met (see below also); however, as you are aware the ESLs were revised in December 2013 and site data must be reassessed using the current December 2013 ESLs. In the December 2013 ESL revision the goal for TPHho underwent a reduction from 2,500 to 500 milligrams per kilogram and eight polycyclic aromatic hydrocarbons (PAHs) were, in general, revised to higher concentration goals. Consequently, please submit a re-evaluation of the site to the appropriate newer soil goals in the addendum requested by the date identified below.

3. **Sensitivity Analysis** – The UCL calculations used one of essentially three available options in managing non-detectable results at the site; namely setting non-detectable analytical results at 50% of the detection limit. The other options include setting the value at just below the detection limit, or at zero. Because there is not a capability to determine the exact concentration of a sample below the detection limit, it appears appropriate to request that a sensitivity analysis be conducted to determine the sensitively of the data to this general approach (the selected 50% value), and if this selection might skew the UCL calculations inappropriately.

4. **Downgradient Delineation of Contaminants** – The first groundwater monitoring event at the site documented a groundwater gradient to the east, contrary to the anticipated flow direction. Several reasonable explanations were provided; however, should this flow direction continue please be aware that the downgradient extent of site contamination would not have been defined at the site.

5. **Groundwater Monitoring** – Please continue groundwater monitoring on a quarterly basis according to the following schedule. The *Removal Action Completion Report* recommended discontinuing

PAHs or hexavalent chromium due to non-detectable concentrations or the rare detections of PAHs that were much lower than the December drinking water ESLs, rather than "Table A" ESL goals. Please revise and resubmit groundwater concentration tables to reflect appropriate the updated ESLs in future submittals. ACEH is in general agreement with the hexavalent chromium recommendation; however, revision of existing tables will allow a determination if eliminating other contaminants of concern from the sampling program is appropriate prior to the next groundwater sampling event.

6. **Site Management Plan –** Depending on the outcome of the re-evaluation of site residual contamination as requested above, and any future actions, a Site Management Plan is appropriate for a site with residual contamination. Consequently, please submit a Site Management Plan at an appropriate time.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the specified file naming convention below, according to the following schedule:

- **June 13, 2014 –** Addendum to the Removal Action Completion Report, including Tier 2 and Sensitivity Analysis
  File to be named: RO3009_REM_ADEND_R_yyyy-mm-dd

- **August 8, 2014 –** Groundwater Monitoring Report
  File to be named RO3009_GWM_R_yyyy-mm-dd

- **TBD –** Site Management Plan
  File to be named RO3009_SITE_MANAGE_R_yyyy-mm-dd

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Should you have any questions, please contact me at (510) 567--6876 or send me an electronic mail message at mark.detterman@acgov.org.

Sincerely,

Digitally signed by Mark E. Detterman
DN: cn=Mark E. Detterman, o, ou, email, c=US
Date: 2014.04.14 12:50:51 -07'00'

Mark E. Detterman, PG, CEG
Senior Hazardous Materials Specialist

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations
Electronic Report Upload (ftp) Instructions

cc: Kris Larson, Ninyo & Moore, 1956 Webster Street, Suite 400, Oakland, CA 94612;(sent via electronic mail to klarson@ninyoandmoore.com)

Cem Atabek, Ninyo & Moore, 1956 Webster Street, Suite 400, Oakland, CA 94612; (sent via electronic mail to catabek@ninyoandmoore.com)

Dilan Roe (sent via electronic mail to dilan.roe@acgov.org)
Mark Detterman (sent via electronic mail to mark.detterman@acgov.org)
Electronic File, GeoTracker

Attachment 1

Responsible Party(ies) Legal Requirements/Obligations

REPORT/DATA REQUESTS

These reports/data are being requested pursuant to Division 7 of the California Water Code (Water Quality), Chapter 6.7 of Division 20 of the California Health and Safety Code (Underground Storage of Hazardous Substances), and Chapter 16 of Division 3 of Title 23 of the California Code of Regulations (Underground Storage Tank Regulations).

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (Local Oversight Program [LOP] for unauthorized releases from petroleum Underground Storage Tanks [USTs], and Site Cleanup Program [SCP] for unauthorized releases of non-petroleum hazardous substances) require submission of reports in electronic format pursuant to Chapter 3 of Division 7, Sections 13195 and 13197.5 of the California Water Code, and Chapter 30, Articles 1 and 2, Sections 3890 to 3895 of Division 3 of Title 23 of the California Code of Regulations (23 CCR). Instructions for submission of electronic documents to the ACEH FTP site are provided on the attached "Electronic Report Upload Instructions."

Submission of reports to the ACEH FTP site is in addition to requirements for electronic submittal of information (ESI) to the State Water Resources Control Board's (SWRCB) Geotracker website. In April 2001, the SWRCB adopted 23 CCR, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1 (Electronic Submission of Laboratory Data for UST Reports). Article 12 required electronic submittal of analytical laboratory data submitted in a report to a regulatory agency (effective September 1, 2001), and surveyed locations (latitude, longitude and elevation) of groundwater monitoring wells (effective January 1, 2002) in Electronic Deliverable Format (EDF) to Geotracker. Article 12 was subsequently repealed in 2004 and replaced with Article 30 (Electronic Submittal of Information) which expanded the ESI requirements to include electronic submittal of any report or data required by a regulatory agency from a cleanup site. The expanded ESI submittal requirements for petroleum UST sites subject to the requirements of 23 CCR, Division, 3, Chapter 16, Article 11, became effective December 16, 2004. All other electronic submittals required pursuant to Chapter 30 became effective January 1, 2005. Please visit the SWRCB website for more information on these requirements: (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 7835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, late reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	REVISION DATE: July 25, 2012
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (petroleum UST and SCP) require submission of all reports in electronic form to the county's FTP site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single Portable Document Format (PDF) with no password protection**.
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

1) Obtain User Name and Password
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to deh.loptoxic@acgov.org
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

TABLE 1 - RACR ANALYTICAL RESULTS FOR METALS AND TOTAL DISSOLVED SOLIDS

Sample ID	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thalium	Vanadium	Zinc	Mercury	Total Dissolved Solids
Soil Cleanup Goals (mg/kg)		40	7*	1,500	8	12	2,500	8	80	230	200**	40	150	10	40	10	200	600	10	NA
Confirmation Sample Results (mg/kg)																				
EX1-B-1-4.0	11/14/13	--	6.1	--	--	--	--	--	--	65	16	<1.9	77	--	--	--	--	--	--	--
EX1-S-1-1.0	1/14/14	--	**12**	--	--	--	--	--	--	49	16	2.4	39	--	--	--	--	--	--	--
EX1-S-2-1.0	1/14/14	--	**9.1**	--	--	--	--	--	--	130	26	21	**380**	--	--	--	--	--	--	--
EX1-S-3-1.0	1/14/14	--	4.3	--	--	--	--	--	--	8.2	3.3	<0.45	24	--	--	--	--	--	--	--
EX2-B-1-6.0	10/24/13	--	--	--	--	--	--	--	--	--	71	--	55	--	--	--	--	73	--	--
EX2-B-2-1.0	10/30/13	--	--	--	--	--	--	--	--	--	--	--	**1,200**	--	--	--	--	--	--	--
EX2-B-3-1.0	10/30/13	--	--	--	--	--	--	--	--	--	--	--	**190**	--	--	--	--	--	--	--
EX2-B-4-2.0	11/1/13	--	--	--	--	--	--	--	--	--	--	--	**190**	--	--	--	--	--	--	--
EX2-B-5-2.0	11/1/13	--	--	--	--	--	--	--	--	--	--	--	110	--	--	--	--	230	--	--
EX2-B-6-3.0	11/7/13	--	--	--	--	--	--	--	--	--	--	--	67	--	--	--	--	--	--	--
EX2-S-1-0.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	100	--	--	--	--	230	--	--
EX2-S-1-4.5	10/24/13	--	--	--	--	--	--	--	--	--	11		16	--	--	--	--	18	--	--
EX2-S-2-0.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	**280**	--	--	--	--	240	--	--
EX2-S-2-4.5	10/24/13	--	--	--	--	--	--	--	--	--	17	--	**340**	--	--	--	--	77	--	--
EX2-S-3-0.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	**250**	--	--	--	--	**1,600**	--	--
EX2-S-3-4.5	10/24/13	--	--	--	--	--	--	--	--	--	23	--	**310**	--	--	--	--	110	--	--
EX2-S-4-0.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	**220**	--	--	--	--	99	--	--
EX2-S-4-4.5	10/24/13	--	--	--	--	--	--	--	--	--	18	--	40	--	--	--	--	76	--	--
EX2-S-5-0.5	10/28/13	--	--	--	--	--	--	--	--	--	--	--	**270**	--	--	--	--	--	--	--
EX2-S-5-4.5	10/28/13	--	--	--	--	--	--	--	--	--	--	--	86	--	--	--	--	--	--	--
EX2-S-6-0.5	10/28/13	--	--	--	--	--	--	--	--	--	--	--	**610**	--	--	--	--	--	--	--
EX2-S-7-0.5	10/28/13	--	--	--	--	--	--	--	--	--	--	--	**180**	--	--	--	--	400	--	--
EX2-S-7-4.5	10/28/13	--	--	--	--	--	--	--	--	--	--	--	**210**	--	--	--	--	--	--	--
EX2-S-8-0.5	10/30/13	--	--	--	--	--	--	--	--	--	--	--	78	--	--	--	--	--	--	--
EX2-S-9-0.5	10/30/13	--	--	--	--	--	--	--	--	--	--	--	15	--	--	--	--	--	--	--
EX2-S-10-0.5	10/30/13	--	--	--	--	--	--	--	--	--	--	--	**160**	--	--	--	--	--	--	--
EX2-S-10-4.5	10/30/13	--	--	--	--	--	--	--	--	--	--	--	**180**	--	--	--	--	--	--	--
EX2-S-11-0.5	11/1/13	--	--	--	--	--	--	--	--	--	--	--	74	--	--	--	--	--	--	--
EX2-S-11-4.5	11/1/13	--	--	--	--	--	--	--	--	--	--	--	**390**	--	--	--	--	--	--	--
EX2-S-12-4.5	11/7/13	--	--	--	--	--	--	--	--	--	--	--	**330**	--	--	--	--	--	--	--
EX2-S-13-4.5	11/11/13	--	--	--	--	--	--	--	--	--	--	--	79	--	--	--	--	--	--	--
EX3-B-1-2.0	10/23/13	--	--	--	--	--	--	--	--	**300**	--	--	**280**	--	--	--	--	--	--	--
EX3-B-2-3.0	10/25/13	--	--	--	--	--	--	--	--	27	--	--	36	--	--	--	--	--	--	--
EX3-B-3-3.0	10/30/13	--	--	--	--	--	--	--	--	28	--	--	97	--	--	--	--	--	--	--
EX3-B-4-3.0	10/30/13	--	--	--	--	--	--	--	--	36	--	--	--	--	--	--	--	--	--	--
EX3-S-1-1.0	10/23/13	--	--	--	--	--	--	--	--	60	--	--	57	--	--	--	--	--	--	--
EX3-S-2-1.0	10/23/13	--	--	--	--	--	--	--	--	**390**	--	--	140	--	--	--	--	--	--	--
EX3-S-3-1.0	10/23/13	--	--	--	--	--	--	--	--	**1,400**	--	--	**1,200**	--	--	--	--	--	--	--
EX3-S-4-1.0	10/23/13	--	--	--	--	--	--	--	--	120	--	--	84	--	--	--	--	--	--	--
EX3-S-5-1.0	10/25/13	--	--	--	--	--	--	--	--	**720**	--	--	**720**	--	--	--	--	--	--	--
EX3-S-6-1.0	10/25/13	--	--	--	--	--	--	--	--	**290**	--	--	--	--	--	--	--	--	--	--
EX3-S-7-1.0	10/29/13	--	--	--	--	--	--	--	--	**2,300**	--	--	**2,700**	--	--	--	--	--	--	--
EX3-S-8-1.0	10/29/13	--	--	--	--	--	--	--	--	220	--	--	--	--	--	--	--	--	--	--
EX3-S-9-1.0	10/30/13	--	--	--	--	--	--	--	--	**310**	--	--	**670**	--	--	--	--	--	--	--
EX3-S-10-1.0	10/30/13	--	--	--	--	--	--	--	--	62	--	--	--	--	--	--	--	--	--	--
EX3-S-11-1.0	11/1/13	--	--	--	--	--	--	--	--	15	--	--	43	--	--	--	--	--	--	--
EX3-S-12-1.0	11/1/13	--	--	--	--	--	--	--	--	49	--	--	44	--	--	--	--	--	--	--
EX3-S-13-1.0	11/1/13	--	--	--	--	--	--	--	--	110	--	--	**200**	--	--	--	--	--	--	--

TABLE 1 - RACR ANALYTICAL RESULTS FOR METALS AND TOTAL DISSOLVED SOLIDS

Sample ID	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thalium	Vanadium	Zinc	Mercury	Total Dissolved Solids
Soil Cleanup Goals (mg/kg)		40	7*	1,500	8	12	2,500	8	80	230	200**	40	150	10	40	10	200	600	10	NA
EX3-S-14-1.0	11/7/13	--	--	--	--	--	--	--	--	--	--	--	42	--	--	--	--	--	--	--
EX4-B-1-3.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	110	--	--	--	--	--	--	--
EX4-S-1-1.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	**190**	--	--	--	--	--	--	--
EX4-S-2-1.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	100	--	--	--	--	--	--	--
EX4-S-3-1.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	110	--	--	--	--	--	--	--
EX4-S-4-1.5	10/28/13	--	--	--	--	--	--	--	--	--	--	--	38	--	--	--	--	--	--	--
EX5-B-2-6.0	10/28/13	<1.9	<3.9	130	0.55	<0.49	13	<0.99	5.3	8.1	6.4	<1.9	9.8	<3.9	<0.97	<1.9	23	13	0.02	--
EX5-S-2-2.5	10/24/13	<1.8	3.6	580	<0.36	<0.45	28	--	6.6	29	68	2.0	33	<3.6	<0.91	<1.8	28	130	0.72	--
EX5-S-3-2.5	10/24/13	<2.0	<4.0	730	0.55	<0.50	17	--	5.1	12	44	<2.0	16	<4.0	<1.0	<2.0	22	71	0.25	--
EX5-S-4-2.5	10/24/13	4.4	**14**	300	<0.39	0.89	520	--	20	**270**	**390**	**56**	**780**	<3.9	<0.98	<2.0	42	420	0.27	--
EX5-S-5-2.5	10/28/13	--	<3.8	--	--	--	--	<1.0	--	6.2	5.1	<1.9	12	--	--	--	--	--	--	--
EX6-B-1-2.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	46	--	--	--	--	25	--	--
EX6-S-1-1.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	**230**	--	--	--	--	39	--	--
EX6-S-2-1.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	76	--	--	--	--	46	--	--
EX6-S-3-1.5	10/24/13	--	--	--	--	--	--	--	--	--	--	--	37	--	--	--	--	23	--	--
EX6-S-4-1.5	10/28/13	--	--	--	--	--	--	--	--	--	--	--	91	--	--	--	--	--	--	--
EX7-B-1-7.0	10/24/13	--	<3.8	--	--	--	--	--	--	--	--	--	13	--	--	--	--	--	--	--
EX7-B-2-7.0	10/25/13	--	<3.1	--	--	--	--	--	--	--	--	--	11	--	--	--	--	--	--	--
EX7-B-3-7.0	10/23/13	--	<3.7	--	--	--	--	--	--	--	--	--	29	--	--	--	--	--	--	--
EX7-B-4-7.0	10/25/13	<1.6	4.4	91	0.7	<0.39	24		7.8	7.4	12	<1.6	14	<3.1	<0.78	<1.6	36	18	0.094	
EX7-S-1-5.0	10/24/13	<2.0	**7.4**	220	0.62	<0.50	50	--	18	27	27	2.2	86	<4.0	<1.0	<2.0	41	55	0.085	--
EX7-S-2-5.5	10/24/13	<2.0	6.3	200	<0.36	<0.45	44	--	8.6	23	120	<1.8	41	<3.6	<0.9	<1.8	34	72	0.068	--
EX7-S-3-5.5	10/24/13	--	<3.7	--	--	--	--	--	--	--	--	--	9.9	--	--	--	--	--	--	--
EX7-S-4-5.5	10/24/13	<1.8	<3.6	510	0.42	<0.45	28	--	5.3	29	150	<1.8	15	<3.6	<0.89	<1.8	26	100	0.92	--
EX7-S-5-5.5	10/25/13	<1.7	5.5	160	<0.34	<0.43	16	--	3.5	39	160	<1.7	16	<3.4	<0.86	<1.7	28	42	0.13	--
EX7-S-6-5.5	10/25/13	--	**7.1**	--	--	--	--	--	--	--	--	--	15	--	--	--	--	--	--	--
EX7-S-7-4.5	10/23/13	--	4.5	--	--	--	--	--	--	--	--	--	52	--	--	--	--	--	--	--
EX7-S-8-5.0	10/28/13	--	<3.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX7-S-9-5.0	10/28/13	--	<4.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX7-S-10-5.5	10/30/13	--	<3.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX9-B-1-3.0	10/23/13	--	**9.0**	--	--	--	--	--	--	150	--	26	**160**	--	--	--	--	--	--	--
EX9-B-2-4.0	10/25/13	--	<3.8	--	--	--	--	--	--	--	--	--	14	--	--	--	--	--	--	--
EX9-B-3-3.0	10/30/13	<2.0	<4.0	330	0.47	<0.5	22	--	5.8	110	46	<2.0	15	<4.0	<0.99	<2.0	31	71	0.4	--
EX9-S-1-1.0	10/23/13	--	**7.2**	--	--	--	--	--	--	66	--	6.5	110	--	--	--	--	--	--	--
EX9-S-2-1.0	10/23/13	--	6.2	--	--	--	--	--	--	150	--	31	140	--	--	--	--	--	--	--
EX9-S-3-1.0	10/23/13	--	5.1	--	--	--	--	--	--	24	--	3.8	32	--	--	--	--	--	--	--
EX9-S-4-1.0	10/23/13	--	5.8	--	--	--	--	--	--	200	--	**48**	**200**	--	--	--	--	--	--	--
EX9-S-5-1.0	10/25/13	--	--	--	--	--	--	--	--	--	--	**54**	**320**	--	--	--	--	--	--	--
EX9-S-6-1.0	11/7/13	--	--	--	--	--	--	--	--	--	--	7.0	82	--	--	--	--	--	--	--
EX11-B-1-6.0	10/25/13	--	--	--	--	--	--	--	--	--	10	--	--	--	--	--	--	--	--	--
EX11-S-1-4.5	10/25/13	--	--	--	--	--	--	--	--	--	43	--	--	--	--	--	--	--	--	--
EX11-S-2-4.5	10/25/13	--	--	--	--	--	--	--	--	--	**200**	--	--	--	--	--	--	--	--	--
EX11-S-3-4.5	10/25/13	--	--	--	--	--	--	--	--	--	170	--	--	--	--	--	--	--	--	--
EX11-S-4-4.5	10/25/13	--	--	--	--	--	--	--	--	--	**210**	--	--	--	--	--	--	--	--	--

TABLE 1 - RACR ANALYTICAL RESULTS FOR METALS AND TOTAL DISSOLVED SOLIDS

Sample ID	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thalium	Vanadium	Zinc	Mercury	Total Dissolved Solids
Soil Cleanup Goals (mg/kg)		40	7*	1,500	8	12	2,500	8	80	230	200**	40	150	10	40	10	200	600	10	NA
EX12-B-1-2.0	10/28/13	--	--	--	--	--	--	--	--	51	--	--	84	--	--	--	--	--	--	--
EX12-B-2-2.0	10/30/13	--	--	--	--	--	--	--	--	45	--	--	91	--	--	--	--	--	--	--
EX12-B-3-2.0	11/7/13	--	--	--	--	--	--	--	--	5.9	--	--	13	--	--	--	--	--	--	--
EX12-S-1-1.0	10/28/13	--	--	--	--	--	--	--	--	**240**	--	--	**420**	--	--	--	--	--	--	--
EX12-S-2-1.0	10/28/13	--	--	--	--	--	--	--	--	**1,200**	--	--	**1,900**	--	--	--	--	--	--	--
EX12-S-3-1.0	10/28/13	--	--	--	--	--	--	--	--	110	--	--	20	--	--	--	--	--	--	--
EX12-S-4-1.0	10/28/13	--	--	--	--	--	--	--	--	130	--	--	**170**	--	--	--	--	--	--	--
EX12-S-5-1.0	10/30/13	--	--	--	--	--	--	--	--	**630**	--	--	**1,100**	--	--	--	--	--	--	--
EX12-S-6-1.0	10/30/13	--	--	--	--	--	--	--	--	6.3	--	--	12	--	--	--	--	--	--	--
EX12-S-7-1.0	10/30/13	--	--	--	--	--	--	--	--	--	--	--	7.6	--	--	--	--	--	--	--
EX12-S-8-1.0	10/30/13	--	--	--	--	--	--	--	--	**320**	--	--	**820**	--	--	--	--	--	--	--
EX12-S-9-1.0	11/1/13	--	--	--	--	--	--	--	--	**500**	--	--	**730**	--	--	--	--	--	--	--
EX12-S-10-1.0	11/7/13	--	--	--	--	--	--	--	--	170	--	--	**420**	--	--	--	--	--	--	--
EX12-S-11-1.0	11/11/13	--	--	--	--	--	--	--	--	--	--	--	38	--	--	--	--	--	--	--
EX13-B-1-2.5	10/28/13	--	--	--	--	--	--	--	--	--	52	--	--	--	--	--	--	--	--	--
EX13-S-1-1.0	10/28/13	--	--	--	--	--	--	--	--	--	43	--	--	--	--	--	--	--	--	--
EX13-S-2-1.0	10/28/13	--	--	--	--	--	--	--	--	--	140	--	--	--	--	--	--	--	--	--
EX13-S-3-1.0	10/28/13	--	--	--	--	--	--	--	--	--	16	--	--	--	--	--	--	--	--	--
EX13-S-4-1.0	10/28/13	--	--	--	--	--	--	--	--	--	33	--	--	--	--	--	--	--	--	--
EX14-B-1-1.5	10/28/13	<1.9	3.9	280	0.54	0.57	43	--	8.6	50	150	7.1	61	<3.8	<0.95	<1.9	28	240	0.46	--
EX14-B-2-2.0	10/30/13	2	**12**	880	<0.39	0.89	11	--	3.1	130	**240**	<2.0	9.3	<3.9	2.1	<2.0	13	240	1.5	--
EX14-B-3-3.0	11/4/13	--	**8.8**	--	--	--	--	--	--	--	**640**	--	--	--	--	--	--	--	--	--
EX14-B-4-4.0	11/7/13	--	<4.0	--	--	--	--	--	--	--	5.8	--	--	--	--	--	--	--	--	--
EX14-B-5-4.0	11/7/13	--	--	--	--	--	--	--	--	--	45	--	--	--	--	--	--	--	--	--
EX14-S-1-0.5	10/30/13	<2.0	<4.0	260	<0.4	<0.5	130	--	8.7	64	96	**56**	**270**	<4.0	<1.0	<2.0	20	250	0.44	--
EX14-S-2-0.5	10/28/13	<1.9	4.2	240	0.55	1	46	--	6.5	67	**240**	2.6	23	<3.8	<0.95	<1.9	24	580	0.39	--
EX14-S-3-0.5	10/28/13	<1.7	**9.3**	220	0.43	3.5	480	--	**83**	**330**	**550**	**97**	**470**	<3.4	6.2	<1.7	32	**800**	0.72	--
EX14-S-4-0.5	10/30/13	--	--	--	--	--	--	--	--	--	**390**	--	--	--	--	--	--	--	--	--
EX14-S-5-0.5	10/30/13	--	--	--	--	--	--	<0.97	--	--	150	--	--	--	--	--	--	--	--	--
EX14-S-6-0.5	10/30/13	<2.0	4.8	250	0.52	0.61	15	<1.0	4.5	27	180	<2.0	12	<3.9	<0.98	<2.0	17	150	0.63	--
EX14-S-7-1.5	10/30/13	2.9	**12**	730	<0.39	0.75	15	--	3.9	140	**300**	<1.9	12	<3.9	3.2	<1.9	17	270	2.5	--
EX14-S-8-0.5	11/4/13	--	--	--	--	--	19	--	--	--	--	<1.9	11	--	--	--	--	--	--	--
EX14-S-9-0.5	11/4/13	--	--	--	--	--	--	--	--	--	**390**	--	--	--	--	--	--	--	--	--
EX14-S-10-0.5	11/4/13	--	--	--	--	--	--	--	--	--	**390**	--	--	--	--	--	--	--	--	--
EX14-S-11-1.5	11/4/13	--	**13**	--	--	--	--	--	--	--	**500**	--	--	--	--	--	--	--	--	--
EX14-S-12-2.0	11/4/13	--	**10**	--	--	--	--	--	--	--	150	--	--	--	--	--	--	--	--	--
EX14-S-13-0.5	11/7/13	--	--	--	--	--	--	--	--	--	110	--	--	--	--	--	--	--	--	--
EX14-S-14-0.5	11/7/13	--	--	--	--	--	--	--	--	--	**360**	--	--	--	--	--	--	--	--	--
EX14-S-15-1.5	11/7/13	--	<3.7	--	--	--	--	--	--	--	**240**	--	--	--	--	--	--	--	--	--
EX14-S-16-0.5	11/11/13	--	--	--	--	--	--	--	--	--	170	--	--	--	--	--	--	--	--	--
EX14-S-17-1.5	11/11/13	--	--	--	--	--	--	--	--	--	**630**	--	--	--	--	--	--	--	--	--
EX15-B-1-1.0	10/30/13	<1.9	<3.7	110	<0.39	<0.46	38	--	4	42	160	4.8	97	<3.7	1.1	<1.9	32	110	0.16	--
EX15-B-2-1.0	10/30/13	<1.9	<3.8	200	0.44	<0.48	47	--	6.4	23	71	<1.9	21	<3.8	<0.96	<1.9	31	61	0.093	--
Groundwater Sample Results (mg/L)																				
EX7-GW***	10/29/13	<0.010	**0.03**	0.41	<0.0020	<0.0025	<0.010	--	0.0091	**0.1**	**0.36**	**0.27**	**0.11**	<0.020	<0.0050	<0.010	**0.085**	0.19	**0.00045**	--
MW-1	12/5/13	<0.010	**0.017**	0.074	<0.0020	<0.0020	<0.010	<0.010	<0.0020	**0.021**	**0.0094**	**0.99**	**0.033**	<0.020	<0.0050	<0.010	0.018	<0.020	**0.00022**	1,400
MW-2	12/5/13	<0.010	**0.011**	0.11	<0.0020	<0.0020	<0.010	<0.010	**0.0056**	**0.020**	<0.0050	**0.58**	**0.037**	<0.020	<0.0050	<0.010	0.012	0.047	**0.00027**	1,800
MW-3	12/5/13	<0.010	<0.010	0.15	<0.0020	<0.0020	<0.010	<0.010	0.0028	<0.020	**0.0099**	<0.010	**0.030**	<0.020	<0.0050	<0.010	<0.010	0.047	**0.00021**	1,800
	ESLs (mg/L)	0.006	0.01	1	0.005	0.0025	0.05	0.00002	0.0030	0.0031	0.0025	0.078	0.0082	0.005	0.0019	0.002	0.019	0.081	0.00002	NA

Notes

Metals analyzed by EPA Method 6010B, 7470A (mercury), and 7196A (hexavalent chromium)

Total Dissolved Solids analyzed by EPA Method SM 2540C

-- = not analyzed

TABLE 1 - RACR ANALYTICAL RESULTS FOR METALS AND TOTAL DISSOLVED SOLIDS

Sample ID	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thalium	Vanadium	Zinc	Mercury	Total Dissolved Solids
Soil Cleanup Goals (mg/kg)		40	7*	1,500	8	12	2,500	8	80	230	200**	40	150	10	40	10	200	600	10	NA

ESLs = San Francisco Bay Regional Water Quality Control Board 2013 Environmental Screening Levels, Summary Table A, Groundwater is Current or Potential Drinking Water Source
* indicates a site specific cleanup goal of 7 mg/kg is used for arsenic based on statistical analysis of naturally occurring background concentrations
** indicates a site specific cleanup goal of 200 mg/kg will be used for lead, which is below the ESL of 320 mg/kg
*** indicates water sample were unfiltered and analyzed for total metals as required for waste disposal profiling, and not dissolved metals which cleanup goals and ESLs are based on.
EBMUD - East Bay Municipal Utility District
<x = less than laboratory reporting limit of x
NA = not applicable
mg/kg = milligrams per kilogram
mg/L= milligrams per liter
Bold indicates concentration equal to or exceeding ESL
Grey Shading indicates soil represented by sample was over-excavated

TABLE 2 - RACR ANALYTICAL RESULTS FOR PETROLEUM HYDROCARBONS, VOCs, AND pH

Sample ID	Date Collected	TPHho	Oil & Grease	TPHg	TPHd	TPHmo	VOCs	pH (standard units)
Soil Cleanup Goals (mg/kg)		500	NA	500	500	2,500	NA	NA
Confirmation Sample Results (mg/kg)								
EX5-B-1-5.0	10/24/13	**1,100**	--	--	--	--	--	--
EX5-B-2-6.0	10/28/13	<50	--	--	--	--	--	--
EX5-S-1-2.5	10/24/13	**1,600**	--	--	--	--	--	--
EX5-S-2-2.5	10/24/13	75	--	--	--	--	--	--
EX5-S-3-2.5	10/24/13	< 49	--	--	--	--	--	--
EX5-S-4-2.5	10/24/13	**930**	--	--	--	--	--	--
EX7-B-1-7.0	10/24/13	< 49	--	--	--	--	--	--
EX7-B-2-7.0	10/25/13	<50	--	--	--	--	--	--
EX7-B-3-7.0	10/23/13	< 49	--	--	--	--	--	--
EX7-B-4-7.0	10/25/13	< 49	--	--	--	--	--	--
EX7-S-1-5.0	10/24/13	< 50	--	--	--	--	--	--
EX7-S-2-5.5	10/24/13	94	--	--	--	--	--	--
EX7-S-3-5.5	10/24/13	< 50	--	--	--	--	--	--
EX7-S-4-5.5	10/24/13	< 50	--	--	--	--	--	--
EX7-S-5-5.5	10/25/13	**570**	--	--	--	--	--	--
EX7-S-6-5.5	10/25/13	280	--	--	--	--	--	--
EX7-S-7-4.5	10/23/13	< 50	--	--	--	--	--	--
EX8-B-1-2.0	10/28/13	**11,000**	--	--	--	--	--	--
EX8-B-2-2.0	10/28/13	**8,600**	--	--	--	--	--	--
EX8-B-3-3.0	11/1/13	**2,400**	--	--	--	--	--	--
EX8-S-1-1.0	10/28/13	350	--	--	--	--	--	--
EX8-S-2-1.0	10/28/13	**980**	--	--	--	--	--	--
EX8-S-3-1.0	10/28/13	< 49	--	--	--	--	--	--
EX9-B-3-3.0	10/30/13	--	--	--	7.5	<50	--	--
EX10-B-1-6.0	10/25/13	< 50	--	--	--	--	--	--
EX10-S-1-4.5	10/25/13	120	--	--	--	--	--	--
EX10-S-2-4.5	10/25/13	53	--	--	--	--	--	--
EX15-B-1-1.0	10/30/13	--	--	--	100	160	--	--
EX15-B-2-1.0	10/30/13	--	--	--	15	<49	--	--
Groundwater Sample Results (µg/L)								
EX7-GW	10/29/13	--	--	<50	**4,900**	**12,000**	ND	--
MW-1	12/5/13	**230**	--	--	--	--	--	--
MW-2	12/5/13	<100	--	--	--	--	--	--
MW-3	12/5/13	<100	--	--	--	--	--	--
	ESLs (mg/L)	100	100	100	100	100	NA	NA

Notes

TPHho, TPHd, and TPHmo = total petroleum hydrocarbons as hydraulic oil, diesel, and motor oil, analyzed by EPA Method 8015B

Oil & Grease analzyed by EPA Method 1664

TPHg = total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B

VOCs = volatile organic comounds analyzed by EPA Method 8260B

pH analyzed by EPA Method 9040B

-- = not analyzed

ESLs = San Francisco Bay Regional Water Quality Control Board 2013 Environmental Screening Levels, Summary Table A, Groundwater is Current or Potential Drinking Water Source

*indicates discharge limit is for total identifiable chlorinated hydrocarbons

<x = less than laboratory reporting limit of x

NA = not applicable

ND = not detected (laboratory reporting limts vary, see lab report)

mg/kg = milligrams per kilogram

µg/L= micrograms per liter

Bold indicates concentration exceeding Cleanup Goal

Grey Shading indicates soil represented by sample was over-excavated

TABLE 3 - RACR ANALYTICLA RESULTS FOR PAHs and SVOCs

Sample ID	Date	PAHs																SVOCs		
		Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]flouranthene	Bonz[g, h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz(a, h)anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene	2-Methylnaphthalene	Dibenzofuran	All Other SVOCs
Soil Cleanup Goals (µg/kg)		16,000	13,000	2,800	1300	130	1300	27,000	1300	13,000	380	40,000	8,900	1300	1,200	11,000	85,000	250	NA	NA
Confirmation Sample Results (µg/kg)																				
EX5-B-1-5.0	10/24/13	200	< 49	83	100	63	75	< 49	< 49	170	< 49	250	170	< 49	130	450	320	--	--	--
EX5-B-2-6.0	10/28/13	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	--	--	--
EX5-B-3-6.0	10/28/13	--	--	--	--	79	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX5-B-4-7.0	10/30/13	--	--	--	--	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX5-S-1-2.5	10/24/13	540	140	340	510	**340**	270	110	270	610	< 50	760	490	110	320	1,400	930	--	--	--
EX5-S-2-2.5	10/24/13	< 4.9	15	9.5	35	31	30	20	34	54	< 4.9	82	8.5	19	13	100	93	--	--	--
EX5-S-3-2.5	10/24/13	9.1	8.3	6.3	11	14	14	9.6	17	27	< 4.9	46	8.3	8.8	15	62	49	--	--	--
EX5-S-4-2.5	10/24/13	3,500	< 250	**4,200**	**8,000**	**5,400**	**5,500**	2,000	**5,000**	7,300	**990**	16,000	2,900	**2,000**	**2,600**	**17,000**	14,000	--	--	--
EX5-S-5-2.5	10/28/13	< 5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	--	--
EX5-S-6-2.5	10/28/13	7.5	<5	7.5	18	9.9	19	5.9	15	27	<5	45	7	5.6	5.5	45	49	--	--	--
EX7-B-1-7.0	10/24/13	< 5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	--	--
EX7-B-2-7.0	10/25/13	< 5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	--	--
EX7-B-3-7.0	10/23/13	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	--	--	--
EX7-B-4-7.0	10/25/13	< 5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	--	--
EX7-S-1-5.0	10/24/13	< 5	<5	<5	<5	<5	<5	<5	<5	<5	<5	9.7	9.7	9.7	9.7	11	9.8	--	--	--
EX7-S-2-5.5	10/24/13	9.3	<5	<5	<5	<5	<5	<5	<5	<5	<5	11	5.1	<5	<5	18	9.5	--	--	--
EX7-S-3-5.5	10/24/13	< 5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	--	--
EX7-S-4-5.5	10/24/13	< 4.9	5.8	6.4	35	29	22	15	25	36	5.2	48	< 4.9	14	< 4.9	23	52	--	--	--
EX7-S-5-5.5	10/25/13	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	56	< 50	100	< 50	< 50	< 50	100	94	--	--	--
EX7-S-6-5.5	10/25/13	<25	35	28	120	92	92	52	94	150	<25	250	<25	54	91	260	250	--	--	--
EX7-S-7-4.5	10/23/13	<5	14	15	57	51	49	39	39	68	8.1	110	8.0	32	35	81	120	--	--	--
EX7-S-10-5.5	10/30/13	--	--	--	--	<4.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX8-B-1-2.0	10/28/13	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	--	--	--
EX8-B-2-2.0	10/28/13	<99	<99	<99	<99	<99	<99	<99	<99	<99	<99	<99	<99	<99	<99	<99	<99	--	--	--
EX8-B-3-3.0	11/1/13	--	--	--	--	<4.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX8-S-1-1.0	10/28/13	<5	<5	<5	9.7	11	13	7.4	9.6	18	<5	31	<5	6.6	5.7	34	33	--	--	--
EX8-S-2-1.0	10/28/13	6.4	< 4.9	6.9	12	10	11	7.3	10	22	< 4.9	30	8.5	5.7	14	38	34	--	--	--
EX8-S-3-1.0	10/28/13	<5	9.5	6.3	21	23	21	17	23	44	6.1	49	<5	12	9.5	41	50	--	--	--
EX9-B-3-3.0	10/30/13	<66	<66	<66	<330	<66	<66	<66	<66	79	<66	120	<66	<66	<66	180	180	<66	<66	ND
EX10-B-1-6.0	10/25/13	< 5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	--	--
EX10-S-1-4.5	10/25/13	< 25	26	32	77	80	80	50	71	110	< 25	180	< 25	45	39	180	180	--	--	--
EX10-S-2-4.5	10/25/13	<5	<5	<5	8.5	13	11	8.6	10	14	<5	18	<5	7.4	<5	16	22	--	--	--
EX10-S-3-4.5	10/29/13	--	--	--	--	68	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX10-S-4-4.5	11/1/13	--	--	--	--	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EX15-B-1-1.0	10/30/13	1,500	<330	740	<1,600	<330	<330	<330	<330	450	<330	2,000	1,500	<330	1,400	4,000	2,100	**1,100**	920	ND
EX15-B-2-1.0	10/30/13	<130	<130	<130	<650	<130	<130	<130	<130	<130	<130	<130	<130	<130	<130	<130	170	<130	<130	ND
EX15-B-3-1.5	11/1/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**1,600**	--	--
EX15-B-4-2.5	11/7/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<20	--	--
EX15-S-1-1.0	11/1/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<9.9	--	--
EX15-S-2-1.0	11/1/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<99	--	--
EX15-S-3-1.0	11/1/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	150	--	--
EX15-S-4-1.0	11/1/13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	150	--	--
Groundwater Sample Results (µg/L)																				
MW-1	12/5/13	0.28	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.99	<0.10	<0.10	--	--	--
MW-2	12/5/13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--	--	--
MW-3	12/5/13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--	--	--
ESLs (µg/L)		20	30	0.73	0.027	0.14	0.056	0.1	0.056	0.35	0.016	8	3.9	0.056	6.1	4.6	2	NA	NA	NA

Notes

PAHs = polycyclic aromatic hydrocarbons analzyed by EPA Method 8270 SIM

SVOCs = semi-volatile organic compounds analzyed by EPA Method 8270C

-- = not analyzed

ESLs = San Francisco Bay Regional Water Quality Control Board 2013 Environmental Screening Levels, Summary Table A, Groundwater is Current or Potential Drinking Water Source

<x = less than laboratory reporting limit of x

ND = not detected (laboratory reporting limts vary, see lab report)

NA = not applicable

µg/kg = micrograms per kilogram

Bold indicates concentration exceeding Cleanup Goal

Grey Shading indicates soil represented by sample was over-excavated

TABLE 4 - RACR ANALYTICLA RESULTS FOR PCBs

		PCB-1254	All Other PCBs
	ESL (µg/kg)	220	220
Sample ID	**Date Collected**	**Confirmation Sample Results (µg/kg)**	
EX9-B-3-3.0	10/30/13	<49	<49
EX15-B-1-1.0	10/30/13	62	<49
EX15-B-2-1.0	10/30/13	57	<49

Notes

PCBs = Polychlorinated Biphenyls analyzed by EPA Method 8082

<x = less than laboratory reporting limit of x

µg/kg= micrograms per kilogram

ESLs = San Francisco Bay Regional Water Quality Control Board 2013 Environmental Screening Levels, Summary Table A, Groundwater is Current or Potential Drinking Water Source

Grey Shading indicates soil represented by sample was over-excavated

TABLE 5 - 1st QUARTER 2014 GROUNDWATER MONITORING ANALYTICAL RESULTS FOR METALS AND TOTAL DISSOLVED SOLIDS

Sample ID	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Hexavalent Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thalium	Vanadium	Zinc	Mercury	Total Dissolved Solids
		Groundwater Sample Results (mg/L)																		
MW-1	12/5/13	<0.010	**0.017**	0.074	<0.0020	<0.0020	<0.010	<0.010*	<0.0020	**0.021**	**0.0094**	**0.99**	**0.033**	<0.020	<0.0050	<0.010	0.018	<0.020	**0.00022**	1,400
	3/24/2014	<0.010	**0.018**	0.032	<0.0020	<0.0020	<0.010	<0.0005	<0.0020	**0.037**	**0.019**	**0.67**	**0.043**	<0.020	<0.0050	<0.010	**0.022**	<0.020	<0.00020	1,100
MW-2	12/5/13	<0.010	0.011	0.11	<0.0020	<0.0020	<0.010	<0.010*	**0.0056**	**0.020**	<0.0050	**0.58**	**0.037**	<0.020	<0.0050	<0.010	0.012	0.047	**0.00027**	1,800
	3/24/2014	<0.010	<0.010	0.036	<0.0020	<0.0020	<0.010	<0.0005	<0.0020	<0.020	<0.0050	**0.55**	**0.018**	<0.020	<0.0050	<0.010	0.015	<0.020	<0.00020	1,100
MW-3	12/5/13	<0.010	<0.010	0.15	<0.0020	<0.0020	<0.010	<0.010*	0.0028	<0.020	**0.0099**	<0.010	**0.030**	<0.020	<0.0050	<0.010	<0.010	0.047	**0.00021**	1,800
	3/24/2014	<0.010	**0.014**	0.04	<0.0020	<0.0020	<0.010	<0.0005	0.0023	<0.020	<0.0050	<0.010	**0.019**	<0.020	<0.0050	<0.010	<0.010	<0.020	<0.00020	1,200
	ESLs (mg/L)	0.006	0.01	1	0.005	0.0025	0.05	0.00002	0.0030	0.0031	0.0025	0.078	0.0082	0.005	0.0019	0.002	0.019	0.081	0.00002	NA

Notes

Metals analyzed by EPA Methods 6010B, 7470A (mercury), and 7199 (hexavalent chromium)

* indicates samples analyzed for hexavalent chromium by EPA Method 7196A

Total Dissolved Solids analyzed by EPA Method SM 2540C

ESLs = San Francisco Bay Regional Water Quality Control Board 2013 Environmental Screening Levels, Summary Table A, Groundwater is Current or Potential Drinking Water Source

<x = less than laboratory reporting limit of x

mg/L= milligrams per liter

NA = not applicable

Bold indicates concentration equal to or exceeding Cleanup Goa

TABLE 6 -1ST QUARTER 2014 GROUNDWATER MONITORING ANALYTICAL RESULTS FOR TPHho and PAHs

Sample ID	Date Collected	TPHho	PAHs															
			Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]flouranthene	Bonz[g, h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz(a, h)anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene
		Analytical Results (µg/L)																
MW-1	12/5/13	230	0.28	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.99	<0.10	<0.10
	3/24/2014	<100	0.80	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.26	<0.10	5.2	0.24	<0.10
MW-2	12/5/13	<100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	3/24/2014	<100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.12	<0.10	<0.10
MW-3	12/5/13	<100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	3/24/2014	<100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	ESLs (µg/L)	100	20	30	0.73	0.027	0.14	0.056	0.1	0.056	0.35	0.016	8	3.9	0.056	6.1	4.6	2

Notes

PAHs = polycyclic aromatic hydrocarbons analyzed by EPA Method 8270 SIM

TPHho = total petroleum hydrocarbons as hydraulic oil analyzed by EPA Method 8015B

ESLs = San Francisco Bay Regional Water Quality Control Board 2013 Environmental Screening Levels, Summary Table A, Groundwater is Current or Potential Drinking Water Source

Grey Shading indicates concentration exceed ESLs

<x = not detected, concentration is less than laboratory reporting limit of x

µg/L = micrograms per Liter

TABLE D-1 - 95 % UCL CALCULATION FOR ARSENIC IN SOIL

Sample ID	Analytical Result (mg/kg)
Confirmation Samples	
EX1-B-1-4.0	6.1
EX1-S-1-1.0	**12**
EX1-S-2-1.0	**9.1**
EX1-S-3-1.0	4.3
EX5-B-2-6.0*	<3.9
EX5-S-2-2.5	3.6
EX5-S-3-2.5*	<4
EX5-S-5-2.5*	<3.8
EX7-B-1-7.0*	<3.8
EX7-B-2-7.0*	<3.9
EX7-B-3-7.0*	<3.7
EX7-B-4-7.0	4.4
EX7-S-2-5.5	6.3
EX7-S-3-5.5*	<3.7
EX7-S-4-5.5*	<3.6
EX7-S-5-5.5	5.5
EX7-S-7-4.5	4.5
EX7-S-8-5.0*	<3.7
EX7-S-9-5.0*	<4
EX7-S-10-5.5*	<3.5
EX9-B-2-4.0*	<3.8
EX9-B-3-3.0*	<4
EX9-S-1-1.0	**7.2**
EX9-S-2-1.0	6.2
EX9-S-3-1.0	5.1
EX14-B-1-1.5	3.9
EX14-B-4-4.0*	<4
EX14-S-6-0.5	4.8
EX14-S-12-2.0	**10**
EX15-B-2-1.0*	<3.8
Previous Samples	
B-2 @ 0.5	3.9
B-4 @ 5.0	1.6
B-5A @ 4-5*	<3.8
B-9A @ 7-8	4.8
B-15A @ 4-5*	<3.9
B-20B @ 1-2	4.4
B-22A @ 4-5*	<3.8
UG-1 @ 0.5-1	4.9
UG-2 @ 0.5-1	3.6

ProUCL Calculations

General Statistics

Total Number of Observations	39	Number of Distinct Observations	21
Number of Detects	21	Number of Non-Detects	18
Number of Distinct Detects	17	Number of Distinct Non-Detects	6
Minimum Detect	1.6	Minimum Non-Detect	3.5
Maximum Detect	12	Maximum Non-Detect	4
Variance Detects	5.686	Percent Non-Detects	46.15%
Mean Detects	5.533	SD Detects	2.385
Median Detects	4.8	CV Detects	0.431
Skewness Detects	1.302	Kurtosis Detects	1.935
Mean of Logged Detects	1.628	SD of Logged Detects	0.424

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.875	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.908	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.191	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.193	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	4.062	Standard Error of Mean	0.449
SD	2.425	95% KM (BCA) UCL	5.231
95% KM (t) UCL	4.819	95% KM (Percentile Bootstrap) UCL	5.083
95% KM (z) UCL	4.801	95% KM Bootstrap t UCL	4.905
90% KM Chebyshev UCL	5.409	95% KM Chebyshev UCL	6.019
97.5% KM Chebyshev UCL	6.866	99% KM Chebyshev UCL	8.529

Suggested UCL to Use

95% KM (t) UCL	4.819	95% KM (Percentile Bootstrap) UCL	5.083

Notes:
Bold indicates a concentration equal to or exceeding 7 mg/kg
*indicates laboratory result was non-detectable
mg/kg – milligrams per kilogram

TABLE D-2 - 95 % UCL CALCULATION FOR LEAD IN SOIL

Sample ID	Analytical Result (mg/kg)	Sample ID	Analytical Result (mg/kg)
Confirmation Samples		**Previous Samples**	
EX1-B-1-4.0	16	SB-101 (11.5)	4
EX1-S-1-1.0	16	SB-101 (15.5)	6
EX1-S-2-1.0	26	SB-102 (3.5)	15
EX1-S-3-1.0	3.3	SB-102 (7.5)	110
EX2-B-1-6.0	71	SB-102 (11.5)	5
EX2-S-1-4.5	11	SB-102 (15.5)	7
EX2-S-4-4.5	18	SB-103 (7.5)	150
EX5-B-2-6.0	6.4	SB-103 (11.5)	4
EX5-S-2-2.5	68	SB-103 (15.5)	4
EX5-S-3-2.5	44	SB-104 (1.5)	10
EX5-S-5-2.5	5.1	SB-104 (3.5)	75
EX7-B-4-7.0	12	SB-104 (7.5)	13
EX7-S-2-5.5	120	SB-105 (3.5)	44
EX7-S-4-5.5	150	SB-105 (7.5)	17
EX7-S-5-5.5	160	SB-106 (7.5)	**210**
EX9-B-3-3.0	46	SB-108 (1.5)	12
EX11-B-1-6.0	10	SB-108 (4.5)	65
EX11-S-1-4.5	43	SB-108 (7.5)	5
EX11-S-2-4.5	**200**	SB-109 (4.5)	120
EX11-S-3-4.5	170	SB-109 (7.5)	5
EX11-S-4-4.5	**210**	SB-110 (1.5)	87
EX13-B-1-2.5	52	SB-110 (4.5)	10
EX13-S-1-1.0	43	SB-110 (7.5)	5
EX13-S-2-1.0	140	SB-111 (7.5)	49
EX13-S-3-1.0	16	SB-111 (9.5)	10
EX13-S-4-1.0	33	SB-112 (7.5)	8
EX14-B-1-1.5	150	#6A (2.75)	110
EX14-B-4-4.0	5.8	#6A (3.5)	7
EX14-B-5-4.0	45	#6B (3.75)	56
EX14-S-5-0.5	150	#8 (1.25)	180
EX14-S-6-0.5	180	#8 (3.5)	140
EX14-S-12-2.0	150	B1001 (0.5)	76
EX14-S-13-0.5	110	B1001 (2.0)	48
EX14-S-16-0.5	170	B1001 (4.0)	11
EX15-B-2-1.0	71	B1001 (6.0)	43
Previous Samples		B1001 (8.0)	41
B-2 @ 0.5	160	B1001 (10.0)	**280**
B-4 @ 5.0	48	B1002 (4.0)	9.5
B-5A @ 4-5	60	B1002 (10.0)	26
B-9A @ 7-8	170	SWEX- East Wall	21
B-15A @ 4-5	50	SCEX - Bottom	26
B-22A @ 4-5	67	SCEX- North Wall	54
B25A-4.0	19	SCEX- East Wall	8
V1 (1.5-2.0)	17	SCEX- South Wall	6
V3 (1.0-1.5)	14	SEEX - Bottom	38
SB-101 (3.5)	12	SEEX- West Wall	4
SB-101 (7.5)	5		

ProUCL Calculations

Raw Statistics	
Number of Valid Samples	92.00
Number of Unique Samples	53.00
Minimum	3.30
Maximum	280.00
Mean	60.63
Median	42.00
Standard Deviation	64.35
Variance	4140.36
Coefficient of Variation	1.06
Skewness	1.22
Gamma Statistics	
k hat	0.87
k star (bias corrected)	0.85
Theta hat	69.96
Theta star	71.70
nu hat	159.46
nu star	155.60
Approx.Chi Square Value (.05)	127.76
Adjusted Level of Significance	0.05
Adjusted Chi Square Value	127.36
Log-transformed Statistics	
Minimum of log data	1.19
Maximum of log data	5.63
Mean of log data	3.43
Standard Deviation of log data	1.27
Variance of log data	1.61
RECOMMENDATION	
Data are Non-parametric (0.05)	
Use 97.5% Chebyshev (Mean, Sd) UCL	

Normal Distribution Test	
Lilliefors Test Statisitic	0.19
Lilliefors 5% Critical Value	0.09
Data not normal at 5% significance level	
95% UCL (Assuming Normal Distribution)	
Student's-t UCL	71.78
Gamma Distribution Test	
A-D Test Statistic	1.89
A-D 5% Critical Value	0.79
K-S Test Statistic	0.13
K-S 5% Critical Value	0.10
Data do not follow gamma distribution	
at 5% significance level	
95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	73.84
Adjusted Gamma UCL	74.08
Lognormal Distribution Test	
Lilliefors Test Statisitic	0.10
Lilliefors 5% Critical Value	0.09
Data not lognormal at 5% significance level	
95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	96.06
95% Chebyshev (MVUE) UCL	118.70
97.5% Chebyshev (MVUE) UCL	140.67
99% Chebyshev (MVUE) UCL	183.81
95% Non-parametric UCLs	
CLT UCL	71.67
Adj-CLT UCL (Adjusted for skewness)	72.58
Mod-t UCL (Adjusted for skewness)	71.92
Jackknife UCL	71.78
Standard Bootstrap UCL	71.65
Bootstrap-t UCL	72.49
Hall's Bootstrap UCL	72.86
Percentile Bootstrap UCL	71.61
BCA Bootstrap UCL	72.76
95% Chebyshev (Mean, Sd) UCL	89.87
97.5% Chebyshev (Mean, Sd) UCL	102.53
99% Chebyshev (Mean, Sd) UCL	127.38

Notes:
Bold indicates a concentration equal to or exceeding 200 mg/kg
mg/kg – milligrams per kilogram

TABLE D-3 - 95 % UCL CALCULATION FOR NICKEL IN SOIL

Sample ID	Analytical Result (mg/kg)	Sample ID	Analytical Result (mg/kg)	Sample ID	Analytical Result (mg/kg)
Confirmation Samples		EX9-B-3-3.0	15	SB-108 (4.5)	24
EX1-B-1-4.0	77	EX9-S-1-1.0	110	SB-108 (7.5)	10
EX1-S-1-1.0	39	EX9-S-2-1.0	140	SB-109 (4.5)	14
EX1-S-2-1.0	**380**	EX9-S-3-1.0	32	SB-109 (7.5)	10
EX1-S-3-1.0	24	EX9-S-6-1.0	82	SB-110 (1.5)	19
EX2-B-1-6.0	55	EX12-B-1-2.0	84	SB-110 (4.5)	11
EX2-B-5-2.0	110	EX12-B-2-2.0	91	SB-110 (7.5)	8.4
EX2-B-6-3.0	67	EX12-B-3-2.0	13	SB-111 (7.5)	12
EX2-S-1-0.5	100	EX12-S-3-1.0	110	SB-111 (9.5)	9
EX2-S-1-4.5	16	EX12-S-6-1.0	12	SB-112 (7.5)	86
EX2-S-4-4.5	40	EX12-S-7-1.0	7.6	#6A (2.75)	97
EX2-S-5-4.5	86	EX12-S-11-1.0	38	#6A (3.5)	8.3
EX2-S-8-0.5	78	EX14-B-1-1.5	61	#6B (3.75)	9.2
EX2-S-9-0.5	15	EX14-S-6-0.5	12	#8 (1.25)	14
EX2-S-13-4.5	79	EX14-S-8-0.5	11	#8 (3.5)	**180**
EX3-B-2-3.0	36	EX15-B-2-1.0	21	B1001 (0.5)	23
EX3-B-3-3.0	97	**Previous Samples**		B1001 (2.0)	83
EX3-S-1-1.0	57	B-4 @ 5.0	7.1	B1001 (4.0)	15
EX3-S-4-1.0	84	B-5A @ 4-5	13	B1001 (6.0)	84
EX3-S-11-1.0	43	B-9A @ 7-8	23	B1001 (8.0)	16
EX3-S-12-1.0	44	B-15A @ 4-5	12	B1001 (10.0)	25
EX3-S-14-1.0	42	B-22A @ 4-5	19	B1002 (4.0)	69
EX4-B-1-3.5	110	B25A-4.0	84	B1002 (10.0)	9.1
EX4-S-2-1.5	100	V1 (1.5-2.0)	15		
EX4-S-3-1.5	110	V3 (1.0-1.5)	95		
EX4-S-4-1.5	38	SB-101 (3.5)	22		
EX5-B-2-6.0	9.8	SB-101 (7.5)	8.2		
EX5-S-2-2.5	33	SB-101 (11.5)	10		
EX5-S-3-2.5	16	SB-101 (15.5)	20		
EX5-S-5-2.5	12	SB-102 (3.5)	60		
EX6-B-1-2.5	46	SB-102 (7.5)	7.8		
EX6-S-2-1.5	76	SB-102 (11.5)	9.4		
EX6-S-3-1.5	37	SB-102 (15.5)	15		
EX6-S-4-1.5	91	SB-103 (7.5)	10		
EX7-B-1-7.0	13	SB-103 (11.5)	23		
EX7-B-2-7.0	11	SB-103 (15.5)	23		
EX7-B-3-7.0	29	SB-104 (1.5)	35		
EX7-B-4-7.0	14	SB-104 (3.5)	11		
EX7-S-2-5.5	41	SB-104 (7.5)	8.3		
EX7-S-3-5.5	9.9	SB-105 (3.5)	12		
EX7-S-4-5.5	15	SB-105 (7.5)	10		
EX7-S-5-5.5	16	SB-106 (7.5)	24		
EX7-S-7-4.5	52	SB-107 (7.5)	11		
EX9-B-2-4.0	14	SB-108 (1.5)	59		

ProUCL Calculations

Raw Statistics		Normal Distribution Test	
Number of Valid Samples	109.00	Lilliefors Test Statisitic	0.22
Number of Unique Samples	64.00	Lilliefors 5% Critical Value	0.08
Minimum	7.10	Data not normal at 5% significance level	
Maximum	380.00		
Mean	43.90	95% UCL (Assuming Normal Distribution)	
Median	23.00	Student's-t UCL	51.64
Standard Deviation	48.71		
Variance	2372.71	Gamma Distribution Test	
Coefficient of Variation	1.11	A-D Test Statistic	3.64
Skewness	3.50	A-D 5% Critical Value	0.78
		K-S Test Statistic	0.17
Gamma Statistics		K-S 5% Critical Value	0.09
k hat	1.27	Data do not follow gamma distribution	
k star (bias corrected)	1.24	at 5% significance level	
Theta hat	34.62		
Theta star	35.42	95% UCLs (Assuming Gamma Distribution)	
nu hat	276.47	Approximate Gamma UCL	50.88
nu star	270.20	Adjusted Gamma UCL	50.98
Approx.Chi Square Value (.05)	233.12		
Adjusted Level of Significance	0.05	Lognormal Distribution Test	
Adjusted Chi Square Value	232.66	Lilliefors Test Statisitic	0.15
		Lilliefors 5% Critical Value	0.08
Log-transformed Statistics		Data not lognormal at 5% significance level	
Minimum of log data	1.96		
Maximum of log data	5.94	95% UCLs (Assuming Lognormal Distribution)	
Mean of log data	3.34	95% H-UCL	52.51
Standard Deviation of log data	0.93	95% Chebyshev (MVUE) UCL	62.84
Variance of log data	0.86	97.5% Chebyshev (MVUE) UCL	71.36
		99% Chebyshev (MVUE) UCL	88.10
		95% Non-parametric UCLs	
		CLT UCL	51.57
		Adj-CLT UCL (Adjusted for skewness)	53.24
		Mod-t UCL (Adjusted for skewness)	51.90
		Jackknife UCL	51.64
		Standard Bootstrap UCL	51.39
		Bootstrap-t UCL	53.89
RECOMMENDATION		Hall's Bootstrap UCL	56.24
Data are Non-parametric (0.05)		Percentile Bootstrap UCL	51.18
		BCA Bootstrap UCL	52.89
Use 95% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL	64.24
		97.5% Chebyshev (Mean, Sd) UCL	73.04
		99% Chebyshev (Mean, Sd) UCL	90.32

Notes:
Bold indicates a concentration equal to or exceeding 150 mg/kg
mg/kg – milligrams per kilogram

TABLE D-4 - 95 % UCL CALCULATION FOR BENZO(a)PYRENE IN SOIL

Sample ID	Analytical Result (µg/kg)
Confirmation Sample Results	
EX5-B-2-6.0*	<4.9
EX5-B-4-7.0*	<5
EX5-S-2-2.5	31
EX5-S-3-2.5	14
EX5-S-5-2.5*	<5
EX5-S-6-2.5	9.9
EX7-B-1-7.0*	<5
EX7-B-2-7.0*	<5
EX7-B-3-7.0*	<4.9
EX7-B-4-7.0*	<5
EX7-S-2-5.5*	<5
EX7-S-3-5.5*	<5
EX7-S-4-5.5	29
EX7-S-5-5.5*	<50
EX7-S-7-4.5	**51**
EX7-S-10-5.5*	<4.9
EX8-B-3-3.0*	<4.9
EX8-S-1-1.0	11
EX8-S-2-1.0	10
EX8-S-3-1.0	23
EX9-B-3-3.0*	<66
EX10-B-1-6.0*	<5
EX10-S-2-4.5	13
EX10-S-4-4.5	15
EX15-B-2-1.0*	<130
Previous Sample Results	
B-10A @ 6-7	32
B-14A @ 4-5	12
B-15A @ 4-5	5.2
B-15A @ 6-7*	<5
B-17A @ 4-5	41
B17A @ 6-7*	<5
B-20A @ 4-5	15
B-22A @ 4-5	33
B-22A @ 6-7	41
B-24A @ 6-7	6

ProUCL Calculations

General Statistics

Total Number of Observations	35	Number of Distinct Observations	21
Number of Detects	18	Number of Non-Detects	17
Number of Distinct Detects	16	Number of Distinct Non-Detects	5
Minimum Detect	5.2	Minimum Non-Detect	4.9
Maximum Detect	51	Maximum Non-Detect	130
Variance Detects	188.6	Percent Non-Detects	48.57%
Mean Detects	21.78	SD Detects	13.73
Median Detects	15	CV Detects	0.631
Skewness Detects	0.69	Kurtosis Detects	-0.664
Mean of Logged Detects	2.878	SD of Logged Detects	0.678

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.901	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.897	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.245	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.209	Detected Data Not Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	14.36	Standard Error of Mean	2.358
SD	13.01	95% KM (BCA) UCL	18.15
95% KM (t) UCL	18.35	95% KM (Percentile Bootstrap) UCL	18.42
95% KM (z) UCL	18.24	95% KM Bootstrap t UCL	18.94
90% KM Chebyshev UCL	21.44	95% KM Chebyshev UCL	24.64
97.5% KM Chebyshev UCL	29.09	99% KM Chebyshev UCL	37.82

Suggested UCL to Use

95% KM (t) UCL	18.35	95% KM (Percentile Bootstrap) UCL	18.42

Notes:
Bold indicates a concentration exceeding 45 µg/kg
*indicates laboratory result was non-detectable
µg/kg – micrograms per kilogram