Yosemite Slough Sediment
Waste Characterization Study Report

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Region IX
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List of Abbreviations and Acronyms

APPL	Agriculture and Priority Pollutants Laboratories
bgs	below ground surface
CAM	California Assessment Manual
CCR	California Code of Regulations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COPC	contaminant of potential concern
DDD	dichloro-diphenyl-dichloroethane
DDE	dichloro-diphenyl-dichloroethylene
DDT	dichloro-diphenyl-trichloroethane
E & E	Ecology and Environment, Inc.
EE/CA	engineering evaluation and cost analysis
EPA	U.S. Environmental Protection Agency
ERM	effects range median
ESL	environmental screening level
IDW	investigation-derived waste
MDL	method detection limit
mg/kg	milligrams per kilogram (same as part per million [mg/kg])
mL	milliliters
NOAA	National Oceanic and Atmospheric Administration
PCBs	polychlorinated biphenyls
ppb	parts per billion
ppm	parts per million
PQL	practical quantitation limit
QA/QC	quality assurance/quality control
RCRA	Resource Conservation and Recovery Act
RL	reporting limit

List of Abbreviations and Acronyms (cont.)

RSLs	regional screening levels
RWQCB	regional water quality control board
SAP	sampling and analysis plan
SFPUC	San Francisco Public Utilities Commission
SFRWQCB	San Francisco Bay Regional Water Quality Control Board
SQuiRTs	Screening Quick Reference Tables
START	Superfund Technical Assessment and Response Team
STLC	soluble threshold limit concentrations
TCLP	toxicity characteristic leaching procedure
TPH	total petroleum hydrocarbons
TPH-d	total petroleum hydrocarbons – diesel
TPH-mo	total petroleum hydrocarbons – motor oil
TSCA	Toxic Substances Control Act
TTLC	total threshold limit concentrations
UCL	upper confidence limit at 95% confidence interval
µg/kg	micrograms per kilogram (same as parts per billion [µg/kg])
µg/L	micrograms per liter (same as parts per billion [µg/kg])
VOA	volatile organic analysis
WET	waste extraction test

1 Introduction

The U.S. Environmental Protection Agency (EPA) directed Ecology and Environment, Inc.'s (E & E) Superfund Technical Assessment and Response Team (START) to support EPA's environmental data collection activities and an EPA-funded engineering evaluation and cost analysis (EE/CA) for a planned remediation of contaminated sediment in Yosemite Creek in San Francisco, San Francisco County, California. The Yosemite Creek Superfund site (the site) is an approximately 1,600-foot channel that receives sewage and storm water system overflows and storm water runoff and leads to the South Basin of the San Francisco Bay. Previous investigations of the site indicate creek sediments are contaminated with polychlorinated biphenyls (PCBs); metals, including chromium, lead, mercury, nickel, and zinc; total petroleum hydrocarbons as diesel (TPH-d); TPH as motor oil (TPH-mo) and the pesticides chlordane, dieldrin, and dichloro-diphenyl-trichloroethane (DDT). The waste characterization study was conducted in February 2012 and focused on generating data on concentrations of total and leachable metals, including mercury and hexavalent chromium, PCBs, and asbestos in the slough sediments. The data were generated to support estimates of volumes that could require different types of hazardous or nonhazardous disposal if the waste were to be removed from the slough.

Field work described in this Waste Characterization Report was conducted in accordance with the *Sampling and Analysis Plan* (SAP), *Yosemite Creek Sediment Waste Characterization Study, February 2012*, prepared by E & E.

The waste characterization results for PCBs, metals, and asbestos were compared to toxicity characteristic leaching procedure (TCLP) thresholds outlined in Title 40: Protection of Environment of the U.S. Code of Federal Regulations (CFR) Part 261, Toxic Substances Control Act Title 1, and the soluble threshold limit concentrations (STLC) and total threshold limit concentrations (TTLC) from Title 26 of the California Code of Regulations (CCR) in order to assess federal and state waste classification of the sediments. This report was prepared to describe the scope of work, objectives, methodology, analytical testing procedures, results, conclusions, and recommendations for the site.

1.1 Site Location

The Yosemite Creek site is a 1,600-foot long channel that leads to the South Basin of the San Francisco Bay in the southeastern portion of San Francisco, San Francisco County, California (Figures 1 and 2). The approximate location of the site is 37° 43' 25" N, 122° 23' 07" W. The site is located west of and adjacent to the Hunters Point Naval Shipyard Superfund site and is situated within the Yosemite Basin.

1.2 Site Description

The site is located in the Yosemite Creek drainage basin, which encompasses approximately 1,500 acres in southeastern San Francisco, California (Battelle 2004). The site historically received sewage and storm water overflows and storm water runoff. Discharges of treated sewage and storm water historically flowed to the southeast into the South Basin of the San Francisco Bay. At low tide, the sediments of the site are exposed as a tidal mudflat; this area (see Figure 2) was the study area investigated for this assessment. The study area is approximately 1,800 feet long and varies from approximately 200 feet to 800 feet wide, with an area of 408,200 square feet.

1.3 Site History

Before 1900, the site and the immediate area around the site consisted primarily of wetlands, marshland, or land submerged below mean tide level (intertidal and subtidal habitat). Between 1940 and 1970, much of the surrounding area was filled. The area surrounding the site was characterized by mixed residential, commercial, and industrial use beginning in the 1940s. Previous investigations have shown site sediments to be impacted with PCBs; metals, including chromium, lead, mercury, nickel, and zinc; TPH; and the pesticides chlordane, dieldrin, and total DDT (Battelle 2004).

Additional information on site history is available in *Sediment Investigation at Yosemite Creek*, prepared by Battelle in May 2004, and *Sediment Investigation at Yosemite Creek, Fall 1998*, prepared by Arthur D. Little in May 1999.

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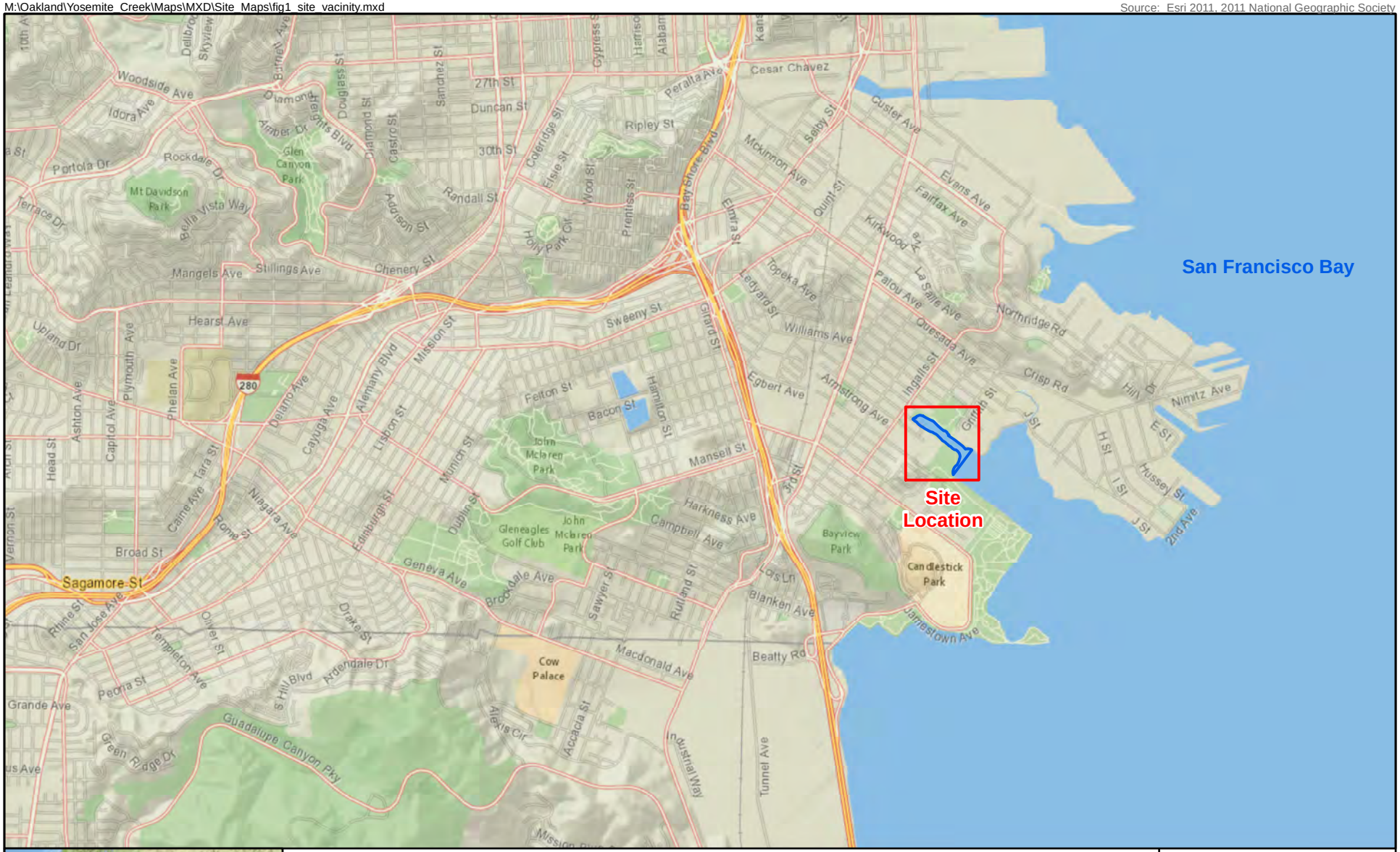
Source: Esri 2011, 2011 National Geographic Society



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0 0.25 0.5 1 1.5 Miles

0 250 500 1,000 1,500 Meters

Legend

Approximate Site Boundary

Figure 1
Site Vacinity Map

Yosemite Creek Sediment Removal Assessment

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Source: Esri 2011, USGS

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0 100 200 400 600

Feet

0 25 50 100 150

Meters

Legend

Approximate Site Boundary

Figure 2
Site Location Map

Yosemite Creek Sediment Waste Characterization Study

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2 Setting and Previous Investigation

A discussion of the site's geology, hydrogeology, and ecology and a summary of previous investigation results are provided below.

2.1 Geology, Hydrology, and Hydrogeology

Information presented in the Battelle report (Battelle 2004) and documents from the nearby Bay Area Drum site indicates that artificial fill, younger bay mud, bay side sand, and/or Franciscan formation rock (sandstone, graywacke, shale, and chert) lie beneath the site (Harding Lawson Associates 1999). The closest area to the site for which geologic information is available is the Hunters Point Shipyard site. Geology beneath the adjacent Hunters Point Shipyard reportedly includes artificial fill, which can contain serpentinite bedrock, excavated bay mud, sands, gravels, and construction and industrial debris. The fill generally overlies bay mud deposits and occasionally undifferentiated sedimentary deposits (Barajas & Associates, Inc. 2008).

Groundwater flow in the region is towards the site as a groundwater-to-surface water discharge into the South Basin (Harding Lawson Associates 1999). The Yosemite Basin is located between two hills: to the north lies Hunters Point and to the south lies Bayview Hill. The original Yosemite Creek originated from a spring in what is now McLaren Park and flowed into San Francisco Bay. Yosemite Basin is approximately 3 square miles and is bounded by McLaren Park to the west and the Hunters Point Naval shipyard and San Francisco Bay to the east and northeast. Lands to the south and north of the site are owned by the California State Park system and managed as part of Candlestick Point State Recreation Area. This includes a recently constructed tidal wetlands project located on the north side of Yosemite Slough.

2.2 Storm Water and Sewer System Drainage

The San Francisco Public Utilities Commission (SFPUC) owned and operated the sewer system that has historically discharged to the site under various configurations. Between 1959 and 1991, SFPUC's combined sewer system operated with three overflow structures (outfalls 40, 41, and 42) that discharged to the site in rainy weather, which occurred 82 times per year, on average. Outfall 41, which drained much of the area east of Highway 101, was located at the mouth of the site. Outfall 42 discharged at Fitch Street near the southern

shoreline of the creek, draining areas that included industrial properties on the southern side of the site and Candlestick Park. Outfall 40 discharged near Griffith Street on the north side of the site and drained an area of approximately 200 acres, including the Bay Area Drum site.

In 1990 and 1991, SFPUC completed construction of overflow retention and storage basins for its combined sewer system. This upgrade reduced the number of system overflows to the site to a long-term average of one per year (Battelle 2004).

2.3 Previous Investigations and Regulatory Involvement

The EPA, the U.S. Department of the Navy, and a significant number of other responsible parties have been working toward the selection of an appropriate remedial option for the site, which has been determined to be affected by several source areas.

The South Basin area of the San Francisco Bay, which includes the site, has been the subject of numerous environmental investigations (Battelle 2004). Remedial investigations, feasibility studies, and remedial actions are ongoing at the Hunters Point Shipyard Superfund Site, which includes the South Basin, under the U.S. Navy's Base Realignment and Closure Program. Additionally, the California State Parks Foundation sampled soil, groundwater, and sediment in a 35-acre area where wetland creation had been proposed, including the site. Sediments at the site were investigated in December 1995 under the Bay Protection and Toxic Cleanup Program. Samples contained concentrations of mercury and PCBs exceeding the screening criteria (Battelle 2004).

As a part of ongoing Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial activities at Hunters Point Shipyard (see Figure 1), a remedial investigation and feasibility study was performed at Parcel F, the portion of Hunters Point Shipyard that includes the South Basin shoreline and adjacent sediments, by PRC Environmental Management, Inc. under the direction of the Navy in 1996. Sediment sample results in the South Basin and the site indicated elevated levels of mercury, PCBs, DDT, and chlordane. This investigation was conducted to evaluate contamination of the South Basin from Hunters Point Shipyard but also presented the potential for additional sources of contamination to the South Basin, including discharges to the site (Battelle 2004).

Based on the evidence of contaminated sediments at the site, the regional water quality control board (RWQCB) required further investigation to delineate the nature and extent of the contamination. Additional investigation and sampling of the site was performed under the direction of the SFPUC in October 1998, October 1999, and April 2000. The SFPUC investigation included collecting surface and subsurface sediment samples up to 4feet below ground surface (bgs) and bioassays and bioaccumulation in clam tissue. The investigation and its

results are discussed in the Battelle *Sediment Investigation at Yosemite Creek* report (Battelle 2004).

According to the Battelle report, the following contaminants of potential concern (COPCs) are present at the site at concentrations that exceeded their screening levels: lead, mercury, nickel, zinc, total PCBs, total DDT, total chlordane, and dieldrin. The maximum concentrations reported in surface sediments were chromium at 202 parts per million (ppm), mercury at 1.21 ppm, nickel at 152 ppm, lead at 197 ppm, zinc at 316 ppm, PCBs at 1317 parts per billion (ppb), total DDT at 142 ppb, total chlordane at 88 ppb, and dieldrin at 110 ppb. A total of 32 surface locations have been sampled by the SFPUC and the Navy in the vicinity of the site.

Subsurface samples were collected at five locations during the 2004 Battelle investigation. Subsurface samples were collected to total depths of 4 feet bgs in two locations, 3 feet bgs at one location, and 2 feet bgs at two locations. The maximum concentrations reported in subsurface sediments were chromium at 368 ppm, lead at 811 ppm, mercury at 1.49 ppm, zinc at 830 ppm, dieldrin at 370 ppb, total chlordane at 208 ppb, total DDT at 1,430 ppb, and total PCBs at 2,356 ppb. These COPC concentrations exceeded their respective screening criteria, with the exception of chromium, and generally appeared to decrease with depth.

In addition to studies in the South Basin area discussed above, several environmental investigations have occurred at the former Bay Area drum facility, a former drum recycling and reconditioning facility located north of the site at 1212 Thomas Avenue in San Francisco, California.

Remediation of soil and groundwater at the former Bay Area drum site was completed in July 2003 under the direction of the California Department of Toxic Substances Control. The sewer and storm water system draining the Bay Area drum site and its vicinity emptied into Yosemite Slough (Battelle 2004).

Between June 17 and July 9, 2009, START assisted the EPA in collecting a total of 191 sediment samples from 36 sampling locations at the site. The results of this investigation were presented in a document entitled *Yosemite Creek Sediment Removal Assessment Report* (Ecology and Environment 2011). Based on the results of the sediment sampling, PCBs (Aroclor-1254 and 1260 and PCB Congeners), metals (chromium, lead, mercury, and zinc), and TPH-d and motor oil were confirmed to be present in Yosemite Slough sediments at concentrations that exceeded their respective environmental screening levels (ESLs). Elevated COPCs were predominantly located in the upper 3 feet of sediment at Yosemite Slough, although contaminant concentrations exceeding site screening levels did occur in the 3- to 5-foot interval. PCBs, lead, mercury, zinc, and TPH-d contamination boundaries above site screening levels were not completely defined during the 2009 assessment, including in the downstream direction towards the entrance to San Francisco Bay.

3 Field Activities

A site-specific sampling and analysis plan (SAP) was completed before initiating field work. All work was conducted under E & E's standard operating procedures, a health and safety plan, and the site-specific sampling plan.

The objectives of the site investigation were as follows:

- **Document the concentrations of PCBs, asbestos, and metals** (chromium, lead, mercury, and zinc) in sediment at the site and determine where these concentrations exceed state and federal waste disposal criteria.

- **Evaluate the potential for extrapolations regarding volumes and area** based on previous sampling results if the waste characterization data indicate good correlation between existing TTLC and STLC data sets. These volume extrapolations will be completed as part of the EE/CA.

START's selection of eight sample boring locations (YC-038 through YC-045), based on previous site data, focused on providing adequate coverage across the 1,600 foot long and 200 foot wide Yosemite Creek channel while targeting areas with the highest documented concentrations of COPCs. Some sample locations were adjusted in the field based on accessibility, field conditions, and professional judgment. A total of 32 samples, not including duplicates, were collected from the eight sample locations during the waste characterization study. Sample locations are noted on Figure 3 and a summary of sample location information is presented in Table 3-1.

Photographic documentation collected by the START during site activities is presented in Appendix A. A description of sampling methodologies can be found in the SAP.

3.1 Sediment Sampling

As noted above, START collected 32 sediment samples from eight sampling locations at Yosemite Creek on February 21, 2012. Personnel present during the field activities included EPA Region 9 Laboratory personnel Andy Lincoff; START members Sara Dwight, Brian Milton, and Kate Villars, and U.S. Coast

Guard Pacific Strike Team members Danielle Lashbrook, Jonathan Avis, and Truman Skang.

Table 3-1 Sample Collection Summary, Yosemite Creek Waste Characterization Study, San Francisco, San Francisco County, California

Sediment Sample Location	Sample ID	Date Sampled	Depth (ft)	Comment
YC-038	YC-038-1	2/21/2012	0-1	MS/MSD HexCr
	YC-038-2	2/21/2012	1-2	MS/MSD Hg
	YC-038-3	2/21/2012	2-3	
	YC-838-3	2/21/2012	2-3	DUP PCB
	YC-038-3.6	2/21/2012	3-3.6	MS/MSD PCB
YC-039	YC-039-1	2/21/2012	0-1	
	YC-039-2	2/21/2012	1-2	MS/MSD Metals
	YC-039-3	2/21/2012	2-3	
	YC-039-3.3	2/21/2012	3-3.3	Insufficient volume due to repeated refusal, metals and PCBs only; MS/MSD PCB
YC-040	YC-040-1	2/21/2012	0-1	
	YC-840-1	2/21/2012	0-1	DUP Metals
	YC-040-2	2/21/2012	1-2	
	YC-840-2	2/21/2012	1-2	DUP HexCr
	YC-040-3	2/21/2012	2-3	
	YC-040-3.6	2/21/2012	3-3.6	
	YC-840-3.6	2/21/2012	3-3.6	DUP Asb
YC-041	YC-041-1	2/21/2012	0-1	
	YC-841-1	2/21/2012	0-1	DUP HexCr
	YC-041-2	2/21/2012	1-2	MS/MSD Hg
	YC-841-2	2/21/2012	1-2	DUP Asb
	YC-041-3	2/21/2012	2-3	MS/MSD HexCr
	YC-841-3	2/21/2012	2-3	DUP PCB
	YC-041-4	2/21/2012	3-4	
	YC-841-4	2/21/2012	3-4	DUP Metals
YC-042	YC-042-1	2/21/2012	0-1	
	YC-842-1	2/21/2012	0-1	DUP HexCr
	YC-042-2	2/21/2012	1-2	
	YC-842-2	2/21/2012	1-2	DUP Asb
	YC-042-3	2/21/2012	2-3	
	YC-842-3	2/21/2012	2-3	DUP PCB
	YC-042-4	2/21/2012	3-4	
	YC-842-4	2/21/2012	3-4	DUP Metals

Table 3-1 Sample Collection Summary, Yosemite Creek Waste Characterization Study, San Francisco, San Francisco County, California

Sediment Sample Location	Sample ID	Date Sampled	Depth (ft)	Comment
YC-043	YC-043-1	2/21/2012	0-1	
	YC-043-2	2/21/2012	1-2	
	YC-043-3	2/21/2012	2-3	
	YC-043-4	2/21/2012	3-4	
YC-044	YC-044-1	2/21/2012	0-1	MS/MSD HexCr
	YC-844-1	2/21/2012	0-1	DUP Metals
	YC-044-2	2/21/2012	1-2	
	YC-844-2	2/21/2012	1-2	DUP PCB
	YC-044-3	2/21/2012	2-3	
	YC-844-3	2/21/2012	2-3	DUP HexCr
	YC-044-4	2/21/2012	3-4	
	YC-844-4	2/21/2012	3-4	DUP Asb
YC-045	YC-045-1	2/21/2012	0-1	
	YC-045-2	2/21/2012	1-2	
	YC-045-3	2/21/2012	2-3	
	YC-045-4	2/21/2012	3-4	

Notes:

DUP Asb = Duplicate sample for asbestos by 600/R-93/116
DUP HexCr = Duplicate sample for hexavalent chromium by 7471A
DUP Metals = Duplicate sample for metals by 6010 B and 7471A
DUP PCB = Duplicate sample for PCBs by 8082
MS/MSD HexCr = Matrix Spike/Matrix Spike Duplicate sample for hexavalent chromium by 7471A
MS/MSD Hg = Matrix Spike/Matrix Spike Duplicate sample for mercury by 7471A
MS/MSD Met = Matrix Spike/Matrix Spike Duplicate sample for metals by 6010 B
MS/MSD PCB = Matrix Spike/Matrix Spike Duplicate sample for PCBs by 8082

Since the Yosemite Creek site is a tidally influenced area, largely exposed during low tide and completely submerged during high tide, sample locations were accessed by an EPA-owned pontoon boat with a Vibracore unit mounted to the front. The vibracore sampling device consists of a hollow casing attached to a vibrating motor, and a tripod and hoist are generally required for operation. The 3-inch sampling core was advanced through the sediment using high-frequency vibrations. The sediments were collected in pre-cleaned acrylic sampling cores.

After collecting sample core, the tube was retrieved, capped with Teflon caps, and the ends were labeled. Sample tubes were transported to the sample staging area for processing. The sediment core was extruded from the tube and divided into 1-foot intervals. Four samples per location (0 to 1 foot bgs, 1 to 2 feet bgs, 2 to 3 feet bgs, 3 to ≤4 feet bgs) were prepared from the sediment cores. In cases of refusal or poor recovery, at least three attempts were made at a sampling location to obtain a full 4-foot core. If refusal or recovery issues continued, samples were collected to the farthest depth achievable.

For each 1-foot interval, samples were homogenized in a glass bowl and placed into two 8-ounce glass sample jars and two 4-ounce sample jars, Handlers used nitrile gloves. All samples were placed in coolers and chilled with ice to 4^{o} C for storage and transport to the analytical laboratory.

Sample locations were recorded in the field logbook and the geographic coordinates were obtained and documented using a Trimble GeoXH global positioning device.

3.2 Laboratory Analysis

All sediment samples were split and sent to EPA Region 9 laboratory in Richmond, California, for analysis for metals, including lead and zinc (EPA Method 6010B); mercury (EPA Method 7471A); and PCBs (EPA Method 8082), and to Test America Laboratories in West Sacramento, California for analysis of hexavalent chromium (EPA Method 7196) and asbestos by polarized light microscopy (EPA Method 600/R-93/116).

3.3 Radiation Screening

Due to the proximity of the Yosemite Creek site to the Hunters Point Shipyard Superfund site, which has documented radiation contamination, sediment sampling cores were screened for gamma radiation using a Ludlum 192 meter before being extruded from the sampling tube. No sediment cores contained gamma concentrations that exceeded background radiation levels.

3.4 Investigation-Derived Waste

In the process of conducting field activities at the Yosemite Creek site, several different types of investigation-derived waste (IDW) were generated, including the following:

- Residual soil from acetate soil sampling vibracore tubes
- Decontamination fluids and solids (e.g., towels)
- Disposable sampling equipment
- Used personal protective equipment.

At the conclusion of field activities, one 55-gallon drum containing decontamination rinse water, one 55-gallon drum containing soil cuttings and used personal protective equipment had been collected. START coordinated the characterization and disposal of this IDW as well as an additional 14 drums of drill cuttings, decontamination rinseate, and personal protective equipment generated in a related geotechnical investigation conducted on the site by Arcadis, a contractor representing the responsible parties.

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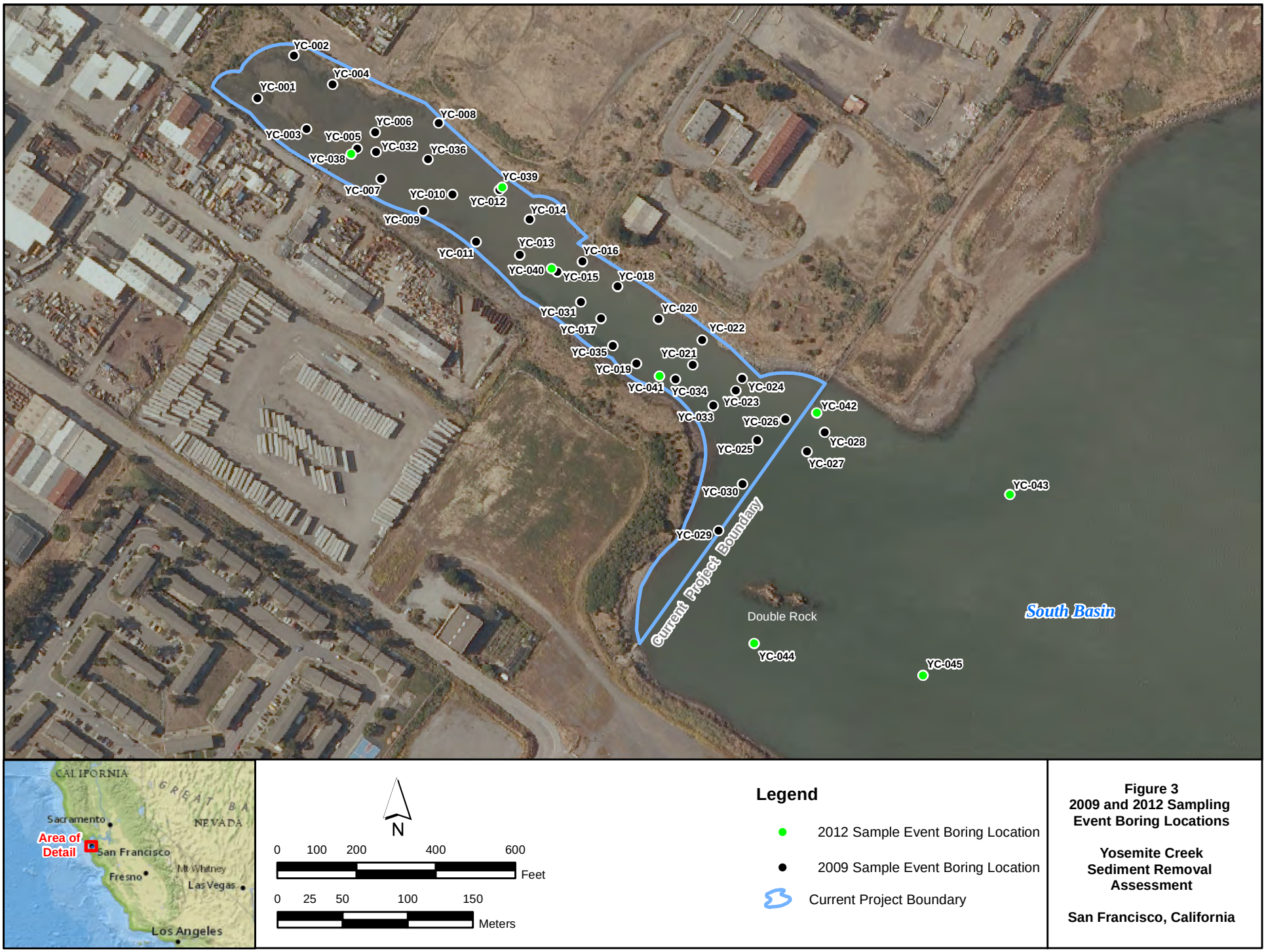


Figure 3
2009 and 2012 Sampling Event Boring Locations

Yosemite Creek Sediment Removal Assessment

San Francisco, California

Two composited samples from the eight soil-containing drums and two composited samples from the eight water drums were collected by START on April 3, 2012 for waste profiling purposes. These samples were sent to the EPA Region 9 laboratory for analysis of organochlorine pesticides and PCBs by EPA Method 8081A/8082; CAM 17 metals by EPA Methods 6010B and 7471A/7470A; and petroleum hydrocarbons (gasoline, diesel, and motor oil by EPA Method 8015B) Environmental Logistics of Bloomington, California, was contracted to profile the waste and transport it to an appropriate disposal facility.

On May 23, 2012 Environmental Logistics removed the drums from the site and delivered them to Filter Recycling Services in Rialto, California for disposal. START retained copies of all disposal manifests (see Appendix F).

3.5 Deviations from the SAP

All work was conducted in accordance with the SAP with the following exceptions:

Refusal in the subsurface limited the vertical extent of sampling at three locations, YC-038-3.6, YC-040-3.6, and YC-039-3.3. Three repeated sampling attempts were made at these locations down to refusal depth, and proposed samples deeper than the refusal depth were not collected.

4 Results and Interpretations

The analytical testing results for sediment are discussed in the following sections.

4.1 Sediment Sample Analytical Results

As noted above, a total of 32 soil samples were collected at eight locations from target depths ranging from 1 to 4 feet bgs and analyzed for PCBs as Aroclors, metals, hexavalent chromium, and asbestos. Analytical results are presented in Appendix B. Detected compounds are discussed in more detail below. Complete analytical data packages are presented in Appendix C.

A qualified chemist performed a Tier 2 data validation in accordance with the SAP. Except for the qualification discussed in Section 5, all data were considered acceptable for their intended use. Copies of the data validation reports are included as Appendix D.

Figure 3 shows the locations of samples collected as part of this waste characterization study. Attempts were made to co-locate sample locations YC-038 with YC-005, YC-039 with YC-012, YC-40 with YC-15, and YC-41 with YC-34.

4.1.1 PCBs as Aroclors

Analytical results for PCBs are summarized in Appendix B, Table B1. Aroclor 1254 and Aroclor 1260 were the only analytes detected above laboratory method detection limits (MDLs). For each sample the sum of total Aroclors was calculated. Where an Aroclor species was not detected above the laboratory MDL its value for purposes of calculating total PCBs was assumed to be zero.

PCBs were not observed at concentrations exceeding the Toxic Substances Control Act (TSCA) regulatory limit of 50 milligrams per kilogram (mg/kg) for total PCBs as a sum of Aroclors in any sample from this study. No sample exceeded the soluble threshold limit concentrations (STLC) threshold value of 50 mg/kg, which is ten times the STLC regulatory limit of 5 milligrams per liter (mg/L); therefore no additional analysis of the samples for soluble PCBs by the California waste extraction test (WET) was required. Fifteen samples in this study exceeded the TTLC regulatory value of 5 mg/kg; however this regulatory limit only applies to PCB contamination from a known source Of the 32 samples

analyzed, 25 exceeded the propose PCB removal action level of 1,240 µg/kg. The average concentration of the 25 samples that exceed the removal level was 11,209 µg/kg. Using ProUCL Version 3.0 statistical software and assuming a Chebyshev distribution, the upper confidence limit (UCL) of the mean at the 95 percent confidence level was 22,334 µg/kg. These results indicate that the sediments would be classified as non-TSCA for PCBs for the purposes of disposal. Appendix B, Table B5 shows the disposal classification for each sediment sample. A summary of the statistical evaluation is included in Appendix E.

Appendix B, Table B5, also presents the total PCBs as a sum of Aroclors for samples collected during E & E's 2009 remedial assessment study. Four samples collected in this remedial assessment study exceeded the TSCA regulatory limit. The estimated disposal volume of sediments exceeding TSCA regulatory values for PCBs are estimated as part of the EC/CA. However unless these areas are specifically segregated, it is unlikely that PCB concentrations in sediment removed from the slough will be greater than the 50 mg/kg TSCA limit once they are homogenized during the removal process.

4.1.2 Hexavalent Chromium

Analytical results for hexavalent chromium are summarized in Appendix B, Table B1. Hexavalent chromium was detected above the laboratory MDL in two samples in this study. Both of these samples were at levels less than the laboratory reporting limit (RL). Based on these results, the sediments can be considered non-hazardous with respect to hexavalent chromium for purposes of disposal.

4.1.3 Asbestos

Analytical results for asbestos are summarized in Appendix B, Table B1. Asbestos was detected above the laboratory MDL in two samples in this study, both of which were below 1% chrysotile. Based on the State of California's regulatory limit of 1% friable asbestos, the results indicate that the sediments can be considered non-hazardous for asbestos for purposes of disposal.

4.1.4 Metals

Sediment samples were first analyzed for total solid CAM-17 metals by EPA Method 6010B. The results for each sample were then compared with the threshold values for TCLP and STLC. If the STLC threshold value (10 x STLC regulatory limit) for any analyte was met, then the sample was analyzed for soluble metals via the California WET method. If the TCLP threshold value (20 x TCLP regulatory limit) for any analyte was met, then the sample was analyzed for soluble metals via the TCLP method. The regulatory limits for total threshold limit concentrations (TTLC), STLC, and TCLP are shown in Appendix B, Table B2.

4.1.4.1 TTLC Metals

Analytical results for total solid metals are summarized in Appendix B, Table B2. All analytes were detected above the laboratory MDL except for thallium. Molybdenum and selenium were detected in only one sample. TTLC regulatory limits were exceeded in one sample, YC-041-3, which exceeded the 1,000 mg/kg limit for lead. These results indicate that sediments removed from Yosemite Slough are unlikely to be classified by the State of California as hazardous for total metals for purposes of disposal. This conclusion is supported by the calculated value of the 95%UCL about the mean of the TTLC (total) lead concentrations for the 25 waste characterization samples that exceeded the PCB removal action level (i.e. the 95% UCL for lead for samples collocated with PCBs above the action level). Using ProUCL Version 3.0, the calculated 95% UCL for total lead in those samples (using the Chebyshev distribution) was 851.4 mg/kg. Appendix B, Table B5 shows the disposal classification for each sediment sample. A summary of the statistical evaluation for total lead is included in Appendix E.

4.1.4.2 STLC Metals

All sediment samples except for YC-038-3 and YC-038-3.6 exceeded the TTLC threshold value of 50 mg/kg for lead and chromium, indicating STLC analyses were necessary. One sample, YC-041-3, also exceeded the TTLC threshold value of 250 mg/kg for copper. Because samples YC-038-3 and YC-038-3.6 were within 2 mg/kg of the TTLC threshold value for chromium, all samples were analyzed for soluble metals via the California WET method (STLC).

The analytical results for soluble metals via the California WET method are summarized in Appendix B, Table B3. Three samples, YC-038-2, YC-041-4, and YC-039-2, exceeded the STLC regulatory limit of 5 mg/L for soluble chromium. Eighteen samples exceeded the STLC regulatory limit of 5 mg/L for soluble lead. Because removal actions are expected to be based on PCB concentrations, the 95% UCL for soluble lead was calculated using the STLC values for those 25 samples that exceeded the 1,240 µg/kg limit for PCBs. Using ProUCL Version 3.0, the calculated mean was 12.7 mg/L and the 95% UCL about the mean was 27.6 mg/L. These results indicate that sediment removed due to elevated PCB concentrations will likely be classified by the State of California as hazardous for soluble lead for purposes of disposal. Appendix B, Table B5 shows the disposal classification for each sediment sample. A summary of the statistics generated using ProUCL 3.0 is included in Appendix E.

4.1.4.3 TCLP Metals

All sediment samples except for YC-038-3, YC-038-3.6, and YC-039-3.3 met the TTLC threshold value of 100 mg/kg for chromium, indicating TCLP extraction was warranted. Twenty-four samples, not including YC-038-3, YC-038-3.6, and YC-039-3.3, exceeded the TTLC threshold value of 100 mg/kg for lead, indicating TCLP extraction procedure was warranted. All samples except for YC-038-3, YC-038-3.6, and YC-039-3.3 were analyzed for soluble metals via the

TCLP method. The analytical results for soluble metals via the TCLP method are summarized in Appendix B, Table B4. No samples in this study exceeded the TCLP regulatory limits. These results indicate that the sediments may be considered as non-RCRA (Resource Conservation and Recovery Act) hazardous for purposes of disposal.

4.2 Waste Characterization

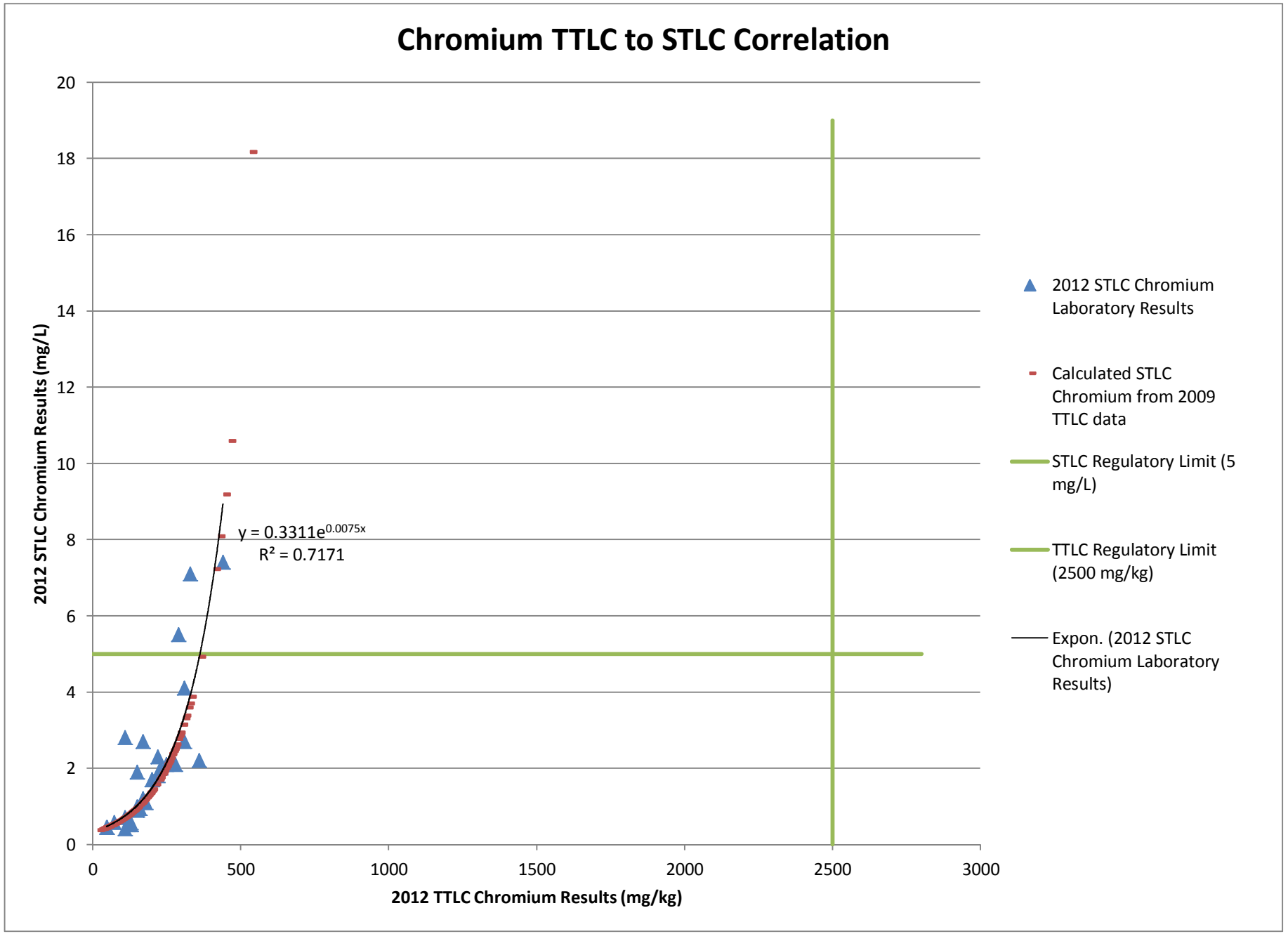
To ensure that the collected samples were at concentrations appropriate for establishing a correlation with historic data, the sampling locations were selected based on previous analytical results in areas where there are documented contamination "hot spots." The sediments in these areas are the most likely to have the hazardous waste characteristics needed to determine the correlation to support the estimation of the sediment disposal volumes falling under the various disposal methods.

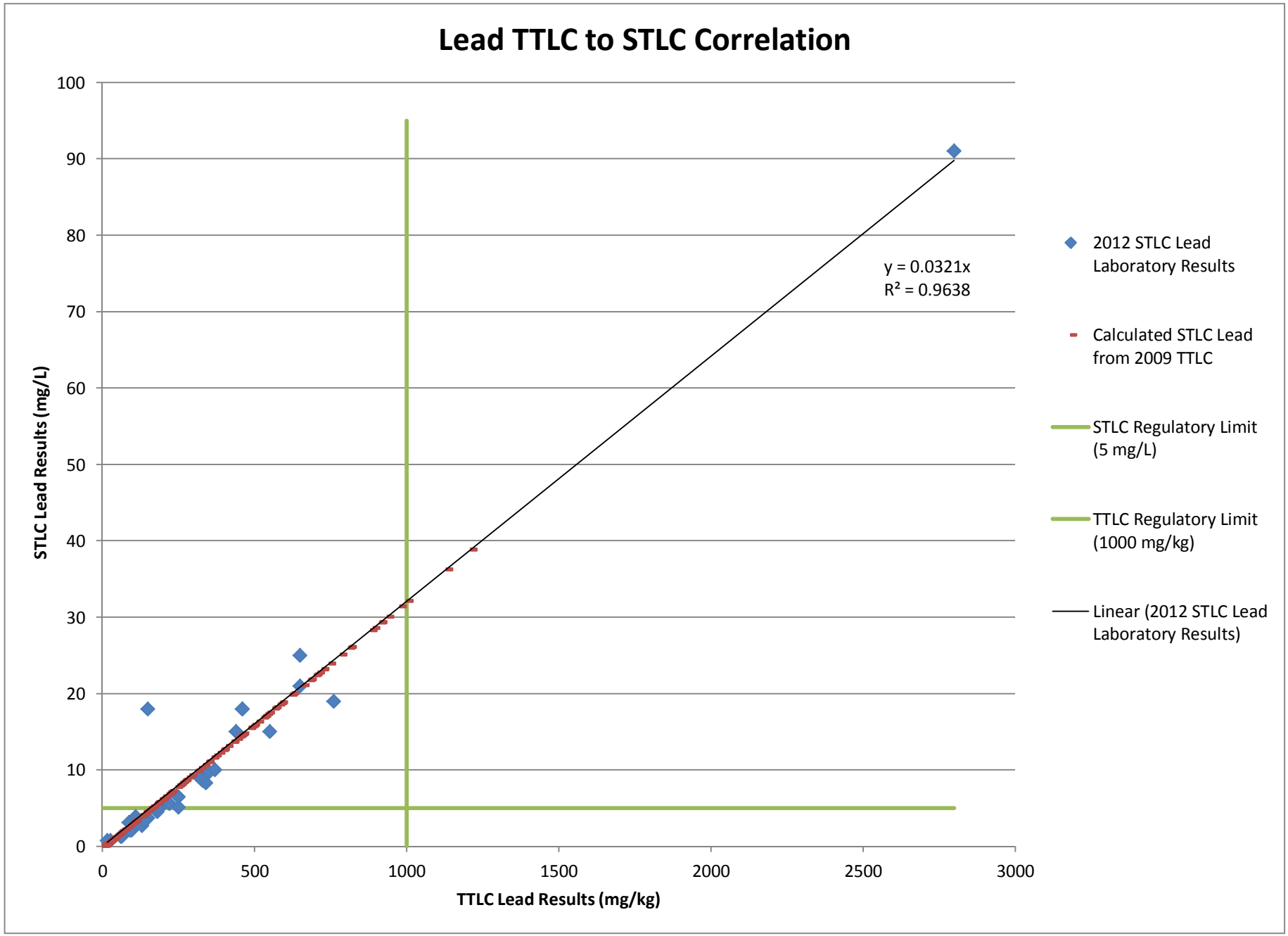
If the waste characterization data indicate good correlation between existing TTLC and STLC data sets, then extrapolations regarding volumes and area can be made using previous sampling results. For example, if the characterization data indicate that sediments are regulated hazardous waste under TSCA or California rules, and there is good correlation between TTLC, TCLP, and STLC data collected during the waste characterization study, then it will be assumed that material with similar TTLC characteristics (as sampled during the E & E 2009 remedial assessment work) will be disposed of as a regulated hazardous waste, and extrapolations regarding volumes and areas can be made using previous sampling results.

4.2.1 Correlation Study

A correlation study was run to determine the relationship between TTLC and STLC sample results for chromium and lead for sediment samples collected in this waste characterization study. The correlation study was not run for PCB results because no samples collected during this study exceeded TSCA regulatory limits or met the STLC threshold value for PCBs. No correlation study was run for the relationship between TTLC and TCLP results because no sediment samples exceeded the TCLP regulatory thresholds.

According to the SAP, a correlation coefficient value of 0.70 or greater is considered as an acceptable correlation. Chromium TTLC and STLC sample results from this study have a correlation coefficient of 0.72 (see Figure 4). Lead TTLC and STLC sample results have a correlation coefficient of 0.96 (see Figure 5). However, if the outlier point that exceeds the TTLC regulatory limit of 1,000 mg/kg is removed, the correlation coefficient is reduced to 0.80. Because both of these correlation coefficients meet the acceptable criteria, the relationship between TTLC and STLC was used to calculate the STLC results for lead and chromium for the sediment samples collected by E & E during the 2009 removal assessment study. The results of this calculation are shown in Appendix B, Table B5. The relationship between TTLC and STLC for lead corresponding to the


Chromium TTLC to STLC Correlation
2012 STLC Chromium Results (mg/L)
2012 TTLC Chromium Results (mg/kg)
0
2
4
6
8
10
12
14
16
18
20
0
500
1000
1500
2000
2500
3000
y = 0.3311e0.0075x
R² = 0.7171
2012 STLC Chromium Laboratory Results
Calculated STLC Chromium from 2009 TTLC data
STLC Regulatory Limit (5 mg/L)
TTLC Regulatory Limit (2500 mg/kg)
Expon. (2012 STLC Chromium Laboratory Results)


Lead TTLC to STLC Correlation
STLC Lead Results (mg/L)
TTLC Lead Results (mg/kg)
0
10
20
30
40
50
60
70
80
90
100
0
500
1000
1500
2000
2500
3000
y = 0.0321x
R² = 0.9638
2012 STLC Lead Laboratory Results
Calculated STLC Lead from 2009 TTLC
STLC Regulatory Limit (5 mg/L)
TTLC Regulatory Limit (1000 mg/kg)
Linear (2012 STLC Lead Laboratory Results)

correlation coefficient of 0.9638 was used in the calculation of STLC results for sediment samples collected in 2009.

Although the correlation between chromium TTLC and STLC was less strong than the correlation between lead TTLC and STLC, all calculated chromium exceedances were co-located with lead exceedances, so any calculated chromium exceedances will not alter the disposal method. These results show a good correlation between existing TTLC and STLC datasets; therefore extrapolations regarding disposal volumes can be made using the 2009 removal assessment sampling results.

4.2.2 Waste Disposal Classification

Disposal volume estimates requiring different types of hazardous or nonhazardous disposal, if removed from the slough, will be estimated in the EC/CA using data generated from this waste characterization study. The sediment data for each sample collected by E & E during the 2009 and 2012 sampling events were compared with the regulatory disposal limits for TSCA, RCRA, or California rules as discussed above. Total Aroclor data for PCBs was used in comparison with TSCA and California rules for both the 2009 and 2012 sample results. Because of the positive correlation between TTLC and STLC data (discussed in Section 4.2.1), calculated STLC data were used in the comparison with California rules for the 2009 samples.

Appendix B, Table B5, shows the disposal classification of each sample. Disposal types determined to exist for sediments removed from the Slough are shown in Table 4-1. For disposal purposes, sediment that is classified as non-hazardous by the State of California for metals is considered Class II Waste. Sediment that is classified as hazardous by the State of California for metals is considered as non-RCRA waste for disposal purposes.

Table 4-2 shows a summary of the number of samples found in each disposal classification.

Actual disposal classifications may vary depending on the results of characterization samples collected from dewatered sediment stockpiles.

4.2.3 Co-located Samples

Attempts were made to co-locate sample locations YC-038 with YC-005, YC-039 with YC-012, YC-40 with YC-15, and YC-41 with YC-34. The sample results did not always result in matching disposal classifications for these co-located samples (see Appendix B, Table B6). For example, YC-034-1 resulted in a classification of non-RCRA, PCB-containing waste, while the co-located sample YC-041-1 resulted in a classification of Class II waste, PCB-containing. It is assumed that this is the case because sample collection locations may not have matched perfectly due to the field limitations of sample collection from a boat;

and because of the inherent variability of contaminant concentrations in environmental samples.

4.2.4 Distribution of Disposal Classification Samples

Figures 6 through 10 present the spatial distribution of disposal classifications of existing sample locations where the disposal classifications were estimated through the correlation study described above. The five figures represent sample results for 1-foot depth intervals, starting at the sediment surface (0 to 1 foot) to the deepest samples collected (4 to 5 feet).

Table 4-1 Definition of Disposal Classifications, Yosemite Creek Waste Characterization Study, San Francisco, San Francisco County, California

PCB CLASS	METALS CLASS: No Exceedance of TTLC, STLC, or TCLP	METALS CLASS: Exceeds either TTLC or STLC for Pb or Cr	METALS CLASS: Exceeds TCLP for Pb or Cr
Sum of Aroclors = 0	Class II Waste, non-PCB	Non-RCRA, non-PCB	RCRA
Sum of Aroclors is >0 but <50ppm	Class II Waste, PCB-containing	Non-RCRA, PCB-containing	RCRA
Sum of Aroclors is >50ppm	TSCA		RCRA/TSCA

Key:

BCP = polychlorinated biphenyls
Cr = chromium
Pb = lead
ppm = parts per million
RCRA = Resource Conservation and Recovery Act
STLC = soluble threshold limit concentrations
TSCA = Toxic Substances and Control Act
TTLC = total threshold limit concentrations

Table 4-2 Disposal Classification Sample Count, Yosemite Creek Waste Characterization Study, San Francisco, San Francisco County, California

		METALS CLASS		
		No Exceedance of TTLC, STLC, or TCLP	Exceeds either TTLC or STLC for Pb or Cr	Exceeds TCLP for Pb or Cr
PCB CLASS	Sum of Aroclors = 0	27	16	0
	Sum of Aroclors is >0 but <50ppm	40	136	0
	Sum of Aroclors is >50ppm	4		0

Key:

BCP = polychlorinated biphenyls
Cr = chromium
Pb = lead
ppm = parts per million
RCRA = Resource Conservation and Recovery Act
STLC = soluble threshold limit concentrations
TSCA = Toxic Substances and Control Act
TTLC = total threshold limit concentrations

Path: M:\Oakland\Yosemite_Creek\Maps\MXD\Waste_Characterization\1ft_WC.mxd

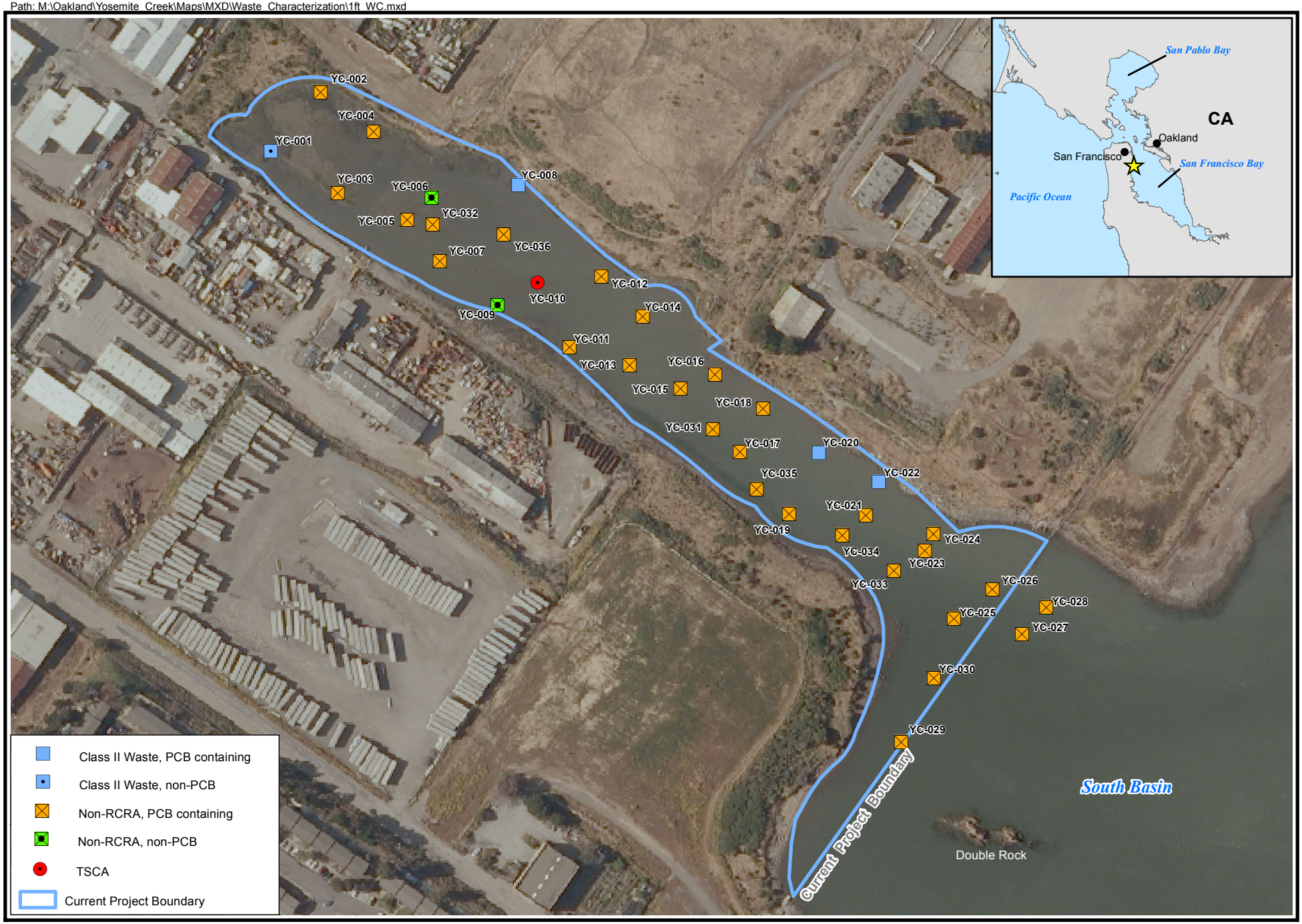


Figure 6. Waste Classification Distribution
0-1 Foot Depth

Imagery: National Agriculture Imagery Program (NAIP)

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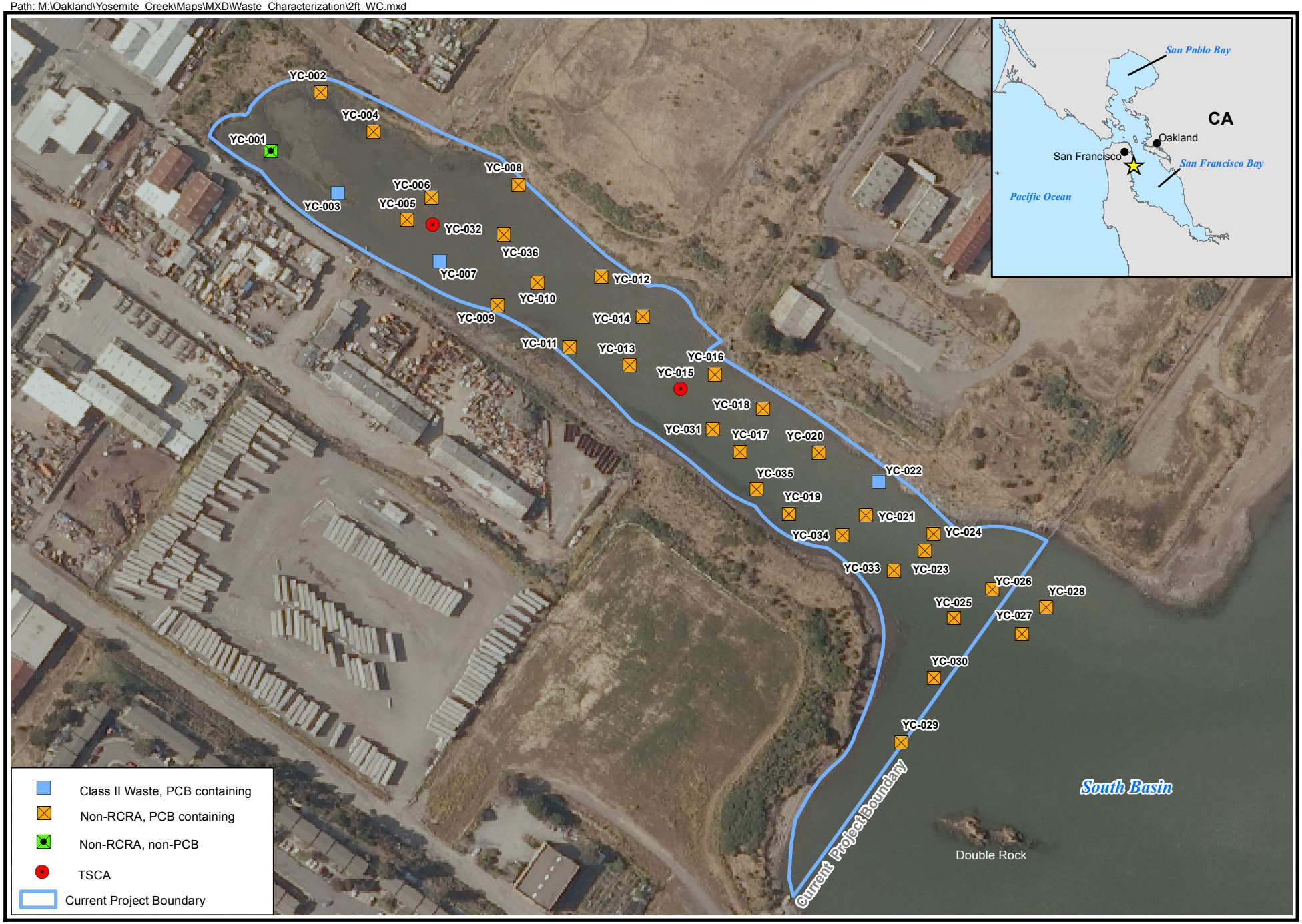

Figure 7. Waste Classification Distribution
1-2 Foot Depth

Imagery: National Agriculture Imagery Program (NAIP)

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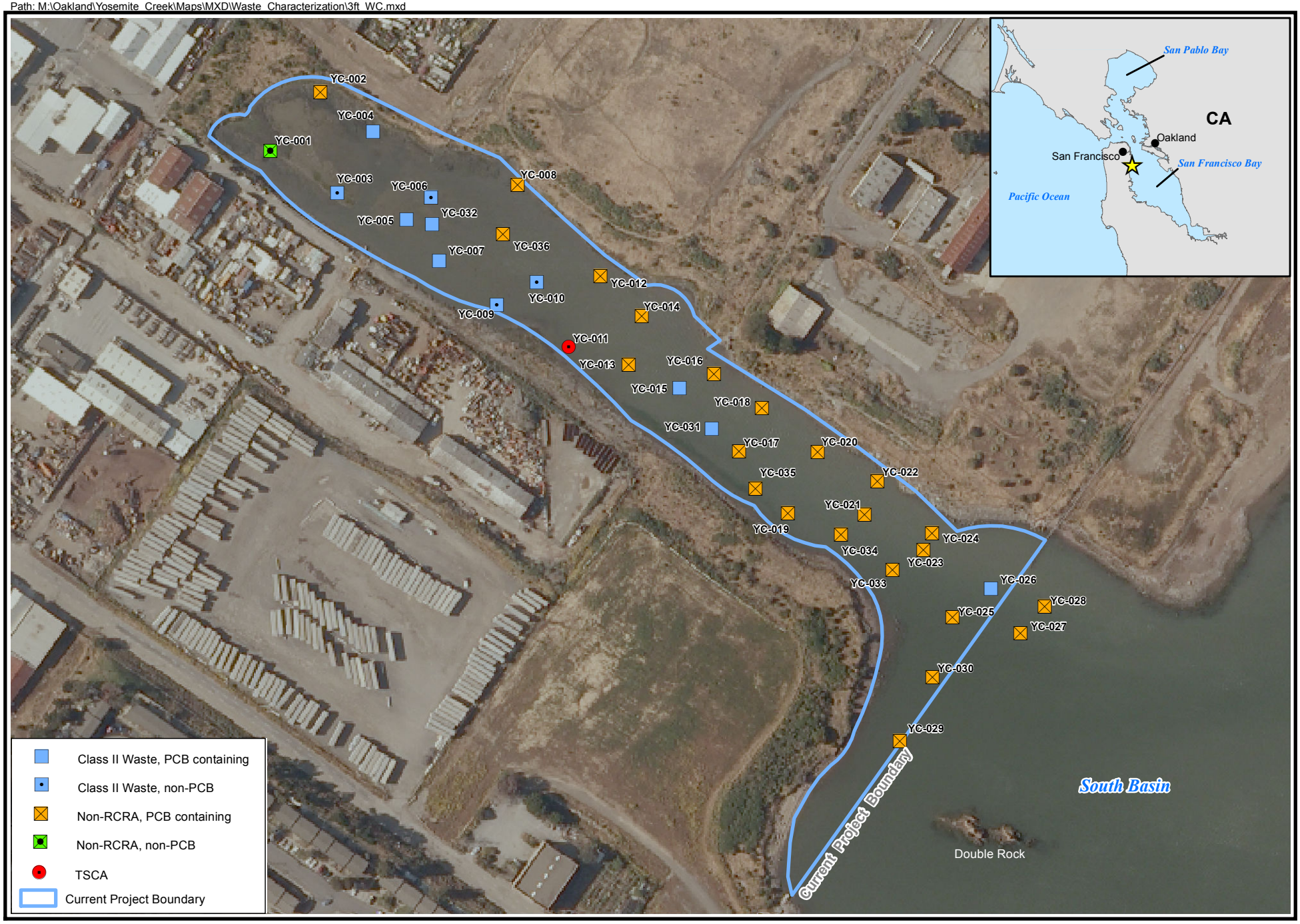

Figure 8. Waste Classification Distribution 2-3 Foot Depth

Imagery: National Agriculture Imagery Program (NAIP)

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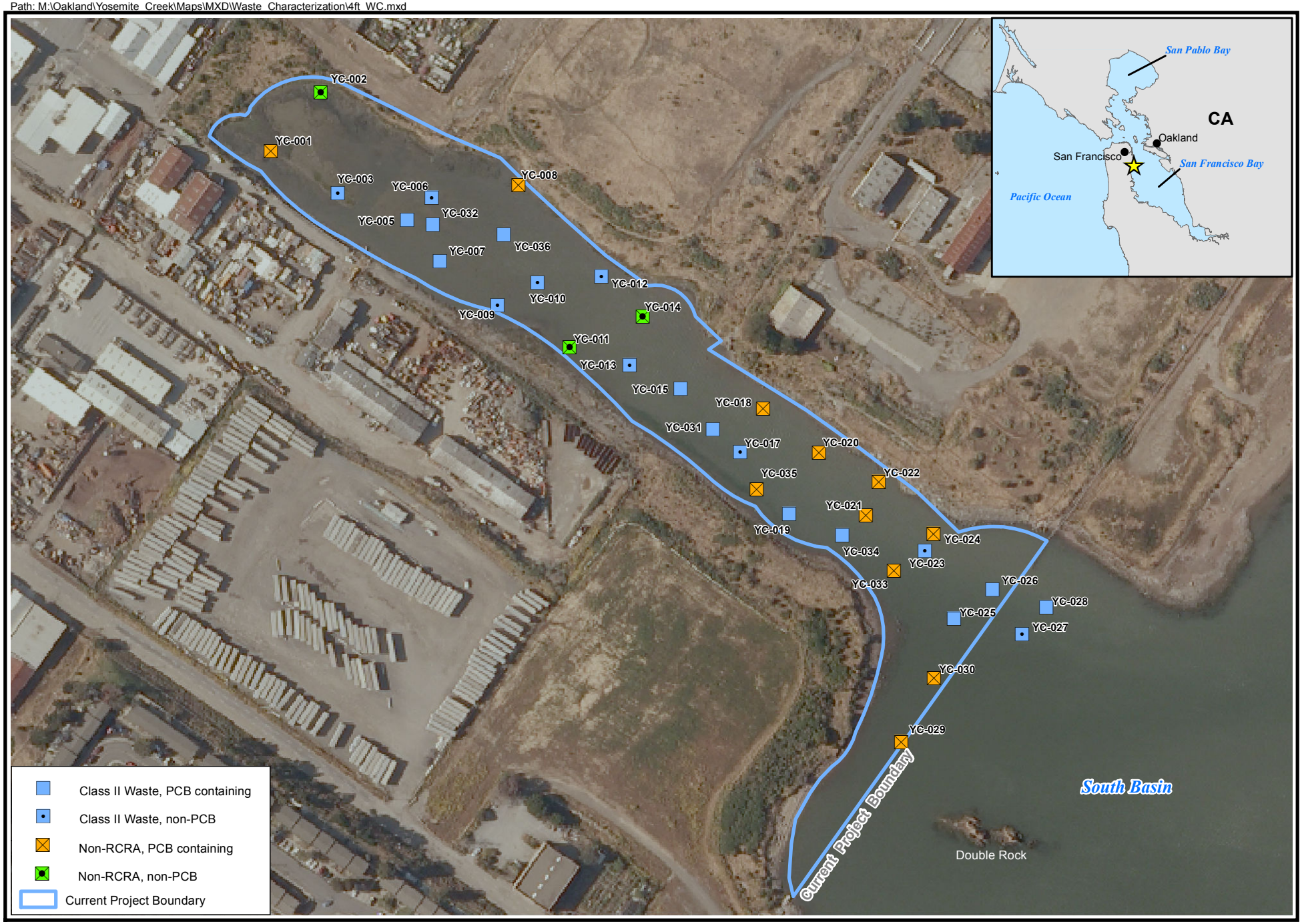

Figure 9. Waste Classification Distribution 3-4 Foot Depth

Imagery: National Agriculture Imagery Program (NAIP)

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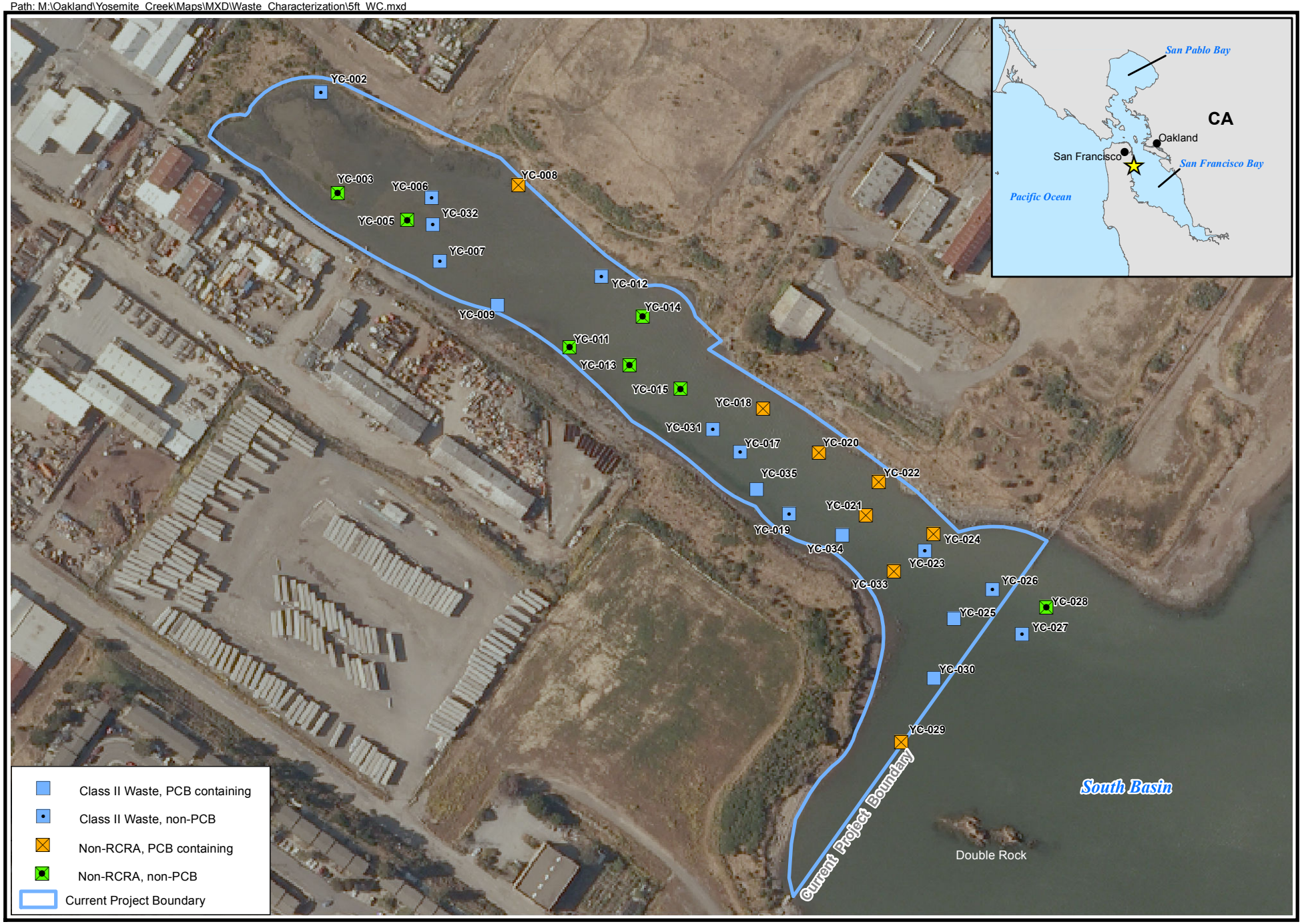

Figure 10. Waste Classification Distribution 4-5 Foot Depth

Imagery: National Agriculture Imagery Program (NAIP)

5 Quality Assurance/Quality Control (QA/QC)

5.1 Analytical Data Usability Report

The quality of the analytical data was reviewed by a START project chemist and, except for the qualifications discussed herein, found to be acceptable for intended uses under this investigation. Data produced as a result of this Waste Characterization Study were found to be acceptable with qualification as definitive analytical data. Specific data validation or quality assurance/quality control (QA/QC) issues are discussed in the Data Validation Summary Reports presented in Appendix D.

5.2 QA/QC Samples

The following quality assurance and quality control (QA/QC) samples were collected and analyzed as part of the waste characterization study.

5.2.1 Duplicate Samples

Field duplicate split samples were collected to evaluated homogenization and field sampling procedures at a rate of approximately one duplicate sample for every ten samples. Based on the SAP and EPA guidance, samples in which duplicates exceeded 35% relative percent difference (RPD) were to be qualified with a J (estimated) data validation qualifier. However, results for all duplicate samples were within the 35% RPD limit.

5.2.2 Matrix Spike and Matrix Spike Duplicate Samples

Additional sample material was collected for samples YC-044-3 and YC-039-2 and these samples were designated for matrix spike (MS) and matrix spike duplicate (MSD) analyses for TTLC metals. Except for antimony, recoveries were within the specified control limits. Results for antimony were qualified as estimated (j-flagged).

5.2.3 Rinse Blank

A rinse blank sample (YC-022112-RB) was collected by pouring distilled water over a decontaminated sample collection device (sampling spoon or bowl) and capturing the water in the specified sampling containers. The rinse blank was submitted to EPA Region 9 laboratory in Richmond, California, for analysis of metals, including lead and zinc (EPA Method 6010B); mercury (EPA Method 7471A); and PCBs as Aroclors (EPA Method 8082). Analytical results for sample

YC-022112-RB indicated that no PCBs or metals were reported at levels exceeding MDLs. Based on these results, decontamination procedures for site activities were adequate and were unlikely to have resulted in any cross-contamination between samples.

6 Summary and Conclusions

On February 21, 2012, START assisted the EPA with the collection of a total of 32 sediment samples from 8 sampling locations at Yosemite Creek, San Francisco, San Francisco County, California. Based on the results of the sediment sampling, PCBs (as Total Aroclors), soluble metals (including chromium and lead), and total metals are present in Yosemite Creek sediments at concentrations that exceed an applicable disposal criteria. Based on the Waste Characterization Study results, a good correlation is present between existing TTLC and STLC data sets; therefore, extrapolations regarding disposal classification volumes and area can be made using the 2009 removal assessment sampling results and the 2012 Waste Characterization Study results.

Based on the results of this Waste Characterization Study, the removal of sediments from the Yosemite Creek will not result in sediments classified as TSCA Waste for PCBs. However, it is likely that sediments removed from Yosemite Slough will exceed California Hazardous Waste (non-RCRA waste) criteria for soluble lead. There were not any samples collected that resulted in the RCRA Waste disposal classification.

7 References

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A Photodocumentation

ECOLOGY AND ENVIRONMENT, INC.
Superfund Technical Assessment and Response Team
Yosemite Slough – Waste Characterization Study, San Francisco, California

E&E Project. No.: 002693.7008.06TTO TDD No: TO-07 09-11-10-0001

PHOTO 1

Date: 2/21/12

Direction: Northwest

Photographer: Sara Dwight

Description: START, USCG and USEPA field team operate the Vibracore ® to collect sediment cores from sampling locations in the slough.

PHOTO 2

Date: 02/21/12

Direction: Southwest

Photographer: Sara Dwight

Description: START Villars and USCG Lashbrook recover a sediment sample core from the dedicated sample tube.

PHOTO 3

Date: 2/21/12

Direction: Northwest

Photographer: Sara Dwight

Description: USCG Lashbrook homogenizes a one foot increment of the sample core prior to filling sample jars.

B Analytical Results Tables

Table B1. PCB, Asbestos, and Hexavalent Chromium Results
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Arochlor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Sum of Aroclors	Hexavalent Chromium	Asbestos
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	%
Method											Calculated		
TTLC											5000		1
TSCA Waste											50000		NA
STLC											5000		
Sample ID	**Date**												
YC-038-1	2/21/2012	<58	<120	<58	<58	<58	3600	2400	<58	<58	6000	<89	ND
YC-038-2	2/21/2012	<53	<110	<53	<53	<53	21000	17000	<53	<53	38000	<85	ND
YC-038-3	2/21/2012	<40	<81	<40	<40	<40	970	660	<40	<40	1630	<62	ND
YC-038-3.6	2/21/2012	<37	<74	<37	<37	<37	<37	78	<37	<37	78	<62	ND
YC-040-1	2/21/2012	<69	<140	<69	<69	<69	1200	1000	<69	<69	2200	<110	ND
YC-040-2	2/21/2012	<47	<94	<47	<47	<47	830	600	<47	<47	1430	<82	ND
YC-040-3	2/21/2012	<35	<69	<35	<35	<35	2800	1500	<35	<35	4300	<62	ND
YC-040-3.6	2/21/2012	<48	<96	<48	<48	<48	15000	6400	<48	<48	21400	<80	<1% chrysotile
YC-044-1	2/21/2012	<66	<130	<66	<66	<66	<66	470	<66	<66	470	<100	ND
YC-044-2	2/21/2012	<61	<120	<61	<61	<61	970	860	<61	<61	1830	<100	ND
YC-044-3	2/21/2012	<66	<130	<66	<66	<66	2400	3300	<66	<66	5700	<120	ND
YC-044-4	2/21/2012	<68	<140	<68	<68	<68	5000	3700	<68	<68	8700	<100	ND
YC-042-1	2/21/2012	<59	<120	<59	<59	<59	1600	1300	<59	<59	2900	46 U	ND
YC-042-2	2/21/2012	<54	<110	<54	<54	<54	5600	3900	<54	<54	9500	<100	ND
YC-042-3	2/21/2012	<63	<130	<63	<63	<63	8900	7600	<63	<63	16500	<110	ND
YC-042-4	2/21/2012	<67	<130	<67	<67	<67	490	290	<67	<67	780	<100	ND
YC-041-1	2/21/2012	<58	<120	<58	<58	<58	660	570	<58	<58	1230	<93	<1% chrysotile
YC-041-2	2/21/2012	<55	<110	<55	<55	<55	5100	2700	<55	<55	7800	<91	ND
YC-041-3	2/21/2012	<59	<120	<59	<59	<59	29000	2700	<59	<59	31700	<90	ND
YC-041-4	2/21/2012	<67	<130	<67	<67	<67	16000	30000	<67	<67	46000	<100	ND
YC-039-1	2/21/2012	<70	<140	<70	<70	<70	12000	3200	<70	<70	15200	<110	ND
YC-039-2	2/21/2012	<54	<110	<54	<54	<54	15000	17000	<54	<54	32000	<100	ND
YC-039-3	2/21/2012	<43	<86	<43	<43	<43	4800	3400	<43	<43	8200	<70	ND
YC-039-3.3	2/21/2012	<42	<83	<42	<42	<42	<42	340	<42	<42	340	NA	NA
YC-043-1	2/21/2012	<58	<120	<58	<58	<58	540	510	<58	<58	1050	<100	ND
YC-043-2	2/21/2012	<64	<130	<64	<64	<64	3100	2700	<64	<64	5800	41 U	ND
YC-043-3	2/21/2012	<69	<140	<69	<69	<69	1700	1400	<69	<69	3100	<110	ND
YC-043-4	2/21/2012	<64	<130	<64	<64	<64	230	170	<64	<64	400	<110	ND
YC-045-1	2/21/2012	<64	<130	<64	<64	<64	<64	300	<64	<64	300	<110	ND
YC-045-2	2/21/2012	<66	<130	<66	<66	<66	990	1000	<66	<66	1990	<100	ND
YC-045-3	2/21/2012	<69	<140	<69	<69	<69	3400	3500	<69	<69	6900	<100	ND
YC-045-4	2/21/2012	<64	<130	<64	<64	<64	740	700	<64	<64	1440	<100	ND

Notes:
ug/kg - micrograms per kilogram
<n - Not detected in samples above the stated reporting limit n
NA- Not analyzed or not applicable
ND - not detected
U - Estimated result, result is less than reporting limit but greater than method detection limit
Asbestos analyzed by EPA Method 600
Hexavalent Chromium analyzed by SW846 7196A and ASTM D 2216-90
PCBs - polychlorinated biphenyls analyzed by EPA Method 8082
Bold - exceeds disposal criteria
RSL - U.S. EPA Region 9 industrial regional screening levels (November 2010)

TSCA Waste	TSCA Waste
	Exceeds TTLC
	exceeds 10xSTLC

Table B2. TTLC Metals Results
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Antimony	Selenium	Silver	Thallium	Vanadium	Zinc	Arsenic	Barium	Beryllium	Cadmium	Mercury
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
U.S. EPA RSL		1,500,000 (CrIII); 5.6 (CrVI)	300	41,000	800	5,100	20,000	410	5,100	5,100	NA	5200	310,000	1.6	190,000	2,000	800	310
TTLC Requirement		2500	8000	2500	1000	3500	2000	500	100	500	700	2400	5000	500	10000	75	100	20
STLC Requirement		5	80	25	5	350	20	15	1	5	7	24	250	5	100	0.75	1	0.2
TCLP Requirement		5			5				1	5				5	100		1	0.2
Sample ID	**Date**																	
YC-038-1	2/21/2012	150	12	90	330	<4.8	75	<1.9	<1.9	1.1	<4.8	75	320	8.7	150	0.51	2.3	1.2
YC-038-2	2/21/2012	330	15	71	650	<8.9	60	2.1	2.4	1.2	<8.9	74	480	7.1	260	0.42	10	1.5
YC-038-3	2/21/2012	49	8	16	27	<6.5	30	<2.6	<2.6	<1.3	<6.5	62	56	6.9	36	0.31	0.36	0.15
YC-038-3.6	2/21/2012	48	7.7	15	16	<6.4	33	<2.6	<2.6	<1.3	<6.4	49	48	7.4	38	0.31	<0.64	0.4
YC-040-1	2/21/2012	130	14	94	130	<12	91	<4.7	<4.7	<2.3	<12	89	210	10	100	0.69	0.71	0.58
YC-040-2	2/21/2012	110	11	86	110	<8.3	69	<3.3	<3.3	<1.7	<8.3	74	190	7.6	76	0.48	0.89	0.55
YC-040-3	2/21/2012	110	7.4	39	150	<6.2	38	<2.5	<2.5	<1.2	<6.2	50	210	3.4	59	0.23	1.1	0.32
YC-040-3.6	2/21/2012	170	11	110	460	<8.2	72	4	<3.3	1.5	<8.2	79	420	5.1	160	0.31	3.2	1.1
YC-044-1	2/21/2012	130	15	75	91	<10	94	<4.1	<4.1	<2.1	<10	89	200	11	93	0.73	0.59	0.47
YC-044-2	2/21/2012	180	15	95	180	<9.9	100	<4	<4	1.2	<9.9	92	290	13	110	0.73	1.6	0.74
YC-044-3	2/21/2012	310	15	130	340	<11	110	<4.6	<4.6	1.5	<11	95	550	14	180	0.73	4.5	1.4
YC-044-4	2/21/2012	250	15	110	350	<11	99	<4.2	<4.2	1.4	<11	88	440	14	190	0.66	4.4	1.1
YC-042-1	2/21/2012	150	13	97	200	<9.6	90	<3.8	<3.8	1.2	<9.6	76	310	11	120	0.56	1.9	1.3
YC-042-2	2/21/2012	220	14	110	320	<9.9	100	<3.9	<3.9	1.1	<9.9	76	390	12	180	0.57	3.9	0.96
YC-042-3	2/21/2012	310	15	120	370	<11	100	<4.2	<4.2	1.2	<11	84	440	13	240	0.62	5.8	1.1
YC-042-4	2/21/2012	200	14	78	150	<9.8	93	<3.9	<3.9	1.2	<9.8	89	330	14	140	0.69	2.4	1.2
YC-041-1	2/21/2012	130	13	99	180	<9.4	89	<3.8	<3.8	0.96	<9.4	81	270	10	150	0.57	0.94	0.48
YC-041-2	2/21/2012	200	13	240	550	<8.8	120	4.5	<3.5	1.5	<8.8	75	650	11	230	0.54	3.2	0.99
YC-041-3	2/21/2012	360	16	260	2800	5.4	160	9.4	<3.7	3.4	<9.3	72	1200	12	720	0.47	9.1	1.8
YC-041-4	2/21/2012	440	13	130	650	<10	83	<4.2	<4.2	1.4	<10	71	550	9	320	0.49	8.5	1.3
YC-039-1	2/21/2012	280	17	140	760	<11	120	<4.6	<4.6	1.6	<11	99	660	12	250	0.7	5.6	1.9
YC-039-2	2/21/2012	290	13	110	440	<9.1	76	<3.7	<3.7	0.95	<9.1	71	360	7	200	0.41	5.5	1.1
YC-039-3	2/21/2012	150	13	70	460	<7.2	73	2.4	<2.9	0.94	<7.2	71	470	13	260	0.41	2.8	0.87
YC-039-3.3	2/21/2012	73	10	26	87	<6.7	48	<2.7	<2.7	<1.3	<6.7	52	110	11	71	0.31	0.7	0.36
YC-043-1	2/21/2012	120	14	75	96	<10	90	<4	<4	<2	<10	79	190	12	83	0.66	0.59	0.54
YC-043-2	2/21/2012	220	14	100	220	<9.9	94	<4	<4	1.3	<9.9	79	310	13	120	0.62	2.8	0.85
YC-043-3	2/21/2012	270	15	100	250	<11	100	<4.5	<4.5	1.2	<11	93	390	15	170	0.71	3.5	0.84
YC-043-4	2/21/2012	150	14	58	64	<11	93	<4.3	<4.3	<2.2	<11	83	180	13	80	0.66	1.5	0.52
YC-045-1	2/21/2012	110	13	57	61	<10	81	<4.2	<4.2	<2.1	<10	74	140	10	69	0.62	<1	0.39
YC-045-2	2/21/2012	160	14	80	140	<10	91	<4.1	<4.1	1.1	<10	79	220	12	86	0.64	1.1	0.56
YC-045-3	2/21/2012	230	15	110	250	<10	97	<4.1	<4.1	1.3	<10	87	370	14	140	0.67	3.1	0.92
YC-045-4	2/21/2012	170	15	66	92	<10	95	<4.1	<4.1	<2	<10	86	200	14	93	0.7	1.8	0.56

<n - Not detected in samples above the stated detection limit n
Metals analyzed by EPA Method 6010B/7471A
exceeds TTLC, CA Haz Waste
exceeds 10xSTLC
exceeds 20xTCLP

Table B3. STLC Metals Results
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Antimony	Selenium	Silver	Thallium	Vanadium	Zinc	Arsenic	Barium	Beryllium	Cadmium
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
STLC Regulatory Limit		5	80	25	5	350	20	15	1	5	7	24	250	5	100	0.75	1
Sample ID	**Date**																
YC-038-1	2/21/2012	0.89	0.16	0.76	8.6	<0.50	0.4	<0.20	0.27	<0.10	<0.50	0.83	9.1	0.22	1.5	<0.010	0.052
YC-038-2	2/21/2012	7.1	0.22	0.38	25	<0.50	0.39	0.2	0.13	<0.10	<0.50	1.1	17	0.11	2.7	0.005	0.14
YC-038-3	2/21/2012	0.45	0.13	<0.40	0.76	<0.50	0.27	<0.20	<0.20	<0.10	<0.50	0.61	1.4	0.12	0.86	<0.010	<0.050
YC-038-3.6	2/21/2012	0.45	0.13	<0.40	0.76	<0.50	0.27	<0.20	<0.20	<0.10	<0.50	0.61	1.4	0.12	0.86	<0.010	<0.050
YC-040-1	2/21/2012	0.52	0.16	0.57	2.7	<0.50	0.3	<0.20	<0.20	<0.10	<0.50	0.72	3.5	0.19	0.85	<0.010	<0.050
YC-040-2	2/21/2012	0.71	0.17	0.84	3.9	<0.50	0.7	<0.20	<0.20	<0.10	<0.50	0.7	5.9	0.17	1.2	<0.010	0.025
YC-040-3	2/21/2012	2.8	0.24	2.5	18	<0.50	1.3	0.34	<0.20	<0.10	<0.50	1.9	18	0.1	2.7	<0.010	0.073
YC-040-3.6	2/21/2012	2.7	0.24	2.4	18	<0.50	1.3	0.33	<0.20	<0.10	<0.50	1.9	18	<0.20	2.6	<0.010	0.071
YC-044-1	2/21/2012	0.52	0.19	0.68	2.1	<0.50	0.36	<0.20	<0.20	<0.10	<0.50	0.74	3.3	0.17	0.77	0.005	<0.050
YC-044-2	2/21/2012	1.1	0.19	1.1	4.5	<0.50	0.52	<0.20	<0.20	<0.10	<0.50	0.99	6.9	0.23	1.1	0.005	0.04
YC-044-3	2/21/2012	2.7	0.14	1.1	8.3	<0.50	0.6	<0.20	<0.20	<0.10	<0.50	1.2	15	0.21	2	0.006	0.087
YC-044-4	2/21/2012	2.1	0.2	0.84	9.7	<0.50	0.6	0.12	<0.20	<0.10	<0.50	1.2	11	0.31	2.9	<0.010	0.079
YC-042-1	2/21/2012	0.93	0.19	0.95	5.5	<0.50	0.48	<0.20	<0.20	<0.10	<0.50	0.9	8.1	0.22	1.4	<0.010	0.042
YC-042-2	2/21/2012	2.3	0.15	0.87	9	<0.50	0.52	<0.20	<0.20	<0.10	<0.50	1.2	12	0.14	2.2	0.006	0.074
YC-042-3	2/21/2012	4.1	0.17	0.74	10	<0.50	0.62	0.11	<0.20	<0.10	<0.50	1.2	12	0.27	2.6	0.006	0.074
YC-042-4	2/21/2012	1.7	0.13	0.61	3.7	<0.50	0.44	<0.20	<0.20	<0.10	<0.50	1	8.2	0.24	2.1	0.005	0.054
YC-041-1	2/21/2012	0.56	0.18	1.2	5	<0.50	0.46	0.1	<0.20	<0.10	<0.50	0.81	6.6	0.16	1.5	<0.010	<0.050
YC-041-2	2/21/2012	1.7	0.17	2.5	15	<0.50	0.65	0.22	<0.20	<0.10	<0.50	1.2	19	0.23	1.9	0.005	0.095
YC-041-3	2/21/2012	2.2	0.23	0.75	91	<0.50	0.95	0.73	<0.20	<0.10	<0.50	1.3	43	0.23	6.5	0.006	0.15
YC-041-4	2/21/2012	7.4	0.18	0.39	21	<0.50	0.62	0.21	<0.20	<0.10	<0.50	1.2	17	0.17	2.8	0.006	0.085
YC-039-1	2/21/2012	2.1	0.15	0.73	19	<0.50	0.61	0.13	<0.20	<0.10	<0.50	1.3	16	0.17	2.3	0.006	0.092
YC-039-2	2/21/2012	5.5	0.19	0.46	15	<0.50	0.59	0.14	<0.20	<0.10	<0.50	1.1	12	<0.20	3.6	0.005	0.086
YC-039-3	2/21/2012	1.9	0.22	0.26	18	<0.50	0.73	0.19	<0.20	<0.10	<0.50	1.3	18	0.26	3.3	0.005	0.067
YC-039-3.3	2/21/2012	0.58	0.21	0.21	3.1	<0.50	0.39	<0.20	<0.20	<0.10	<0.50	0.76	4.1	0.2	1.6	<0.010	0.027
YC-043-1	2/21/2012	0.52	0.19	0.56	2.1	<0.50	0.36	<0.20	<0.20	<0.10	<0.50	0.74	3.2	0.18	0.76	<0.010	<0.050
YC-043-2	2/21/2012	1.8	0.16	0.82	5.6	<0.50	0.42	<0.20	<0.20	<0.10	<0.50	0.94	11	0.18	2	<0.010	0.05
YC-043-3	2/21/2012	2.2	0.17	1	5.1	<0.50	0.57	<0.20	0.15	<0.10	<0.50	1.2	8.4	0.28	1.8	0.005	0.056
YC-043-4	2/21/2012	0.99	0.18	0.64	1.3	<0.50	0.47	<0.20	<0.20	<0.10	<0.50	0.89	3.1	0.22	0.92	<0.010	0.035
YC-045-1	2/21/2012	0.41	0.16	0.45	1.3	<0.50	0.3	<0.20	<0.20	<0.10	<0.50	0.66	2	0.19	0.6	<0.010	<0.050
YC-045-2	2/21/2012	0.94	0.18	0.89	3.4	<0.50	0.46	<0.20	<0.20	<0.10	<0.50	0.86	4.7	0.2	0.96	0.005	0.027
YC-045-3	2/21/2012	2	0.2	1.3	6.5	<0.50	0.6	<0.20	<0.20	<0.10	<0.50	1.1	9.4	0.31	1.6	0.005	0.068
YC-045-4	2/21/2012	1.2	0.21	0.71	2.1	<0.50	0.51	<0.20	<0.20	<0.10	<0.50	0.96	3.9	0.24	1.1	0.005	0.042

<n - Not detected in samples above the stated detection limit n
Soluble metals analyzed by CA WET method
CA Haz Waste

Table B4. TCLP Metals Results
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		Chromium	Lead	Selenium	Silver	Arsenic	Barium	Cadmium
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TCLP Regulatory Limit		5	5	1	5	5	100	1
Sample ID	Date							
YC-038-1	2/21/2012	<0.10	0.68	<0.20	<0.10	<0.20	<0.50	<0.050
YC-038-2	2/21/2012	<0.10	1.5	<0.20	<0.10	<0.20	0.31	<0.050
YC-038-3	2/21/2012							
YC-038-3.6	2/21/2012							
YC-040-1	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	<0.50	<0.050
YC-040-2	2/21/2012	<0.10	0.18	<0.20	<0.10	<0.20	<0.50	<0.050
YC-040-3	2/21/2012	<0.10	0.68	<0.20	<0.10	<0.20	0.37	<0.050
YC-040-3.6	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	0.35	<0.050
YC-044-1	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	<0.50	<0.050
YC-044-2	2/21/2012	<0.10	0.21	<0.20	<0.10	<0.20	<0.50	<0.050
YC-044-3	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	<0.50	<0.050
YC-044-4	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	0.33	<0.050
YC-042-1	2/21/2012	<0.10	0.24	<0.20	<0.10	<0.20	<0.50	<0.050
YC-042-2	2/21/2012	<0.10	0.2	<0.20	<0.10	<0.20	<0.50	<0.050
YC-042-3	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	0.26	<0.050
YC-042-4	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	<0.50	<0.050
YC-041-1	2/21/2012	<0.10	0.18	<0.20	<0.10	<0.20	<0.50	<0.050
YC-041-2	2/21/2012	<0.10	1	<0.20	<0.10	<0.20	<0.50	<0.050
YC-041-3	2/21/2012	<0.10	1.9	<0.20	<0.10	<0.20	0.62	<0.050
YC-041-4	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	0.25	<0.050
YC-039-1	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	<0.50	<0.050
YC-039-2	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	<0.50	<0.050
YC-039-3	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	<0.50	<0.050
YC-039-3.3	2/21/2012							
YC-043-1	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	<0.50	<0.050
YC-043-2	2/21/2012	<0.10	0.32	<0.20	<0.10	<0.20	<0.50	<0.050
YC-043-3	2/21/2012	<0.10	0.28	<0.20	<0.10	<0.20	<0.50	<0.050
YC-043-4	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	<0.50	<0.050
YC-045-1	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	<0.50	<0.050
YC-045-2	2/21/2012	<0.10	0.16	<0.20	<0.10	<0.20	<0.50	<0.050
YC-045-3	2/21/2012	<0.10	0.35	<0.20	<0.10	<0.20	<0.50	<0.050
YC-045-4	2/21/2012	<0.10	<0.30	<0.20	<0.10	<0.20	<0.50	<0.050

<n - Not detected in samples above the stated detection limit n
Soluble metals analyzed by TCLP
Samples YC-038-3, YC-038-3.6, and YC-039-3.3 did not meet the TCLP threshold (TTLC<20 x TCLP regulatory limit)
RCRA Waste

Table B5. Waste Characterization Classifications by Sample Location
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		TTLC Chromium	Calculated STLC Cr	TTLC Lead	Calculated STLC Pb	Sum of Total Aroclors	Depth Interval Represented	Disposal Classification
Analytical Method		6010B	Calculated from Figure 4	6010B	Calculated from Figure 5	8082		
TTLC		2,500		1000				
STLC		5	5	5	5	5000		
TSCA						50000		
Units		mg/kg	mg/L	mg/kg	mg/L	ug/kg		
Sample ID	Date							
YC-001-1	7/1/09	36.9	0.4	20.5	0.7	0	0-1	Class II Waste, non-PCB
YC-001-2	7/1/09	30.9	0.4	15.9	0.5	0	1-2	Non-RCRA, non-PCB
YC-001-3	7/1/09	66.9	0.5	24	0.8	0	2-3	Non-RCRA, non-PCB
YC-001-4	7/1/09	98.9	0.7	124	4.0	300	3-4	Non-RCRA, PCB containing
YC-002-1	7/1/09	182	1.3	269	8.6	600	0-1	Non-RCRA, PCB containing
YC-002-2	7/1/09	796	129.6	746	23.9	11,700	1-2	Non-RCRA, PCB containing
YC-002-3	7/1/09	42.4	0.5	31	1.0	770	2-3	Non-RCRA, PCB containing
YC-802-3	07/01/09	52	0.5	36.9	1.2	1,040	2-3	Non-RCRA, PCB containing
YC-002-4	07/01/09	58.6	0.5	26.7	0.9	0	3-4	Non-RCRA, non-PCB
YC-002-5	7/1/09	55.1	0.5	8	0.3	0	4-5	Class II Waste, non-PCB
YC-003-1	06/29/09	318	3.6	891	28.6	19,600	0-1	Non-RCRA, PCB containing
YC-003-2	06/29/09	72	0.6	44.2	1.4	500	1-2	Class II Waste, PCB containing
YC-803-2	06/29/09	82.8	0.6	156	5.0	390	1-2	Non-RCRA, PCB containing
YC-003-3	06/29/09	47.1	0.5	26	0.8	0	2-3	Class II Waste, non-PCB
YC-003-4	06/29/09	29.4	0.4	8.2	0.3	0	3-4	Class II Waste, non-PCB
YC-003-5	06/29/09	68.4	0.6	8.3	0.3	0	4-5	Non-RCRA, non-PCB
YC-004-1	07/02/09	145	1.0	203	6.5	2,300	0-1	Non-RCRA, PCB containing
YC-004-2	07/02/09	249	2.1	584	18.7	11,000	1-2	Non-RCRA, PCB containing
YC-004-3	07/02/09	39.6	0.4	14.7	0.5	160	2-3	Class II Waste, PCB containing
YC-005-1	07/07/09	165	1.1	439	14.1	17,000	0-1	Non-RCRA, PCB containing
YC-005-2	07/07/09	222	1.8	539	17.3	49,000	1-2	Non-RCRA, PCB containing
YC-805-2	07/07/09	219	1.7	563	18.1	45,000	1-2	Non-RCRA, PCB containing
YC-005-3	07/07/09	43.5	0.5	28.6	0.9	1,000	2-3	Class II Waste, PCB containing
YC-005-4	07/07/09	58.5	0.5	8.5	0.3	160	3-4	Class II Waste, PCB containing
YC-005-5	07/07/09	58.7	0.5	5.4	0.2	0	4-5	Non-RCRA, non-PCB
YC-006-1	06/29/09	125	0.8	161	5.2	0	0-1	Non-RCRA, non-PCB
YC-006-2	06/29/09	134	0.9	175	5.6	3,700	1-2	Non-RCRA, PCB containing
YC-006-3	06/29/09	50.1	0.5	67.1	2.2	0	2-3	Class II Waste, non-PCB
YC-006-4	06/29/09	39.8	0.4	16.2	0.5	0	3-4	Class II Waste, non-PCB
YC-006-5	06/29/09	38.1	0.4	4.1	0.1	0	4-5	Class II Waste, non-PCB
YC-007-1	07/07/09	291	2.9	724	23.2	18,000	0-1	Non-RCRA, PCB containing

Table B5. Waste Characterization Classifications by Sample Location
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		TTLC Chromium	Calculated STLC Cr	TTLC Lead	Calculated STLC Pb	Sum of Total Aroclors	Depth Interval Represented	Disposal Classification
Analytical Method		6010B	Calculated from Figure 4	6010B	Calculated from Figure 5	8082		
TTLC		2,500		1000				
STLC		5	5	5	5	5000		
TSCA						50000		
Units		mg/kg	mg/L	mg/kg	mg/L	ug/kg		
Sample ID	Date							
YC-007-2	07/07/09	79.4	0.6	102	3.3	4,800	1-2	Class II Waste, PCB containing
YC-007-3	07/07/09	52.8	0.5	17.6	0.6	190	2-3	Class II Waste, PCB containing
YC-807-3	07/07/09	47.7	0.5	21.7	0.7	240	2-3	Class II Waste, PCB containing
YC-007-4	07/07/09	35.3	0.4	5.5	0.2	63	3-4	Class II Waste, PCB containing
YC-007-5	07/07/09	25.1	0.4	3.2	0.1	0	4-5	Class II Waste, non-PCB
YC-008-1	07/02/09	99.8	0.7	139	4.5	1,000	0-1	Class II Waste, PCB containing
YC-008-2	07/02/09	462	10.6	702	22.5	28,000	1-2	Non-RCRA, PCB containing
YC-008-3	07/02/09	411	7.2	587	18.8	32,000	2-3	Non-RCRA, PCB containing
YC-008-4	07/02/09	268	2.5	658	21.1	2,800	3-4	Non-RCRA, PCB containing
YC-008-5	07/02/09	119	0.8	309	9.9	1,600	4-5	Non-RCRA, PCB containing
YC-009-1	06/25/09	112	0.8	137	4.4	0	0-1	Non-RCRA, non-PCB
YC-009-2	06/25/09	111	0.8	191	6.1	960	1-2	Non-RCRA, PCB containing
YC-009-3	06/25/09	46	0.5	36.9	1.2	0	2-3	Class II Waste, non-PCB
YC-009-4	06/25/09	37.3	0.4	9.2	0.3	0	3-4	Class II Waste, non-PCB
YC-009-5	06/25/09	63	0.5	77	2.5	1,200	4-5	Class II Waste, PCB containing
YC-010-1	07/09/09	534	18.2	1000	32.1	70,000	0-1	TSCA
YC-010-2	07/09/09	73.6	0.6	191	6.1	2,600	1-2	Non-RCRA, PCB containing
YC-010-3	07/09/09	40.5	0.4	8	0.3	0	2-3	Class II Waste, non-PCB
YC-810-3	07/09/09	45.3	0.5	20.8	0.7	0	2-3	Class II Waste, non-PCB
YC-010-4	07/09/09	18.4	0.4	1.6	0.1	0	3-4	Class II Waste, non-PCB
YC-011-1	06/25/09	109	0.7	178	5.7	1,100	0-1	Non-RCRA, PCB containing
YC-011-2	06/25/09	263	2.4	783	25.1	7,400	1-2	Non-RCRA, PCB containing
YC-811-2	06/25/09	274	2.6	814	26.1	4,700	1-2	Non-RCRA, PCB containing
YC-011-3	06/25/09	328	3.9	915	29.4	58,000	2-3	TSCA
YC-011-4	06/25/09	46.3	0.5	54.9	1.8	0	3-4	Non-RCRA, non-PCB
YC-011-5	06/25/09	33.9	0.4	8.4	0.3	0	4-5	Non-RCRA, non-PCB
YC-012-1	06/25/09	283	2.8	1130	36.3	8,700	0-1	Non-RCRA, PCB containing
YC-012-2	06/25/09	220	1.7	290	9.3	13,000	1-2	Non-RCRA, PCB containing
YC-012-3	06/25/09	129	0.9	440	14.1	910	2-3	Non-RCRA, PCB containing
YC-012-4	06/25/09	42.4	0.5	23.2	0.7	0	3-4	Class II Waste, non-PCB
YC-012-5	06/25/09	30.4	0.4	3.4	0.1	0	4-5	Class II Waste, non-PCB

Table B5. Waste Characterization Classifications by Sample Location
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		TTLC Chromium	Calculated STLC Cr	TTLC Lead	Calculated STLC Pb	Sum of Total Aroclors	Depth Interval Represented	Disposal Classification
Analytical Method		6010B	Calculated from Figure 4	6010B	Calculated from Figure 5	8082		
TTLC		2,500		1000				
STLC		5	5	5	5	5000		
TSCA						50000		
Units		mg/kg	mg/L	mg/kg	mg/L	ug/kg		
Sample ID	Date							
YC-013-1	06/24/09	128	0.9	267	8.6	5,400	0-1	Non-RCRA, PCB containing
YC-013-2	06/24/09	155	1.1	619	19.9	30,000	1-2	Non-RCRA, PCB containing
YC-013-3	06/24/09	64.4	0.5	195	6.3	2,700	2-3	Non-RCRA, PCB containing
YC-013-4	06/24/09	48.1	0.5	24.2	0.8	0	3-4	Class II Waste, non-PCB
YC-813-4	06/24/09	44.7	0.5	26.2	0.8	0	3-4	Non-RCRA, non-PCB
YC-013-5	06/24/09	39.8	0.4	5.2	0.2	0	4-5	Non-RCRA, non-PCB
YC-014-1	06/25/09	140	0.9	213	6.8	750	0-1	Non-RCRA, PCB containing
YC-014-2	06/25/09	291	2.9	455	14.6	27,000	1-2	Non-RCRA, PCB containing
YC-014-3	06/25/09	144	1.0	458	14.7	1,200	2-3	Non-RCRA, PCB containing
YC-014-4	06/25/09	47.9	0.5	44	1.4	0	3-4	Non-RCRA, non-PCB
YC-814-4	06/25/09	46.8	0.5	27.4	0.9	0	3-4	Non-RCRA, non-PCB
YC-014-5	06/25/09	50	0.5	4.3	0.1	0	4-5	Non-RCRA, non-PCB
YC-015-1	07/07/09	188	1.4	619	19.9	8,500	0-1	Non-RCRA, PCB containing
YC-015-2	07/07/09	270	2.5	937	30.1	130,000	1-2	TSCA
YC-015-3	07/07/09	69.4	0.6	129	4.1	12,000	2-3	Class II Waste, PCB containing
YC-015-4	07/07/09	33.3	0.4	8.3	0.3	300	3-4	Class II Waste, PCB containing
YC-015-5	07/07/09	64.2	0.5	7.3	0.2	0	4-5	Non-RCRA, non-PCB
YC-016-1	07/01/09	87.8	0.6	288	9.2	1,900	0-1	Non-RCRA, PCB containing
YC-016-2	07/01/09	159	1.1	697	22.4	9,000	1-2	Non-RCRA, PCB containing
YC-016-3	07/01/09	116	0.8	193	6.2	500	2-3	Non-RCRA, PCB containing
YC-017-1	06/23/09	131	0.9	182	5.8	940	0-1	Non-RCRA, PCB containing
YC-817-1	06/23/09	170	1.2	258	8.3	2,300	0-1	Non-RCRA, PCB containing
YC-017-2	06/23/09	252	2.2	449	14.4	1,500	1-2	Non-RCRA, PCB containing
YC-017-3	06/23/09	164	1.1	427	13.7	1,500	2-3	Non-RCRA, PCB containing
YC-017-4	06/23/09	60.8	0.5	38.1	1.2	0	3-4	Class II Waste, non-PCB
YC-017-5	06/23/09	39.2	0.4	6.3	0.2	0	4-5	Class II Waste, non-PCB
YC-018-1	06/23/09	97.6	0.7	262	8.4	850	0-1	Non-RCRA, PCB containing
YC-018-2	06/23/09	161	1.1	722	23.2	27,000	1-2	Non-RCRA, PCB containing
YC-018-3	06/23/09	229	1.8	394	12.6	19,600	2-3	Non-RCRA, PCB containing
YC-018-4	06/23/09	272	2.5	460	14.8	7,100	3-4	Non-RCRA, PCB containing
YC-818-4	06/23/09	270	2.5	448	14.4	9,900	3-4	Non-RCRA, PCB containing

Table B5. Waste Characterization Classifications by Sample Location
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		TTLC Chromium	Calculated STLC Cr	TTLC Lead	Calculated STLC Pb	Sum of Total Aroclors	Depth Interval Represented	Disposal Classification
Analytical Method		6010B	Calculated from Figure 4	6010B	Calculated from Figure 5	8082		
TTLC		2,500		1000				
STLC		5	5	5	5	5000		
TSCA						50000		
Units		mg/kg	mg/L	mg/kg	mg/L	ug/kg		
Sample ID	Date							
YC-018-5	06/23/09	127	0.9	428	13.7	880	4-5	Non-RCRA, PCB containing
YC-019-1	06/22/09	125	0.8	254	8.2	1,200	0-1	Non-RCRA, PCB containing
YC-019-2	06/22/09	257	2.3	809	26.0	5,300	1-2	Non-RCRA, PCB containing
YC-019-3	06/22/09	148	1.0	409	13.1	1,900	2-3	Non-RCRA, PCB containing
YC-019-4	06/22/09	83.6	0.6	86.2	2.8	610	3-4	Class II Waste, PCB containing
YC-019-5	06/22/09	48.8	0.5	11.7	0.4	0	4-5	Class II Waste, non-PCB
YC-020-1	06/22/09	99	0.7	127	4.1	580	0-1	Class II Waste, PCB containing
YC-820-1	06/22/09	98.2	0.7	106	3.4	430	0-1	Class II Waste, PCB containing
YC-020-2	06/22/09	87.9	0.6	271	8.7	1,800	1-2	Non-RCRA, PCB containing
YC-020-3	06/22/09	223	1.8	483	15.5	3,400	2-3	Non-RCRA, PCB containing
YC-020-4	06/22/09	171	1.2	453	14.5	1,500	3-4	Non-RCRA, PCB containing
YC-020-5	06/22/09	112	0.8	426	13.7	920	4-5	Non-RCRA, PCB containing
YC-021-1	06/22/09	94.1	0.7	154	4.9	750	0-1	Non-RCRA, PCB containing
YC-021-2	06/22/09	169	1.2	320	10.3	3,700	1-2	Non-RCRA, PCB containing
YC-021-3	06/22/09	262	2.4	530	17.0	9,000	2-3	Non-RCRA, PCB containing
YC-021-4	06/22/09	208	1.6	525	16.9	4,100	3-4	Non-RCRA, PCB containing
YC-021-5	06/22/09	168	1.2	248	8.0	930	4-5	Non-RCRA, PCB containing
YC-022-1	06/22/09	59.6	0.5	70.1	2.3	300	0-1	Class II Waste, PCB containing
YC-022-2	06/22/09	66.5	0.5	137	4.4	890	1-2	Class II Waste, PCB containing
YC-022-3	06/22/09	300	3.1	178	5.7	650	2-3	Non-RCRA, PCB containing
YC-022-4	06/22/09	162	1.1	333	10.7	2,400	3-4	Non-RCRA, PCB containing
YC-022-5	06/22/09	153	1.0	307	9.9	2,400	4-5	Non-RCRA, PCB containing
YC-023-1	06/18/09	91.5	0.7	156	5.0	1,500	0-1	Non-RCRA, PCB containing
YC-023-2	06/18/09	426	8.1	561	18.0	9,000	1-2	Non-RCRA, PCB containing
YC-023-3	06/18/09	188	1.4	288	9.2	380	2-3	Non-RCRA, PCB containing
YC-023-4	06/18/09	51.8	0.5	8.3	0.3	0	3-4	Class II Waste, non-PCB
YC-023-5	06/18/09	58.4	0.5	4.4	0.1	0	4-5	Class II Waste, non-PCB
YC-823-5	06/18/09	59.2	0.5	5.1	0.2	0	4-5	Class II Waste, non-PCB
YC-024-1	06/22/09	123	0.8	280	9.0	1,400	0-1	Non-RCRA, PCB containing
YC-024-2	06/22/09	189	1.4	509	16.3	4,500	1-2	Non-RCRA, PCB containing
YC-024-3	06/22/09	276	2.6	457	14.7	3,000	2-3	Non-RCRA, PCB containing

Table B5. Waste Characterization Classifications by Sample Location
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		TTLC Chromium	Calculated STLC Cr	TTLC Lead	Calculated STLC Pb	Sum of Total Aroclors	Depth Interval Represented	Disposal Classification
Analytical Method		6010B	Calculated from Figure 4	6010B	Calculated from Figure 5	8082		
TTLC		2,500		1000				
STLC		5	5	5	5	5000		
TSCA						50000		
Units		mg/kg	mg/L	mg/kg	mg/L	ug/kg		
Sample ID	Date							
YC-824-3	06/22/09	240	2.0	393	12.6	4,000	2-3	Non-RCRA, PCB containing
YC-024-4	06/22/09	175	1.2	218	7.0	470	3-4	Non-RCRA, PCB containing
YC-024-5	06/22/09	82.9	0.6	49.2	1.6	180	4-5	Non-RCRA, PCB containing
YC-025-1	06/18/09	106	0.7	204	6.5	1,940	0-1	Non-RCRA, PCB containing
YC-025-2	06/18/09	287	2.8	439	14.1	3,300	1-2	Non-RCRA, PCB containing
YC-025-3	06/18/09	194	1.4	363	11.7	2,900	2-3	Non-RCRA, PCB containing
YC-825-3	06/18/09	322	3.7	361	11.6	1,200	2-3	Non-RCRA, PCB containing
YC-025-4	06/18/09	134	0.9	103	3.3	170	3-4	Class II Waste, PCB containing
YC-025-5	06/18/09	74.9	0.6	12.9	0.4	94	4-5	Class II Waste, PCB containing
YC-026-1	06/18/09	218	1.7	1210	38.8	3,900	0-1	Non-RCRA, PCB containing
YC-026-2	06/18/09	262	2.4	495	15.9	1,500	1-2	Non-RCRA, PCB containing
YC-026-3	06/18/09	133	0.9	108	3.5	360	2-3	Class II Waste, PCB containing
YC-026-4	06/18/09	135	0.9	99.8	3.2	220	3-4	Class II Waste, PCB containing
YC-026-5	06/18/09	64.1	0.5	21.6	0.7	0	4-5	Class II Waste, non-PCB
YC-027-1	06/18/09	132	0.9	491	15.8	3,600	0-1	Non-RCRA, PCB containing
YC-027-2	06/18/09	244	2.1	545	17.5	2,700	1-2	Non-RCRA, PCB containing
YC-027-3	06/18/09	197	1.5	219	7.0	260	2-3	Non-RCRA, PCB containing
YC-027-4	06/18/09	64	0.5	6.6	0.2	0	3-4	Class II Waste, non-PCB
YC-027-5	06/18/09	70.7	0.6	15.8	0.5	0	4-5	Class II Waste, non-PCB
YC-028-1	06/17/09	118	0.8	176	5.6	120	0-1	Non-RCRA, PCB containing
YC-028-2	06/17/09	245	2.1	620	19.9	3,000	1-2	Non-RCRA, PCB containing
YC-028-3	06/17/09	232	1.9	347	11.1	1,000	2-3	Non-RCRA, PCB containing
YC-028-4	06/17/09	141	1.0	95.5	3.1	1,200	3-4	Class II Waste, PCB containing
YC-028-5	06/17/09	60.5	0.5	16	0.5	0	4-5	Non-RCRA, non-PCB
YC-029-1	07/06/09	121	0.8	141	4.5	2,200	0-1	Non-RCRA, PCB containing
YC-029-2	07/06/09	268	2.5	451	14.5	11,000	1-2	Non-RCRA, PCB containing
YC-029-3	07/06/09	300	3.1	709	22.8	38,000	2-3	Non-RCRA, PCB containing
YC-829-3	07/06/09	307	3.3	678	21.8	33,000	2-3	Non-RCRA, PCB containing
YC-029-4	07/06/09	245	2.1	289	9.3	21,800	3-4	Non-RCRA, PCB containing
YC-029-5	07/06/09	56.2	0.5	35.9	1.2	1,000	4-5	Non-RCRA, PCB containing
YC-030-1	07/06/09	139	0.9	164	5.3	2,000	0-1	Non-RCRA, PCB containing

Table B5. Waste Characterization Classifications by Sample Location
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		TTLC Chromium	Calculated STLC Cr	TTLC Lead	Calculated STLC Pb	Sum of Total Aroclors	Depth Interval Represented	Disposal Classification
Analytical Method		6010B	Calculated from Figure 4	6010B	Calculated from Figure 5	8082		
TTLC		2,500		1000				
STLC		5	5	5	5	5000		
TSCA						50000		
Units		mg/kg	mg/L	mg/kg	mg/L	ug/kg		
Sample ID	Date							
YC-030-2	07/06/09	235	1.9	682	21.9	15,000	1-2	Non-RCRA, PCB containing
YC-030-3	07/06/09	267	2.5	453	14.5	24,000	2-3	Non-RCRA, PCB containing
YC-030-4	07/06/09	231	1.9	201	6.5	4,300	3-4	Non-RCRA, PCB containing
YC-030-5	07/06/09	83.7	0.6	34.8	1.1	780	4-5	Class II Waste, PCB containing
YC-031-1	07/07/09	146	1.0	249	8.0	3,600	0-1	Non-RCRA, PCB containing
YC-031-2	07/07/09	247	2.1	567	18.2	5,200	1-2	Non-RCRA, PCB containing
YC-031-3	07/07/09	75.4	0.6	102	3.3	2,100	2-3	Class II Waste, PCB containing
YC-831-3	07/07/09	81.5	0.6	123	3.9	1,300	2-3	Class II Waste, PCB containing
YC-031-4	07/07/09	45.8	0.5	16.7	0.5	160	3-4	Class II Waste, PCB containing
YC-031-5	07/07/09	38.5	0.4	5.7	0.2	0	4-5	Class II Waste, non-PCB
YC-032-1	07/07/09	310	3.4	978	31.4	30,000	0-1	Non-RCRA, PCB containing
YC-032-2	07/07/09	443	9.2	882	28.3	68,000	1-2	TSCA
YC-032-3	07/07/09	47.6	0.5	56.6	1.8	1,500	2-3	Class II Waste, PCB containing
YC-032-4	07/07/09	47	0.5	4.4	0.1	360	3-4	Class II Waste, PCB containing
YC-032-5	07/07/09	40.2	0.4	3.5	0.1	0	4-5	Class II Waste, non-PCB
YC-033-1	07/08/09	95.4	0.7	148	4.8	950	0-1	Non-RCRA, PCB containing
YC-833-1	07/08/09	103	0.7	179	5.7	1,200	0-1	Non-RCRA, PCB containing
YC-033-2	07/08/09	185	1.3	912	29.3	4,500	1-2	Non-RCRA, PCB containing
YC-033-3	07/08/09	253	2.2	532	17.1	7,700	2-3	Non-RCRA, PCB containing
YC-033-4	07/08/09	179	1.3	343	11.0	4,600	3-4	Non-RCRA, PCB containing
YC-033-5	07/08/09	94.5	0.7	58.5	1.9	220	4-5	Non-RCRA, PCB containing
YC-034-1	07/08/09	117	0.8	221	7.1	970	0-1	Non-RCRA, PCB containing
YC-034-2	07/08/09	176	1.2	625	20.1	5,100	1-2	Non-RCRA, PCB containing
YC-034-3	07/08/09	360	4.9	578	18.6	46,470	2-3	Non-RCRA, PCB containing
YC-034-4	07/08/09	114	0.8	104	3.3	430	3-4	Class II Waste, PCB containing
YC-034-5	07/08/09	61.9	0.5	7.9	0.3	42	4-5	Class II Waste, PCB containing
YC-035-1	07/08/09	133	0.9	225	7.2	2,800	0-1	Non-RCRA, PCB containing
YC-035-2	07/08/09	160	1.1	484	15.5	9,000	1-2	Non-RCRA, PCB containing
YC-035-3	07/08/09	114	0.8	482	15.5	40,000	2-3	Non-RCRA, PCB containing
YC-035-4	07/08/09	116	0.8	243	7.8	3,700	3-4	Non-RCRA, PCB containing
YC-035-5	07/08/09	57.2	0.5	22.7	0.7	170	4-5	Class II Waste, PCB containing

Table B5. Waste Characterization Classifications by Sample Location
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		TTLC Chromium	Calculated STLC Cr	TTLC Lead	Calculated STLC Pb	Sum of Total Aroclors	Depth Interval Represented	Disposal Classification
Analytical Method		6010B	Calculated from Figure 4	6010B	Calculated from Figure 5	8082		
TTLC		2,500		1000				
STLC		5	5	5	5	5000		
TSCA						50000		
Units		mg/kg	mg/L	mg/kg	mg/L	ug/kg		
Sample ID	Date							
YC-036-1	07/09/09	189	1.4	396	12.7	19,000	0-1	Non-RCRA, PCB containing
YC-036-2	07/09/09	250	2.2	370	11.9	43,000	1-2	Non-RCRA, PCB containing
YC-036-3	07/09/09	252	2.2	382	12.3	1,000	2-3	Non-RCRA, PCB containing
YC-836-3	07/09/09	116	0.8	219	7.0	2,600	2-3	Non-RCRA, PCB containing
YC-036-4	07/09/09	38.4	0.4	5.7	0.2	130	3-4	Class II Waste, PCB containing
Analyte		TTLC Chromium	STLC Cr	TTLC Lead	STLC Pb	Sum of Total Aroclors	Depth Interval Represented	Disposal Classification
YC-038-1	2/21/12	150	0.9	330	8.6	6,000	0-1	Non-RCRA, PCB containing
YC-038-2	2/21/12	330	7.1	650	25.0	38,000	1-2	Non-RCRA, PCB containing
YC-038-3	2/21/12	49	0.5	27	0.8	1,630	2-3	Class II Waste, PCB containing
YC-038-3.6	2/21/12	48	0.5	16	0.8	78	3-3-.6	Non-RCRA, PCB containing
YC-040-1	2/21/12	130	0.5	130	2.7	2,200	0-1	Class II Waste, PCB containing
YC-040-2	2/21/12	110	0.7	110	3.9	1,430	1-2	Non-RCRA, PCB containing
YC-040-3	2/21/12	110	2.8	150	18.0	4,300	2-3	Non-RCRA, PCB containing
YC-040-3.6	2/21/12	170	2.7	460	18.0	21,400	3-3.6	Non-RCRA, PCB containing
YC-044-1	2/21/12	130	0.5	91	2.1	470	0-1	Non-RCRA, PCB containing
YC-044-2	2/21/12	180	1.1	180	4.5	1,830	1-2	Non-RCRA, PCB containing
YC-044-3	2/21/12	310	2.7	340	8.3	5,700	2-3	Non-RCRA, PCB containing
YC-044-4	2/21/12	250	2.1	350	9.7	8,700	3-4	Non-RCRA, PCB containing
YC-042-1	2/21/12	150	0.9	200	5.5	2,900	0-1	Non-RCRA, PCB containing
YC-042-2	2/21/12	220	2.3	320	9.0	9,500	1-2	Non-RCRA, PCB containing
YC-042-3	2/21/12	310	4.1	370	10.0	16,500	2-3	Non-RCRA, PCB containing
YC-042-4	2/21/12	200	1.7	150	3.7	780	3-4	Non-RCRA, PCB containing
YC-041-1	2/21/12	130	0.6	180	5.0	1,230	0-1	Class II Waste, PCB containing
YC-041-2	2/21/12	200	1.7	550	15.0	7,800	1-2	Non-RCRA, PCB containing
YC-041-3	2/21/12	360	2.2	2800	91.0	31,700	2-3	Non-RCRA, PCB containing
YC-041-4	2/21/12	440	7.4	650	21.0	46,000	3-4	Non-RCRA, PCB containing
YC-039-1	2/21/12	280	2.1	760	19.0	15,200	0-1	Non-RCRA, PCB containing
YC-039-2	2/21/12	290	5.5	440	15.0	32,000	1-2	Non-RCRA, PCB containing
YC-039-3	2/21/12	150	1.9	460	18.0	8,200	2-3	Non-RCRA, PCB containing

Table B5. Waste Characterization Classifications by Sample Location
Yosemite Creek Sediment Waste Characterization Study Report

Analyte		TTLC Chromium	Calculated STLC Cr	TTLC Lead	Calculated STLC Pb	Sum of Total Aroclors	Depth Interval Represented	Disposal Classification
Analytical Method		6010B	Calculated from Figure 4	6010B	Calculated from Figure 5	8082		
TTLC		2,500		1000				
STLC		5	5	5	5	5000		
TSCA						50000		
Units		mg/kg	mg/L	mg/kg	mg/L	ug/kg		
Sample ID	Date							
YC-039-3.3	2/21/12	73	0.6	87	3.1	340	3-3.3	Class II Waste, PCB containing
YC-043-1	2/21/12	120	0.5	96	2.1	1,050	0-1	Class II Waste, PCB containing
YC-043-2	2/21/12	220	1.8	220	5.6	5,800	1-2	Non-RCRA, PCB containing
YC-043-3	2/21/12	270	2.2	250	5.1	3,100	2-3	Non-RCRA, PCB containing
YC-043-4	2/21/12	150	1.0	64	1.3	400	3-4	Class II Waste, PCB containing
YC-045-1	2/21/12	110	0.4	61	1.3	300	0-1	Class II Waste, PCB containing
YC-045-2	2/21/12	160	0.9	140	3.4	1,990	1-2	Non-RCRA, PCB containing
YC-045-3	2/21/12	230	2.0	250	6.5	6,900	2-3	Non-RCRA, PCB containing
YC-045-4	2/21/12	170	1.2	92	2.1	1,440	3-4	Class II Waste, PCB containing

Table B6. Comparison of Collocated Sample Disposal Classifications
Yosemite Creek Sediment Waste Characterization Study Report

2009 Sample ID	Date	Depth Interval Represented	2009 Disposal Classification	Collocated 2012 Sample	Date	Depth Interval Represented	2012 Disposal Classification
YC-005-1	07/07/09	0-1	Non-RCRA, PCB containing	YC-038-1	2/21/12	0-1	Non-RCRA, PCB containing
YC-005-2	07/07/09	1-2	Non-RCRA, PCB containing	YC-038-2	2/21/12	1-2	Non-RCRA, PCB containing
YC-005-3	07/07/09	2-3	Class II Waste, PCB containing	YC-038-3	2/21/12	2-3	Class II Waste, PCB containing
YC-005-4	07/07/09	3-4	Class II Waste, PCB containing	YC-038-3.6	2/21/12	3-3-.6	Class II Waste, PCB containing
YC-005-5	07/07/09	4-5	Class II Waste, non-PCB	NA	NA	NA	NA
YC-012-1	06/25/09	0-1	Non-RCRA, PCB containing	YC-039-1	2/21/12	0-1	Non-RCRA, PCB containing
YC-012-2	06/25/09	1-2	Non-RCRA, PCB containing	YC-039-2	2/21/12	1-2	Non-RCRA, PCB containing
YC-012-3	06/25/09	2-3	Non-RCRA, PCB containing	YC-039-3	2/21/12	2-3	Non-RCRA, PCB containing
YC-012-4	06/25/09	3-4	Class II Waste, non-PCB	YC-039-3.3	2/21/12	3-3.3	Class II Waste, PCB containing
YC-012-5	06/25/09	4-5	Class II Waste, non-PCB	NA	NA	NA	NA
YC-015-1	07/07/09	0-1	Non-RCRA, PCB containing	YC-040-1	2/21/12	0-1	Class II Waste, PCB containing
YC-015-2	07/07/09	1-2	TSCA	YC-040-2	2/21/12	1-2	Class II Waste, PCB containing
YC-015-3	07/07/09	2-3	Class II Waste, PCB containing	YC-040-3	2/21/12	2-3	Non-RCRA, PCB containing
YC-015-4	07/07/09	3-4	Class II Waste, PCB containing	YC-040-3.6	2/21/12	3-3.6	Non-RCRA, PCB containing
YC-015-5	07/07/09	4-5	Class II Waste, non-PCB	NA	NA	NA	NA
YC-034-1	07/08/09	0-1	Non-RCRA, PCB containing	YC-041-1	2/21/12	0-1	Class II Waste, PCB containing
YC-034-2	07/08/09	1-2	Non-RCRA, PCB containing	YC-041-2	2/21/12	1-2	Non-RCRA, PCB containing
YC-034-3	07/08/09	2-3	Non-RCRA, PCB containing	YC-041-3	2/21/12	2-3	Non-RCRA, PCB containing
YC-034-4	07/08/09	3-4	Class II Waste, PCB containing	YC-041-4	2/21/12	3-4	Non-RCRA, PCB containing

NA = 2012 boring met refusal prior to reaching this depth interval

C Laboratory Analytical Reports

EMLab P&K

Report for:

Ms. Karen Sellers
TestAmerica-West Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Regarding: Project: G2B220468; Ecology and Environment Yosemite Creek EE/CA
EML ID: 891768

Approved by:

Technical Manager
Miguel Ines

Dates of Analysis:
Asbestos-EPA Method 600/R-93/116: 02-27-2012

Service SOPs: Asbestos-EPA Method 600/R-93/116 (EPA-600/M4-82-020 (SOP 01264))

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data can be provided when requested.

Document Number: 200091 - Revision Number: 5

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	21
Total Samples Analysed:	21
Total Samples with Layer Asbestos Content > 1%:	0

Location: YC-038-1 Lab ID-Version‡: 3963482-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-038-2 Lab ID-Version‡: 3963483-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-038-3 Lab ID-Version‡: 3963484-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-038-3.6 Lab ID-Version‡: 3963485-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-040-1 Lab ID-Version‡: 3963486-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-040-2 Lab ID-Version‡: 3963487-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-040-3 Lab ID-Version‡: 3963488-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-040-3.6 Lab ID-Version‡: 3963489-1

Sample Layers	Asbestos Content
Brown Soil	< 1% Chrysotile
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-840-2 Lab ID-Version‡: 3963490-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
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EMLab P&K
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Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-044-1 Lab ID-Version‡: 3963491-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-044-2 Lab ID-Version‡: 3963492-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-044-3 Lab ID-Version‡: 3963493-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-044-4 Lab ID-Version‡: 3963494-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-844-4 Lab ID-Version‡: 3963495-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
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(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-840-3.6 Lab ID-Version‡: 3963496-1

Sample Layers	Asbestos Content
Brown Soil	< 1% Chrysotile
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-042-2 Lab ID-Version‡: 3963497-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-842-2 Lab ID-Version‡: 3963498-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-042-3 Lab ID-Version‡: 3963499-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-042-4 Lab ID-Version‡: 3963500-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-041-1

Lab ID-Version‡: 3963501-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-041-2

Lab ID-Version‡: 3963502-1

Sample Layers	Asbestos Content
Brown Soil	< 1% Chrysotile
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K

Report for:

Ms. Karen Sellers
TestAmerica-West Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Regarding: Project: G2B220465; Ecology and Environment Yosemite Creek EE/CA
EML ID: 892429

Approved by:

Technical Manager
Miguel Ines

Dates of Analysis:
Asbestos-EPA Method 600/R-93/116: 02-27-2012

Service SOPs: Asbestos-EPA Method 600/R-93/116 (EPA-600/M4-82-020 (SOP 01264))

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data can be provided when requested.

Document Number: 200091 - Revision Number: 5

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220465; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	14
Total Samples Analysed:	14
Total Samples with Layer Asbestos Content > 1%:	0

Location: YC-041-3 Lab ID-Version‡: 3963503-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-041-4 Lab ID-Version‡: 3963504-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-841-4 Lab ID-Version‡: 3963505-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-039-1 Lab ID-Version‡: 3963506-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220465; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-039-2 Lab ID-Version‡: 3963507-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-039-3 Lab ID-Version‡: 3963508-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-043-1 Lab ID-Version‡: 3963509-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-043-2 Lab ID-Version‡: 3963510-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-043-3 Lab ID-Version‡: 3963511-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
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Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220465; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-043-4 Lab ID-Version‡: 3963512-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-1 Lab ID-Version‡: 3963513-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-2 Lab ID-Version‡: 3963514-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-3 Lab ID-Version‡: 3963515-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-4 Lab ID-Version‡: 3963516-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

March 12, 2012

TestAmerica Project Number: G2B220465
PO/Contract: 002693.7008.01SO06

Mindy Song
Ecology and Environment, Inc.
3700 Industry Avenue #102
Lakewood, CA 90712

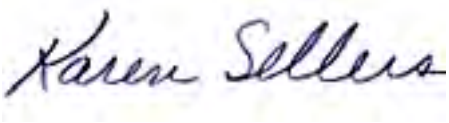
Dear Ms. Song,

This report contains the analytical results for the samples received under chain of custody by TestAmerica on February 22, 2012. These samples are associated with your Yosemite Creek project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4442.

Sincerely,



Karen M. Sellers
Project Manager

Table of Contents

TestAmerica West Sacramento Project Number G2B220465

Case Narrative

TestAmerica West Sacramento Project Number G2B220465

General Comments

Please note that samples for asbestos via method E600/R-93/116 were forwarded to TestAmerica EMLab P&K. Please see attached report for any comments or anomalies pertinent to that analysis.

There were no anomalies associated with this project.

TestAmerica Laboratories West Sacramento Certifications/Accreditations

Certifying State	Certificate #	Certifying State	Certificate #
A2LA (DoD-ELAP)	2928-01	New Mexico	NA
Alaska	UST-055	New York*	11666
Arizona	AZ0708	Oregon*	CA 200005
Arkansas	88-0691	Pennsylvania*	68-1272
California*	01119CA	South Carolina	87014
Colorado	NA	Texas*	T104704399-08-TX
Connecticut	PH-0691	UCMR	CA00044
Florida*	E87570	US Fish & Wildlife	LE148388-0
Georgia	960	USDA Foreign Plant	37-82605
Guam	10-009r	USDA Foreign Soil	P330-09-00055
Hawaii	NA	Utah*	QUAN1
Illinois*	002701	Virginia	178
Kansas*	E-10375	Washington	C581
Louisiana*	01944	West Virginia	9930C, 334
Michigan	9947	Wisconsin	998204680
Nevada	CA44	Wyoming	8TMS-Q
New Jersey*	CA005		

*NELAP accredited. A more detailed parameter list is available upon request. *Updated 5/25/2011*

QC Parameter Definitions

QC Batch: The QC batch consists of a set of up to 20 field samples that behave similarly (i.e., same matrix) and are processed using the same procedures, reagents, and standards at the same time.

Method Blank: An analytical control consisting of all reagents, which may include internal standards and surrogates, and is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background contamination.

Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD): An aliquot of blank matrix spiked with known amounts of representative target analytes. The LCS (and LCSD as required) is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. If an LCSD is performed, it may also be used to evaluate the precision of the process.

Duplicate Sample (DU): Different aliquots of the same sample are analyzed to evaluate the precision of an analysis.

Surrogates: Organic compounds not expected to be detected in field samples, which behave similarly to target analytes. These are added to every sample within a batch at a known concentration to determine the efficiency of the sample preparation and analytical process.

Matrix Spike and Matrix Spike Duplicate (MS/MSD): An MS is an aliquot of a matrix fortified with known quantities of specific compounds and subjected to an entire analytical procedure in order to indicate the appropriateness of the method for a particular matrix. The percent recovery for the respective compound(s) is then calculated. The MSD is a second aliquot of the same matrix as the matrix spike, also spiked, in order to determine the precision of the method.

Isotope Dilution: For isotope dilution methods, isotopically labeled analogs (internal standards) of the native target analytes are spiked into the sample at time of extraction. These internal standards are used for quantitation, and monitor and correct for matrix effects. Since matrix effects on method performance can be judged by the recovery of these analogs, there is little added benefit of performing MS/MSD for these methods. MS/MSD are only performed for client or QAPP requirements.

Control Limits: The reported control limits are either based on laboratory historical data, method requirements, or project data quality objectives. The control limits represent the estimated uncertainty of the test results.

Sample Summary

TestAmerica West Sacramento Project Number G2B220465

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
MQ16M	1	YC-041-3	2/21/2012 02:29 PM	2/22/2012 01:05 PM
MQ16N	2	YC-841-3	2/21/2012 02:30 PM	2/22/2012 01:05 PM
MQ16P	3	YC-041-4	2/21/2012 02:45 PM	2/22/2012 01:05 PM
MQ16Q	4	YC-841-4	2/21/2012 02:46 PM	2/22/2012 01:05 PM
MQ16R	5	YC-039-1	2/21/2012 03:00 PM	2/22/2012 01:05 PM
MQ16V	6	YC-039-2	2/21/2012 03:02 PM	2/22/2012 01:05 PM
MQ16X	7	YC-039-3	2/21/2012 03:15 PM	2/22/2012 01:05 PM
MQ160	8	YC-043-1	2/21/2012 03:32 PM	2/22/2012 01:05 PM
MQ161	9	YC-043-2	2/21/2012 03:33 PM	2/22/2012 01:05 PM
MQ162	10	YC-043-3	2/21/2012 03:43 PM	2/22/2012 01:05 PM
MQ163	11	YC-043-4	2/21/2012 03:44 PM	2/22/2012 01:05 PM
MQ164	12	YC-045-1	2/21/2012 04:00 PM	2/22/2012 01:05 PM
MQ166	13	YC-045-2	2/21/2012 04:02 PM	2/22/2012 01:05 PM
MQ167	14	YC-045-3	2/21/2012 04:12 PM	2/22/2012 01:05 PM
MQ168	15	YC-045-4	2/21/2012 04:14 PM	2/22/2012 01:05 PM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

EXECUTIVE SUMMARY - Detection Highlights

G2B220465

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
YC-041-3 02/21/12 14:29 001				
Percent Moisture	44.4	0.10	%	ASTM D 2216-90
YC-841-3 02/21/12 14:30 002				
Percent Moisture	45.5	0.10	%	ASTM D 2216-90
YC-041-4 02/21/12 14:45 003				
Percent Moisture	50.1	0.10	%	ASTM D 2216-90
YC-039-1 02/21/12 15:00 005				
Percent Moisture	56.3	0.10	%	ASTM D 2216-90
YC-039-2 02/21/12 15:02 006				
Percent Moisture	50.7	0.10	%	ASTM D 2216-90
YC-039-3 02/21/12 15:15 007				
Percent Moisture	28.9	0.10	%	ASTM D 2216-90
YC-043-1 02/21/12 15:32 008				
Percent Moisture	50.4	0.10	%	ASTM D 2216-90
YC-043-2 02/21/12 15:33 009				
Hexavalent Chromium	0.041 B	0.10	mg/kg	SW846 7196A
Percent Moisture	51.4	0.10	%	ASTM D 2216-90
YC-043-3 02/21/12 15:43 010				
Percent Moisture	54.3	0.10	%	ASTM D 2216-90
YC-043-4 02/21/12 15:44 011				
Percent Moisture	53.3	0.10	%	ASTM D 2216-90

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

G2B220465

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
YC-045-1 02/21/12 16:00 012				
Percent Moisture	53.1	0.10	%	ASTM D 2216-90
YC-045-2 02/21/12 16:02 013				
Percent Moisture	50.8	0.10	%	ASTM D 2216-90
YC-045-3 02/21/12 16:12 014				
Percent Moisture	50.7	0.10	%	ASTM D 2216-90
YC-045-4 02/21/12 16:14 015				
Percent Moisture	51.9	0.10	%	ASTM D 2216-90

ANALYTICAL METHODS SUMMARY

G2B220465

PARAMETER	ANALYTICAL METHOD
Hexavalent Chromium	SW846 7196A
Method for Determination of Water Content of Soil	ASTM D 2216-90

References:

ASTM Annual Book Of ASTM Standards.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

G2B220465

ANALYTICAL METHOD	ANALYST	ANALYST ID
ASTM D 2216-90	Steve Valmores	090182
SW846 7196A	Jason Baynes	004928

References:

ASTM Annual Book Of ASTM Standards.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Ecology and Environment, Inc.

Client Sample ID: YC-041-3

General Chemistry

Lot-Sample #...: G2B220465-001 **Work Order #...:** MQ16M **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 44

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.090	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.018		
Percent Moisture	**44.4**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-841-3

General Chemistry

Lot-Sample #...: G2B220465-002 **Work Order #...:** MQ16N **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 46

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.092	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.018		
Percent Moisture	**45.5**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-041-4

General Chemistry

Lot-Sample #...: G2B220465-003 **Work Order #...:** MQ16P **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 50

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.020		
Percent Moisture	**50.1**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-039-1

General Chemistry

Lot-Sample #...: G2B220465-005 **Work Order #...:** MQ16R **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 56

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.11	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.023		
Percent Moisture	**56.3**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-039-2

General Chemistry

Lot-Sample #...: G2B220465-006 **Work Order #...:** MQ16V **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 51

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.020		
Percent Moisture	**50.7**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-039-3

General Chemistry

Lot-Sample #...: G2B220465-007 **Work Order #...:** MQ16X **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 29

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.070	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.014		
Percent Moisture	**28.9**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-043-1

General Chemistry

Lot-Sample #...: G2B220465-008 **Work Order #...:** MQ160 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 50

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.020		
Percent Moisture	**50.4**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-043-2

General Chemistry

Lot-Sample #...: G2B220465-009 Work Order #...: MQ161 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 51

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	0.041 B	0.10	mg/kg	SW846 7196A	03/08-03/09/12	2069063
	Dilution Factor: 1			MDL.....: 0.021		
Percent Moisture	51.4	0.10	%	ASTM D 2216-90	02/27-02/28/12	2058164
	Dilution Factor: 1			MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

Ecology and Environment, Inc.

Client Sample ID: YC-043-3

General Chemistry

Lot-Sample #...: G2B220465-010 **Work Order #...:** MQ162 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 54

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.11	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.022		
Percent Moisture	**54.3**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-043-4

General Chemistry

Lot-Sample #...: G2B220465-011 **Work Order #...:** MQ163 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 53

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.11	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.021		
Percent Moisture	**53.3**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-045-1

General Chemistry

Lot-Sample #...: G2B220465-012 **Work Order #...:** MQ164 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 53

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.11	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.021		
Percent Moisture	**53.1**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-045-2

General Chemistry

Lot-Sample #...: G2B220465-013 **Work Order #...:** MQ166 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 51

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.020		
Percent Moisture	**50.8**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-045-3

General Chemistry

Lot-Sample #...: G2B220465-014 **Work Order #...:** MQ167 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 51

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.020		
Percent Moisture	**50.7**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-045-4

General Chemistry

Lot-Sample #...: G2B220465-015 **Work Order #...:** MQ168 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 52

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1		MDL.....: 0.021		
Percent Moisture	**51.9**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

QC DATA ASSOCIATION SUMMARY

G2B220465

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
002	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
003	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
005	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
006	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
007	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
008	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
009	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
010	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
011	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
012	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
013	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
014	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080
015	SOLID	SW846 7196A		2069063	2069030
	SOLID	ASTM D 2216-90		2058164	2058080

METHOD BLANK REPORT

General Chemistry

Client Lot #...: G2B220465 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium		Work Order #: MRCC41AA		MB Lot-Sample #:	G2C090000-063	
	ND	0.050	mg/kg	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: G2B220465 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium		Work Order #: MRCC41AC	LCS Lot-Sample#: G2C090000-063		
	102	(85 - 115)	SW846 7196A	03/08-03/09/12	2069063
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: G2B220465 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium			Work Order #: MRCC41AC		LCS Lot-Sample#: G2C090000-063		
	0.200	0.203	mg/kg	102	SW846 7196A	03/08-03/09/12	2069063
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: G2B220465 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
						% Moisture.....: 44	
Hexavalent Chromium		WO#: MQ16M1AF-MS/MQ16M1AG-MSD				MS Lot-Sample #: G2B220465-001	
	93	(85 - 115)			SW846 7196A	03/08-03/12/12	2069063
	90	(85 - 115)	2.7	(0-15)	SW846 7196A	03/08-03/12/12	2069063
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: G2B220465 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
					% Moisture.....: 44				
Hexavalent Chromium			WO#: MQ16M1AF-MS/MQ16M1AG-MSD				MS Lot-Sample #: G2B220465-001		
	ND	0.439	0.410	mg/kg	93		SW846 7196A	03/08-03/12/12	2069063
	ND	0.439	0.399	mg/kg	90	2.7	SW846 7196A	03/08-03/12/12	2069063
			Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: G2B220465 **Work Order #...:** MQ16M-SMP MQ16M-DUP **Matrix.....:** SOLID

Date Sampled...: 02/21/12 **Date Received..:** 02/22/12

% Moisture.....: 44

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #: G2B220465-001		
	44.4	44.5	%	0.25	(0-20)	ASTM D 2216-90	02/27-02/28/12	2058164

Dilution Factor: 1

Raw Data Package

General Chemistry - Various Methods

Gen Chem MDL

Lab Reference Data Summary

Target Analyte List: All Analytes

Matrix: SOLID
Extraction: LEACHATE, DI (Routine)
Method: Chromium, Hexavalent (7196A)
QC Program: STANDARD TEST SET
Location: TestAmerica West Sacramento

Analyte List	Detection Limits					Check List 20005					Spike List 20005				
Compound	RL	Units	MDL	Units	Run Date	Amt	Units	LCL	UCL	RPD	Amt	Units	LCL	UCL	RPD
CR, Hexavalent	0.05	mg/kg	0.010	mg/kg	20090108	0.50	mg/kg	85	115	15	0.50	mg/kg	85	115	15

Gen Chem Analysis Run Log

Test America — **West Sacramento**

CURVE CALCULATION BENCHSHEET

(SOP # WS-WC-0020)

ANALYST	JCB	ANALYSIS DATE	03/09/12	METHOD NO.	EPA 7196A	FILE	030912A
REVIEWED BY		REVIEW DATE		INSTRUMENT ID:	GEN20	WAVELENGTH:	540nm
BATCH NO.	2069063	MS RUN NO.	2069030	ICV SOURCE:	11GCM0186 e. 3/18/12	CCV SOURCE:	11GCM0185 e. 3/14/12

	Lab ID	Time	True Conc. mg/L	Background Absorbance	Sample Aliquot gram	Sample Aliquot mL	Extract Volume mL	Dilution	Absorbance	pH 2.0 +/- 0.5 (Y/N) - Cr+6 only	Raw Result	Hexchrom mg/L	Hexchrom mg/kg	Recovery	Check
1	Std0	10:45	0						0.001	Y	0.00037				
2	Std1	10:47	0.005						0.004	Y	0.00402				
3	Std2	10:47	0.01						0.01	Y	0.01134				
4	Std3	10:47	0.025						0.021	Y	0.02476				
5	Std4	10:48	0.05						0.041	Y	0.04915				
6	Std5	10:48	0.1						0.083	Y	0.10036				
7	Std6		0												
8															
9															
11	ICV/LCS	10:48	0.04			10	10	1	0.036	Y	0.04305	0.0430		108%	
12	ICB/MB	10:48				10	10	1	0.002	Y	0.00159	0.0016	(ND)		< RL
13	G2B220465-MB	10:49		0.001	10		50	1	0.001	Y	-0.00085		-0.004		< RL
14	G2B220465-LCS	10:49	0.2	0.001	10		50	1	0.035	Y	0.04061		0.203	102%	
15	G2B220465-1	10:50		0.002	9.81		50	1	0.003	Y	0.00037		0.002		< RL
16	G2B220465-1S	10:50	0.244	0.002	10.25		50	1	0.041	Y	0.04671		0.228	93%	
17	G2B220465-1D	10:52	0.244	0.002	10.25		50	1	0.04	Y	0.04549		0.222	91%	
18	G2B220465-2	10:53		0.003	10		50	1	0.004	Y	0.00037		0.002		< RL
19	G2B220465-3	10:54		0.003	10.46		50	1	0.004	Y	0.00037		0.002		< RL
20	G2B220465-5	10:54		0.003	10.55		50	1	0.003	Y	-0.00085		-0.004		< RL
21	G2B220465-6	10:55		0.002	10.33		50	1	0.003	Y	0.00037		0.002		< RL
22	G2B220465-7	10:56		0.005	10.08		50	1	0.003	Y	-0.00329		-0.016		< RL
23	CCV	10:56	0.05			10	10	1	0.042	Y	0.05037	0.0504		101%	
24	CCB	10:57				10	10	1	0.002	Y	0.00159	0.0016	(ND)		< RL
25	G2B220465-8	10:58		0.004	10.08		50	1	0.004	Y	-0.00085		-0.004		< RL
26	G2B220465-9	10:58		0.003	10.21		50	1	0.007	Y	0.00402		0.020		< RL
27	G2B220465-10	10:59		0.003	10.23		50	1	0.003	Y	-0.00085		-0.004		< RL
28	G2B220465-11	10:59		0.005	9.96		50	1	0.004	Y	-0.00207		-0.010		< RL
29	G2B220465-12	11:00		0.003	10.24		50	1	0.003	Y	-0.00085		-0.004		< RL
30	G2B220465-13	11:00		0.004	10.02		50	1	0.005	Y	0.00037		0.002		< RL
31	G2B220465-14	11:00		0.003	10.45		50	1	0.004	Y	0.00037		0.002		< RL
32	G2B220465-15	11:01		0.004	9.93		50	1	0.004	Y	-0.00085		-0.004		< RL
33	CCV	11:01	0.05			10	10	1	0.044	Y	0.05280	0.0528		106%	
34	CCB	11:01				10	10	1	0.001	Y	0.00037	0.0004	(ND)		< RL

Hexchrom

Intercept = -8.5299E-04

Slope = 1.2195E+00

r = 0.999737 ✓ OL JB 3/12/12

Linear Not Forced Weighting = 1

Absorbance corrected for background absorbance

OL JB 3/12/12

Gen Chem Raw Data

TestAmerica
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TestAmerica West Sacramento
Level 1 & 2 Review Checklist
General Chemistry

Lots: G2B220465

Analysis: 7196A (Cr6+) Date(s): 3/9/12 Analyst: JB

Level 1 Review:	YES	NO	N/A
1. Samples properly preserved/verified	✓		
2. Run setup meets std criteria (Curve,ICV,ICB,CCV,etc)	✓		
3. Calibration criteria met (R=0.995, R^2=0.990)	✓		
4. Second source std in control	✓		
5. Batch QC in control (LCS,MB,MS/MSD,DCS-if necessary)	✓		
6. Calculations checked	✓		
7. QAS/QAPP consulted for client specific requirements	✓		
8. Standard tracking #'s recorded on runlog/benchsheet	✓		
9. Manual integration performed, documented & approved			✓
10. Copy of run log included with data package	✓		
11. Copy of conductivity screen logbook (314.0 only)			✓

Level 1 Data Review:			
1. Benchsheet complete	✓		
2. QAS/QAPP consulted for client specific data entry	✓		
3. Copy of prep sheet/checklist submitted			
4. NCM(s) submitted			✓

Completed by and Date: JB 3/12/12

Level 2 Review:			
1. Level 1 checklist complete & verified	✓		
2. Deviations, NCM(s), holding times checked & approved			✓
3. Reprep/Reanalysis documented and chemist notified			
4. Client specific criteria met	✓		
5. Data entry checked and released in LIMS	✓		
6. Indication on benchsheet of review (dated and initialed)	✓		
7. Manual integration reviewed, approved (dated and initialed)			✓
8. Copy of run log included with data package	✓		
9. Copy of conductivity screen logbook (314.0 only)			✓

Completed by and Date: OS 3-12-12

Comments:

RQC050 TestAmerica Laboratories, Inc. Run Date: 3/12/12
WET CHEM BATCHSHEET Time: 12:29:17

TestAmerica West Sacramen

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE

METHOD: EA Chromium, Hexavalent (7196A)
QC BATCH #: **2069063** INITIALS: DATA ENTRY:
PREP DATE: 3/08/12 14:45 PREP _____ INITIALS _____
COMP DATE: 3/08/12 15:47 ANAL _____ DATE _____
USER: BAYNESJ

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
MQ16M-1-AC	G-2B220465-001	XX A 82 EA 01	Y-D	_____	YC-041-3
MQ16M-1-AG	G-2B220465-001-D	XX A 82 EA 01	Y-D	_____	YC-041-3
MQ16M-1-AF	G-2B220465-001-S	XX A 82 EA 01	Y-D	_____	YC-041-3
MQ16N-1-AC	G-2B220465-002	XX A 82 EA 01	Y-D	_____	YC-841-3
MQ16P-1-AC	G-2B220465-003	XX A 82 EA 01	Y-D	_____	YC-041-4
MQ16R-1-AC	G-2B220465-005	XX A 82 EA 01	Y-D	_____	YC-039-1
MQ16V-1-AC	G-2B220465-006	XX A 82 EA 01	Y-D	_____	YC-039-2
MQ16X-1-AC	G-2B220465-007	XX A 82 EA 01	Y-D	_____	YC-039-3
MQ160-1-AC	G-2B220465-008	XX A 82 EA 01	Y-D	_____	YC-043-1
MQ161-1-AC	G-2B220465-009	XX A 82 EA 01	Y-D	_____	YC-043-2
MQ162-1-AC	G-2B220465-010	XX A 82 EA 01	Y-D	_____	YC-043-3
MQ163-1-AC	G-2B220465-011	XX A 82 EA 01	Y-D	_____	YC-043-4
MQ164-1-AC	G-2B220465-012	XX A 82 EA 01	Y-D	_____	YC-045-1
MQ166-1-AC	G-2B220465-013	XX A 82 EA 01	Y-D	_____	YC-045-2
MQ167-1-AC	G-2B220465-014	XX A 82 EA 01	Y-D	_____	YC-045-3
MQ168-1-AC	G-2B220465-015	XX A 82 EA 01	Y-D	_____	YC-045-4
MRCC4-1-AA	G-2C090000-063-B	XX A 82 EA 01		_____	INTRA-LAB BLANK
MRCC4-1-AC	G-2C090000-063-C	XX A 82 EA 01		_____	INTRA-LAB CHECK

Control Limits

PDE115

TestAmerica Laboratories, Inc.
Inorganics Batch Review
QC Batch **2069063**

Date 3/12/2012
Time 12:08:12

Method Code: **EA Chromium, Hexavalent (7196A)**
Analyst: **Jason Baynes**

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
MQ16M-1-AC	0.002	mg/kg	0.05	03/08-03/09/12	55.60	N		ND	0.090	1.00
MQ16N-1-AC	0.002	mg/kg	0.05	03/08-03/09/12	54.47	N		ND	0.092	1.00
MQ16P-1-AC	0.002	mg/kg	0.05	03/08-03/09/12	49.92	N		ND	0.10	1.00
MQ16R-1-AC	ND	mg/kg	0.05	03/08-03/09/12	43.74	N		ND	0.11	1.00
MQ16V-1-AC	0.002	mg/kg	0.05	03/08-03/09/12	49.27	N		ND	0.10	1.00
MQ16X-1-AC	ND	mg/kg	0.05	03/08-03/09/12	71.13	N		ND	0.070	1.00
MQ160-1-AC	ND	mg/kg	0.05	03/08-03/09/12	49.58	N		ND	0.10	1.00
MQ161-1-AC	0.02	mg/kg	0.05	03/08-03/09/12	48.63	N		0.041 B	0.10	1.00
MQ162-1-AC	ND	mg/kg	0.05	03/08-03/09/12	45.73	N		ND	0.11	1.00
MQ163-1-AC	ND	mg/kg	0.05	03/08-03/09/12	46.74	N		ND	0.11	1.00
MQ164-1-AC	ND	mg/kg	0.05	03/08-03/09/12	46.94	N		ND	0.11	1.00
MQ166-1-AC	0.002	mg/kg	0.05	03/08-03/09/12	49.25	N		ND	0.10	1.00
MQ167-1-AC	0.002	mg/kg	0.05	03/08-03/09/12	49.32	N		ND	0.10	1.00
MQ168-1-AC	ND	mg/kg	0.05	03/08-03/09/12	48.08	N		ND	0.10	1.00
MRCC4-1-AA	ND	mg/kg	0.05	03/08-03/09/12	.00			ND	0.05	1.00

Notes:
Results and reporting limits have been adjusted for dry weight.
B Estimated result. Result is less than RL.

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
MRCC4-1-AC		0.20	0.203	101.50	03/08-03/09/12	(85-115)	1.00

Notes:

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	Pct. Recovered SPIKE	Pct. Recovered DUP	RPD	Prep. - Anal.	Dil.
MQ16M-1-AF		0.002	0.244	0.228	0.222	92.62	90.16	2.66	03/08-03/12/12	1.00

Notes:
Results and reporting limits have been adjusted for dry weight.

OK JB 3/12/12

PRODUCTION TOTALS

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0

Test America — **West Sacramento**

CURVE CALCULATION BENCHSHEET

(SOP # WS-WC-0020)

ANALYST	JCB	ANALYSIS DATE	03/09/12	METHOD NO.	EPA 7196A	FILE	030912A
REVIEWED BY		REVIEW DATE		INSTRUMENT ID	GEN20	WAVELENGTH:	540nm
BATCH NO.	2069063	MS RUN NO.	2069030	ICV SOURCE:	11GCM0186 e. 3/18/12	CCV SOURCE:	11GCM0185 e. 3/14/12

	Lab ID	Time	True Conc. mg/L	Background Absorbance	Sample Aliquot gram	Sample Aliquot mL	Extract Volume mL	Dilution	Absorbance	pH 2.0 +/- 0.5 (Y/N) - Cr+6 only	Raw Result	Hexchrom mg/L	Hexchrom mg/kg	Recovery	Check
1	Std0	10:45	0						0.001	Y	0.00037		Intercept =	-8.5299E-04	
2	Std1	10:47	0.005						0.004	Y	0.00402		Slope =	1.2195E+00	
3	Std2	10:47	0.01						0.01	Y	0.01134				
4	Std3	10:47	0.025						0.021	Y	0.02476				
5	Std4	10:48	0.05						0.041	Y	0.04915		r =	0.999737 ✓ OK JB 3/12/12	
6	Std5	10:48	0.1						0.083	Y	0.10036				
7	Std6		0										Linear	Not Forced	Weighting = 1
8													Absorbance corrected for background absorbance		
9												mg/L	mg/kg	Recovery	Check
11	ICV/LCS	10:48	0.04			10	10	1	0.036	Y	0.04305	0.0430		108% ✓	
12	ICB/MB	10:48				10	10	1	0.002	Y	0.00159	0.0016	(ND) ✓		< RL
13	G2B220465-MB	10:49		0.001	10		50	1	0.001	Y	-0.00085		-0.004		< RL
14	G2B220465-LCS	10:49	0.2	0.001	10		50	1	0.035	Y	0.04061		0.203	102%	
15	G2B220465-1	10:50		0.002	9.81		50	1	0.003	Y	0.00037		0.002		< RL
16	G2B220465-1S	10:50	0.244	0.002	10.25		50	1	0.041	Y	0.04671		0.228	93%	
17	G2B220465-1D	10:52	0.244	0.002	10.25		50	1	0.04	Y	0.04549		0.222	91%	
18	G2B220465-2	10:53		0.003	10		50	1	0.004	Y	0.00037		0.002		< RL
19	G2B220465-3	10:54		0.003	10.46		50	1	0.004	Y	0.00037		0.002		< RL
20	G2B220465-5	10:54		0.003	10.55		50	1	0.003	Y	-0.00085		-0.004		< RL
21	G2B220465-6	10:55		0.002	10.33		50	1	0.003	Y	0.00037		0.002		< RL
22	G2B220465-7	10:56		0.005	10.08		50	1	0.003	Y	-0.00329		-0.016		< RL
23	CCV	10:56	0.05			10	10	1	0.042	Y	0.05037	0.0504		101% ✓	
24	CCB	10:57				10	10	1	0.002	Y	0.00159	0.0016	✓ (ND)		< RL
25	G2B220465-8	10:58		0.004	10.08		50	1	0.004	Y	-0.00085		-0.004		< RL
26	G2B220465-9	10:58		0.003	10.21		50	1	0.007	Y	0.00402		0.020		< RL
27	G2B220465-10	10:59		0.003	10.23		50	1	0.003	Y	-0.00085		-0.004		< RL
28	G2B220465-11	10:59		0.005	9.96		50	1	0.004	Y	-0.00207		-0.010		< RL
29	G2B220465-12	11:00		0.003	10.24		50	1	0.003	Y	-0.00085		-0.004		< RL
30	G2B220465-13	11:00		0.004	10.02		50	1	0.005	Y	0.00037		0.002		< RL
31	G2B220465-14	11:00		0.003	10.45		50	1	0.004	Y	0.00037		0.002		< RL
32	G2B220465-15	11:01		0.004	9.93		50	1	0.004	Y	-0.00085		-0.004		< RL
33	CCV	11:01	0.05			10	10	1	0.044	Y	0.05280	0.0528		106% ✓	
34	CCB	11:01				10	10	1	0.001	Y	0.00037	0.0004	(ND) ✓		< RL

Example Calculation:

$Y = [mx+b]\left[\frac{\text{extract volume}}{\text{sample wt}}\right]$

Y = result (mg/kg) m = slope

x = Absorbance − Background Abs.

b = intercept

* $15 = [(1.2195)(0.041-0.002)+(-8.5299E-4)]\left[\frac{50}{10.25}\right]$

$= 0.228$ mg/kg

m 3-12-12

OK JB 3/12/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

General Chemistry Standards and Reagent Usage Log

Test: Cr6 Analysis

Method ID: EPA 7196A
SOP ID: WS - WC - 0020
Filter Wavelength: 540 nm

Batch IDs: 2069063

Instrument: (GEN20) GENESYS 20 Spectrophotometer

File ID: 030912A

Standards:

Source Standards	Tracking ID	Expiration Date
1 mg/L Cr+6 (CAL / CCV)	11GCM0185	3/14/2012
10 mg/L Cr+6 (ICV/MS/SD)	11GCM0186	3/18/2012

Calibration Standards

Final Concentration (mg/L)	Amount of Source Std (mL)	Final Volume (mL)
0.005	0.05	10
0.01	0.1	10
0.025	0.25	10
0.05 (CCV)	0.5	10
0.1	1	10

ICV Standard

0.04	0.04	10

MS/SD Standard

0.05	0.05	10

Reagents:

	Lot ID	Expiration Date
Color Reagent		
HACH ChromaVer 3	NA	NA
DPC Color Reagent	4525WC-3-3	9/6/2012
H_2SO_4	4525-WC-3-4	9/6/2012
NaOH	N/A	NA

All tracking numbers and expiration dates were checked as accurate prior to reagent or standard use:

Chemist: JCB **Date:** 3/12/2012

Q:\FORMS\QA-534 Cr6 Standard and Reagent Form QA-534 DAW 5/19/06

TestAmerica West Sacramento

Standards Preparation Logbook Record

Mar-07-2012

Logbook: \\sacsvr01\WORLD\stdslog\genchem.std

11GCM0185, Hexavalent Chromium Standard (CAL)

Analyst: klopez

Vendor: CPI Lot No.: 11C109 Vendor's Expiration Date: 03-14-2012
Solvent: Water
Date Prep./Opened: 03-28-2011 Date Received: 03-18-2011
Date Expires(1): 03-14-2012 (1 Year)
Date Expires(2): 03-14-2012 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)
Date Reviewed: 12-31--4714 by 3

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Hexavalent Chromium	1.0000	1.0000

11GCM0186, Hexavalent Chromium Standard (REF)

Analyst: klopez

Vendor: CPI International Lot No.: 11C110 Vendor's Expiration Date: 09-14-2012
Solvent: Water
Date Prep./Opened: 03-28-2011 Date Received: 03-18-2011
Date Expires(1): 03-18-2012 (1 Year)
Date Expires(2): 09-14-2012 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)
Date Reviewed: 12-31--4714 by 3

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Hexavalent Chromium	10.000	10.000

Reviewed By: _____

TestAmerica West Sacramento
Inorganics Department
Reagent and Modifier Tracking Log

Reagent/Modifier Name	Tracking Number	Component One Name/source/ Lot Number/Amount	Component Two Name/Source/ Lot Number/Amount	Component Three Name/Source/ Lot Number/Amount	Final Volume Adjusted with Millipore Water	Date Prepared	Analyst	Expiration Date
150X Elvert	4525-WC-3-1	13.3mL Dionex Elvert Lot # 111216	/	/	2L	2/27/12	[signature]	12/31/12
100X Elvert	4525-WC-3-2	20.0mL Dionex Elvert Lot # 111216	/	/	2L	2/29/12	[signature]	12/31/12
DPC Color Reagent	4525-WC-3-3	0.5g 1,5DPC Fisher #113829	/	/	~~TOO~~ JS 3/6/12 100mL Acetone Fisher K35E48	3/6/12	JS	9/6/12
50% H_2SO_4	4525-WC-3-4	15mL H_2SO_4 Mall - K03051	/	/	30mL	3/6/12	JS	9/6/12
100X Elvert	4525-WC-3-5	20.0mL Dionex Elvert Lot # 111216	NA	NA	2L	3/7/12	[signature]	12/31/12

Gen Chem Prep Data

TestAmerica
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West Sacramento

DI Leach Preparation

SOP ID: WS-WC-0049

Chemist: JB
Lot ID(s): G2B220465
Date: 3/8/12
Batch ID(s): #2069063
Analysis: Cr 6+
Balance ID: QA068
EPA Test Method: 7196A
Leach Start Time 14:45 JB 3/8/12
Leach Stop Time 15:47 JB 3/8/12

Lot ID	Sample #	Initial Wt (g)	Final Volume (mL)			
			20	40	50	Other
G2B220465	M. BLANK	10.00			✓	
	LCS	10.00			✓	
	1	9.81			✓	
	2	10.00			✓	
	3	10.46			✓	
	5	10.55			✓	
	6	10.53			✓	
	7	10.08			✓	
	8	10.08			✓	
	9	~~10.11~~ JB 3/8/12 10.21			✓	
	10	~~9.99~~ JB 3/8/12 10.23			✓	
	11	9.86			✓	
	12	10.24			✓	
	13	10.02			✓	
	14	10.45			✓	
	15	9.93			✓	
	1X	10.05			✓	

JB 3/8/12

Weigh all samples to two decimal places.

Comments: _____

% Moisture/Solid Worksheet

QCBATCH: 2058164

Analyzed by: valmores Report created: 2/28/12 9:41:07 AM

Lot ID	WorkOrder	Pan Tare	Sample Wet Wt	Sample Dry Wt	Wt Diff (Water)	Percent Water	Percent Solid	Reporting Limit	Foot Note	Date Time
G2B210434-20	MQ0141AA	1.05	5.55	3.58	1.97	43.78	56.22	0.1		2/28/12 9:37:51 AM
G2B210434-21	MQ0151AA	1.03	5.22	3.40	1.82	43.44	56.56	0.1		2/28/12 9:37:59 AM
G2B220465-1	MQ16M1AA	1.05	11.14	6.66	4.48	44.40	55.60	0.1		2/28/12 9:38:07 AM
G2B220465-1	MQ16M1AE	1.03	12.60	7.45	5.15	44.51	55.49	0.1		2/28/12 9:38:15 AM
G2B220465-2	MQ16N1AA	1.03	11.66	6.82	4.84	45.53	54.47	0.1		2/28/12 9:38:27 AM
G2B220465-3	MQ16P1AA	1.05	12.29	6.66	5.63	50.09	49.91	0.1		2/28/12 9:38:35 AM
G2B220465-5	MQ16R1AA	1.02	14.10	6.74	7.36	56.27	43.73	0.1		2/28/12 9:38:43 AM
G2B220465-6	MQ16V1AA	1.02	10.52	5.70	4.82	50.74	49.26	0.1		2/28/12 9:38:53 AM
G2B220465-7	MQ16X1AA	1.03	9.48	7.04	2.44	28.88	71.12	0.1		2/28/12 9:39:02 AM
G2B220465-8	MQ1601AA	1.04	10.54	5.75	4.79	50.42	49.58	0.1		2/28/12 9:39:11 AM
G2B220465-9	MQ1611AA	1.01	10.10	5.43	4.67	51.38	48.62	0.1		2/28/12 9:39:19 AM
G2B220465-10	MQ1621AA	1.02	11.19	5.67	5.52	54.28	45.72	0.1		2/28/12 9:39:26 AM
G2B220465-11	MQ1631AA	1.04	11.16	5.77	5.39	53.26	46.74	0.1		2/28/12 9:39:33 AM
G2B220465-12	MQ1641AA	1.02	14.89	7.53	7.36	53.06	46.94	0.1		2/28/12 9:39:51 AM
G2B220465-13	MQ1661AA	1.02	12.29	6.57	5.72	50.75	49.25	0.1		2/28/12 9:40:01 AM
G2B220465-14	MQ1671AA	1.03	14.09	7.47	6.62	50.69	49.31	0.1		2/28/12 9:40:10 AM
G2B220465-15	MQ1681AA	1.03	11.70	6.16	5.54	51.92	48.08	0.1		2/28/12 9:40:18 AM
G2B220468-11	MQ1711AA	1.02	10.80	5.74	5.06	51.74	48.26	0.1		2/28/12 9:40:27 AM
G2B220468-12	MQ1721AA	1.00	14.08	7.53	6.55	50.08	49.92	0.1		2/28/12 9:40:35 AM

$$\%\ \text{diff.} = \frac{44.51 - 44.40}{\left(\frac{44.51 + 44.40}{2}\right)} \times 100 = \frac{0.11}{44.46} \times 100 \quad 0.25\%$$

All weights are in grams.
Sample weights (wet & dry) include the weight (tare) of the sample pan.
Wt. Diff. = sample wet weight (+ tare) - sample dry weight (+ tare).
% Water = (Wt. Diff/(sample wet weight - pan tare))*100
% Solid = 100 - percent Water

Shipping and Receiving Documents

GZB220465

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

GZB220465

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
EnE	Brian Milton		203842
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 3 of 4**
1940 Webster St Ste 100	510-893-6700		
City / State / Zip Code	**Site Contact**	**Lab Contact**	**Analysis (Attach list if more space is needed)**
Oakland / CA / 94612			
Project Name and Location (State)	**Carrier/Waybill Number**		
007693.7008.015006			
Contract/Purchase Order/Quote No.			
Yosemite Creek EE/CA			

	Sample I D No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed	Soil	Containers & Preservatives: Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Cr VI 7196	Asbestos PLM	Special Instructions/ Conditions of Receipt
1	YC-041-3	2/21/12	1429			X		X						X	X	
2	YC-841-3		1430											X		
3	YC-041-4		1445											X	X	
4	YC-841-4		1446												X	
5	YC-039-1		1500											X	X	
6	YC-039-2		1502											X	X	
7	YC-039-3		1515											X	X	
8	YC-043-1		1532											X	X	
9	YC-043-2		1533											X	X	
10	YC-043-3		1543											X	X	
11	YC-043-4		1544											X	X	
12	YC-045-1		1600											X	X	

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard TAT

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1		02/22/12	0942		2.22.12	0942
2		2.22.12	10:15		2/22/12	1015
3		2/22/12	1300		2/22/12	1305

Comments

DISTRIBUTION: WHITE - Returned to Client with Report. CANARY - Stays with the Sample PINK - Field Copy

G2B220465

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

G2B220465

Client	Project Manager	Date	Chain of Custody Number
E+E	Brian Milton		203841
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 4 of 4
1940 Webster St Ste 100	510-893-6700		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Oakland / CA / 94612			
Project Name and Location (State)	**Carrier/Waybill Number**		
Yosemite Creek EE/CA			
Contract/Purchase Order/Quote No.			
002693.7008.015006			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed	Soil	Containers & Preservatives: Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: CrVI 7196	Asbestos PLM	Special Instructions/ Conditions of Receipt
13 YC-045-2	2/21/12	1602			X		X						X	X	
14 YC-045-3	↓	1612			↓		↓						X	X	
15 YC-045-4	↓	1614			↓		↓						X	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard TAT

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1		02/22/12	0942		2.22.12	0942
2		2.22.12	10:15		2/22/12	1015
3		2/22/12	1300		2/22/12	1305

Comments

DISTRIBUTION: WHITE - Returned to Client with Report. CANARY - Stays with the Sample. PINK - Field Copy

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

LOT RECEIPT CHECKLIST
TestAmerica West Sacramento

CLIENT ECOLOGY AND ENVIRONMENT PM KS

LOT# (QUANTIMS ID) G2B220465 QUOTE# 90000 LOCATION W6E

Checked (✓)

DATE RECEIVED 2/22/12 TIME RECEIVED 1305 ☑

DELIVERED BY ☐ FEDEX ☐ ON TRAC ☐ OTHER

☐ GOLDENSTATE ☐ UPS ☐ EZ PARCEL

☑ TAL COURIER ☐ TAL SF ☐ CLIENT ☑

SHIPPPING CONTAINER(S) ☑ TAL ☐ CLIENT ☐ N/A

MULIT-COOLER(S) (If checked see multi-cooler form) ☐

SINGLE COOLER INFORMATION N/A

CUSTODY SEAL STATUS ☐ INTACT ☐ BROKEN ☑ N/A ☐ ☑

CUSTODY SEAL #(S) NA

COC #(S) 203842, 203841 ☐ ☑

TEMPERATURE BLANK Observed: -1 Corrected: 2

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 3,3,3 Average 3 Corrected Average 3

LABORATORY THERMOMETER ID:

IR UNIT: #4 ☑ #5 ☐ ☐ OTHER ☐ ☑

JS (Initials) 2/22/12 (Date)

==========

pH MEASURED ☐ YES ☐ ANOMALY ☑ N/A ☑

LABELED BY..... CH ☑

LOGGED IN BY..... CH ☑

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING ☑

WETCHEM ☑ N/A ☑

VOA-ENCORES ☑ N/A ☑

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☑ N/A ☑

☑ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☐ N/A ☑

☐ CLOUSEAU ☐ TEMPERATURE EXCEEDED (0 °C – 6 °C)*1 ☑ N/A

☑ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS USED

JS (Initials) 2/22/12 (Date)

Notes

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Bottle Lot Inventory

Lot ID: G2B220465

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA*																				
VOAh*																				
VOAmeoh																				
AGB																				
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
____AGJ																				
500AGJ																				
250AGJ																				
125AGJ	1	1	1		1	1	1	1	1	1	1	1	1	1	1					
125AGJmeoh																				
____CGJ																				
500CGJ																				
250CGJ																				
125CGJ																				
PJ																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
_____"CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

h = hydrochloric acid **s** = sulfuric acid **na** = sodium hydroxide **n** = nitric acid **zn** = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's

Chain of Custody Record

Temperature on Receipt ____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

000892429

TAL-4124 (1007)

Client: EE	Project Manager: Brian Milton	Date	Chain of Custody Number: 203842
Address: 1940 Webster St Ste 100	Telephone Number (Area Code)/Fax Number: 510-893-6700	Lab Number	Page 3 of 4
City: Oakland	State: CA	Zip Code: 94612	Site Contact	Lab Contact
Project Name and Location (State): 007693.7008.0150.06	Carrier/Waybill Number	
Contract/Purchase Order/Quote No.: Yosemite Creek EE/CA		

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	HNO3	H2SO4	HCl	NaOH	ZnAc/NaOH	Cr VI 7196	Asbestos PLM	Special Instructions/ Conditions of Receipt
YC-041-3	2/21/12	1429			X		X						XX	X	
YC-841-3		1430											X	X	
YC-041-4		1445											X	X	
YC-841-4		1446											X	X	
YC-039-1		1500											XX	X	
YC-039-2		1502											XX	X	
YC-039-3		1515											XX	X	
YC-043-1		1532											XX	X	
YC-043-2		1533											X	X	
YC-043-3		1543											XX	X	
YC-043-4		1544											XX	X	
YC-045-1		1600											XX	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal ☐ Return To Client ☐ Disposal (By Lab) ☐ Archive For ___ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard TAT

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1		02/22/12	0942		2-22-12	0942
2		2-22-12	10:15		2/22/12	10:15
3		2-22-12	1300		02/22/12	1300
4		02/22/12	1335		2/22/12	1335

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

000892429

TAL-4124 (1007)

Client: E+E	Project Manager: Brian Milton	Date:	Chain of Custody Number: 203841
Address: 1940 Webster St Ste 100	Telephone Number (Area Code)/Fax Number: 510-893-6700	Lab Number:	Page 4 of 4
City: Oakland	State: CA	Zip Code: 94612	Site Contact:	Lab Contact:
Project Name and Location (State): Yosemite Creek EE/CA	Carrier/Waybill Number:	
Contract/Purchase Order/Quote No: 002693.7008.015006		

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Solid	Soil	Containers & Preservatives: Unpreserved	HCl	HNO3	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): Cr VI 7196	Asbestos PLM	Special Instructions/ Conditions of Receipt
YC-045-2	2/21/12	1602			X		X					X	X	
YC-045-3	↓	1612			↓		↓					X	X	
YC-045-4		1614										X	X	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard (TAT)

QC Requirements (Specify):

1. Relinquished By	Date: 02/22/12	Time: 09:42	1. Received By	Date: 2-22-12	Time: 0942
2. Relinquished By	Date: 2-22-12	Time: 10:15	2. Received By	Date: 2/22/12	Time: 1015
3. Relinquished By	Date: 2-22-12	Time: 1300	3. Received By	Date: 2/22/12	Time: 1300
Comments	Date: 02/22/12	Time: 1335		TMK tomlab PK	Date: 2/22/12 Time: 1335

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

ecology and environment, inc.

International Specialists in the Environment

1940 Webster Street, #100
Oakland, CA 94612
Tel: (510) 893-6700, Fax: (510) 550-2760

START AWARD OF ANALYTICAL WORK LETTER

Date: 12/15/2011

To: Karen Sellers
TestAmerica Laboratories, Inc.
880 Riverside Parkway, West Sacramento, CA 95605

Phone: (916) 373-5600
FAX: (916) 372-1059
Email: karen.sellers@testamericainc.com

From: Mindy Song

Through: Howard Edwards

Dear Karen Sellers,

This letter serves to inform you that your laboratory has been awarded the analytical laboratory work for:

Project Name: Yosemite Creek, EE/CA
TDD No.: 09-11-10-0001
Project Number: 002693.7008.01SO06

The work will be performed as per your Basic Ordering Agreement (BOA) environmental analysis subcontract with E&E and is anticipated to consist of the following analysis, matrices, number of samples, and deliverables as per the communication with you on: 12/14/2011

Analytical Method	Sample Matrix	Contract Item #	Sample Qty	Data Summary TAT	Level 4 Package TAT	Unit Cost	TAT Cost	Total Cost
Chromium VI by Coprecipitation/ Colorimetric (Digestion/Extraction Cost EPA 7195/7196	soil	17	30	2-wks - std.	4 wks - Env lab	$17.50	$0.00	$525.00

The Ecology & Environment project manager, Brian Milton (or designee) will contact you prior to shipment to discuss the actual matrices, analyses, quantities, and deliverables as these may differ from the included table.

Please read the following to reconfirm that:

1. Samples will be received starting approximately: ~~1/16/2012~~ 1/20/2012
2. After receipt of samples a summary data package and electronic data will be received by Ecology & Environment as specified in the table above and should be emailed to Brian Milton at bmilton@ene.com.

3. After receipt of samples a Level IV Data Package will be received by Ecology && Environment as specified in the table above, and should be sent to: Mindy Song
3700 Industry Avenue, Suite 102
Lakewood, CA 90712

All billing/invoice statements must contain the following information:

Project Name: Yosemite Creek, EE/CA
TDD No.: 09-11-10-0001
Project Number: 002693.7008.01SO06

BOA Contract Item #
Unit Cost per Contract Item #
Total Cost per Contract Item #

All invoices must be sent to Anita Slater at Ecology && Environment, Inc., 1940 Webster Street, Suite 100, Oakland, CA 94612. The chain-of-custody sheets delivered with each sample shipment contain specific information regarding the number of samples and analyses required as well as the TDD and PAN numbers to reference when invoicing this project. If there are any questions regarding this project, please call me at (310) 947-2853.

cc: Contract Financial Manager
Contract Quality Assurance Officer

ecology and environment, inc.

International Specialists in the Environment

1940 Webster Street, #100
Oakland, CA 94612
Tel: (510) 893-6700, Fax: (510) 550-2760

START AWARD OF ANALYTICAL WORK LETTER

Date: 12/15/2011

To: Karen Sellers
TestAmerica Laboratories, Inc.
880 Riverside Parkway, West Sacramento, CA 95605

Phone: (916) 373-5600
FAX: (916) 372-1059
Email: karen.sellers@testamericainc.com

From: Mindy Song

Through: Howard Edwards

Dear Karen Sellers,

This letter serves to inform you that your laboratory has been awarded the analytical laboratory work for:

Project Name: Yosemite Creek EE/CA
TDD No.: 09-11-10-0001
Project Number: 002693.7008.01SO06

The work will be performed as per your Basic Ordering Agreement (BOA) emergency air analysis subcontract with E&E and is anticipated to consist of the following analysis, matrices, number of samples, and deliverables as per the communication with you on: 12/14/2011.

Analytical Method	Sample Matrix	Contract Item #	Sample Qty	Data Summary TAT	Level 4 Package TAT	Unit Cost	TAT Cost	Total Cost
Asbestos by PLM Bulk (400 Point Count) EPA 600/R-93/116	soil matrix	6402	30	1wk - Emer Air	2wks - Emer Air	$30.00	$0.00	$900.00

The Ecology & Environment project manager, Brian Milton (or designee) will contact you prior to shipment to discuss the actual matrices, analyses, quantities, and deliverables as these may differ from the included table.

Please read the following to reconfirm that:

1. Samples will be received starting approximately: ~~1/17/2012~~ 1/20/2012

2. After receipt of samples a summary data package and electronic data will be received by Ecology & Environment as specified in the table above and should be emailed to Brian Milton at bmilton@ene.com.

3. After receipt of samples a Level IV Data Package will be received by Ecology && Environment as specified in the table above, and should be sent to: Brian Milton
1940 Webster Street, #100
Oakland, CA 94612

All billing/invoice statements must contain the following information:

Project Name: Yosemite Creek EE/CA
TDD No.: 09-11-10-0001
Project Number: 002693.7008.01SO06

BOA Contract Item #
Unit Cost per Contract Item #
Total Cost per Contract Item #

All invoices must be sent to Anita Slater at Ecology && Environment, Inc., 1940 Webster Street, Suite 100, Oakland, CA 94612. The chain-of-custody sheets delivered with each sample shipment contain specific information regarding the number of samples and analyses required as well as the TDD and PAN numbers to reference when invoicing this project. If there are any questions regarding this project, please call me at (310) 947-2853.

cc: Contract Financial Manager
Contract Quality Assurance Officer

SOLID, E600/R-93/116, Asbestos

Subcontract Report from EMLab P&K, San Bruno, CA

EMLab P&K

Report for:

Ms. Karen Sellers
TestAmerica-West Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Regarding: Project: G2B220465; Ecology and Environment Yosemite Creek EE/CA
EML ID: 892429

Approved by:

Technical Manager
Miguel Ines

Dates of Analysis:
Asbestos-EPA Method 600/R-93/116: 02-27-2012

Service SOPs: Asbestos-EPA Method 600/R-93/116 (EPA-600/M4-82-020 (SOP 01264))

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data can be provided when requested.

Document Number: 200091 - Revision Number: 5

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220465; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	14
Total Samples Analysed:	14
Total Samples with Layer Asbestos Content > 1%:	0

Location: YC-041-3 Lab ID-Version‡: 3963503-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-041-4 Lab ID-Version‡: 3963504-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-841-4 Lab ID-Version‡: 3963505-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-039-1 Lab ID-Version‡: 3963506-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220465; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-039-2 Lab ID-Version‡: 3963507-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-039-3 Lab ID-Version‡: 3963508-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-043-1 Lab ID-Version‡: 3963509-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-043-2 Lab ID-Version‡: 3963510-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-043-3 Lab ID-Version‡: 3963511-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220465; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-043-4 Lab ID-Version‡: 3963512-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-1 Lab ID-Version‡: 3963513-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-2 Lab ID-Version‡: 3963514-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-3 Lab ID-Version‡: 3963515-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-4 Lab ID-Version‡: 3963516-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

March 13, 2012

TestAmerica Project Number: G2B220468
PO/Contract: 002693.7008.01SO06

Mindy Song
Ecology and Environment, Inc.
3700 Industry Avenue #102
Lakewood, CA 90712

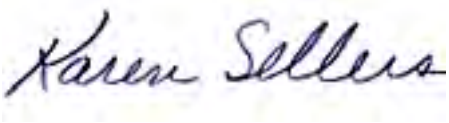
Dear Ms. Song,

This report contains the analytical results for the samples received under chain of custody by TestAmerica on February 22, 2012. These samples are associated with your Yosemite Creek project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4442.

Sincerely,



Karen M. Sellers
Project Manager

Table of Contents

TestAmerica West Sacramento Project Number G2B220468

Case Narrative

TestAmerica West Sacramento Project Number G2B220468

General Comments

Please note that samples for asbestos via method E600/R-93/116 were forwarded to EMLab P&K. Please see attached report for any comments or anomalies pertinent to that analysis.

There were no anomalies associated with this project.

TestAmerica Laboratories West Sacramento Certifications/Accreditations

Certifying State	Certificate #	Certifying State	Certificate #
A2LA (DoD-ELAP)	2928-01	New Mexico	NA
Alaska	UST-055	New York*	11666
Arizona	AZ0708	Oregon*	CA 200005
Arkansas	88-0691	Pennsylvania*	68-1272
California*	01119CA	South Carolina	87014
Colorado	NA	Texas*	T104704399-08-TX
Connecticut	PH-0691	UCMR	CA00044
Florida*	E87570	US Fish & Wildlife	LE148388-0
Georgia	960	USDA Foreign Plant	37-82605
Guam	10-009r	USDA Foreign Soil	P330-09-00055
Hawaii	NA	Utah*	QUAN1
Illinois*	002701	Virginia	178
Kansas*	E-10375	Washington	C581
Louisiana*	01944	West Virginia	9930C, 334
Michigan	9947	Wisconsin	998204680
Nevada	CA44	Wyoming	8TMS-Q
New Jersey*	CA005		

*NELAP accredited. A more detailed parameter list is available upon request. *Updated 5/25/2011*

QC Parameter Definitions

QC Batch: The QC batch consists of a set of up to 20 field samples that behave similarly (i.e., same matrix) and are processed using the same procedures, reagents, and standards at the same time.

Method Blank: An analytical control consisting of all reagents, which may include internal standards and surrogates, and is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background contamination.

Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD): An aliquot of blank matrix spiked with known amounts of representative target analytes. The LCS (and LCSD as required) is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. If an LCSD is performed, it may also be used to evaluate the precision of the process.

Duplicate Sample (DU): Different aliquots of the same sample are analyzed to evaluate the precision of an analysis.

Surrogates: Organic compounds not expected to be detected in field samples, which behave similarly to target analytes. These are added to every sample within a batch at a known concentration to determine the efficiency of the sample preparation and analytical process.

Matrix Spike and Matrix Spike Duplicate (MS/MSD): An MS is an aliquot of a matrix fortified with known quantities of specific compounds and subjected to an entire analytical procedure in order to indicate the appropriateness of the method for a particular matrix. The percent recovery for the respective compound(s) is then calculated. The MSD is a second aliquot of the same matrix as the matrix spike, also spiked, in order to determine the precision of the method.

Isotope Dilution: For isotope dilution methods, isotopically labeled analogs (internal standards) of the native target analytes are spiked into the sample at time of extraction. These internal standards are used for quantitation, and monitor and correct for matrix effects. Since matrix effects on method performance can be judged by the recovery of these analogs, there is little added benefit of performing MS/MSD for these methods. MS/MSD are only performed for client or QAPP requirements.

Control Limits: The reported control limits are either based on laboratory historical data, method requirements, or project data quality objectives. The control limits represent the estimated uncertainty of the test results.

Sample Summary

TestAmerica West Sacramento Project Number G2B220468

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
MQ17L	1	YC-038-1	2/21/2012 10:48 AM	2/22/2012 01:05 PM
MQ17N	2	YC-038-2	2/21/2012 10:50 AM	2/22/2012 01:05 PM
MQ17P	3	YC-038-3	2/21/2012 11:00 AM	2/22/2012 01:05 PM
MQ17Q	4	YC-038-3.6	2/21/2012 11:05 AM	2/22/2012 01:05 PM
MQ17R	5	YC-040-1	2/21/2012 11:30 AM	2/22/2012 01:05 PM
MQ17T	6	YC-040-2	2/21/2012 11:33 AM	2/22/2012 01:05 PM
MQ17V	7	YC-040-3	2/21/2012 11:55 AM	2/22/2012 01:05 PM
MQ17W	8	YC-040-3.6	2/21/2012 11:57 AM	2/22/2012 01:05 PM
MQ17X	9	YC-840-2	2/21/2012 11:36 AM	2/22/2012 01:05 PM
MQ170	10	YC-840-3.6	2/21/2012 11:58 AM	2/22/2012 01:05 PM
MQ171	11	YC-044-1	2/21/2012 12:57 PM	2/22/2012 01:05 PM
MQ172	12	YC-044-2	2/21/2012 12:38 PM	2/22/2012 01:05 PM
MQ173	13	YC-044-3	2/21/2012 12:48 PM	2/22/2012 01:05 PM
MQ174	14	YC-044-4	2/21/2012 12:58 PM	2/22/2012 01:05 PM
MQ175	15	YC-844-3	2/21/2012 12:50 PM	2/22/2012 01:05 PM
MQ176	16	YC-844-4	2/21/2012 01:00 PM	2/22/2012 01:05 PM
MQ177	17	YC-042-1	2/21/2012 01:25 PM	2/22/2012 01:05 PM
MQ178	18	YC-842-1	2/21/2012 01:26 PM	2/22/2012 01:05 PM
MQ179	19	YC-042-2	2/21/2012 01:34 PM	2/22/2012 01:05 PM
MQ18A	20	YC-842-2	2/21/2012 01:35 PM	2/22/2012 01:05 PM
MQ18C	21	YC-042-3	2/21/2012 01:45 PM	2/22/2012 01:05 PM
MQ18D	22	YC-042-4	2/21/2012 01:58 PM	2/22/2012 01:05 PM
MQ18E	23	YC-041-1	2/21/2012 02:20 PM	2/22/2012 01:05 PM
MQ18F	24	YC-041-2	2/21/2012 02:26 PM	2/22/2012 01:05 PM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

EXECUTIVE SUMMARY - Detection Highlights

G2B220468

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
YC-038-1 02/21/12 10:48 001				
Percent Moisture	44.1	0.10	%	ASTM D 2216-90
YC-038-2 02/21/12 10:50 002				
Percent Moisture	40.9	0.10	%	ASTM D 2216-90
YC-038-3 02/21/12 11:00 003				
Percent Moisture	19.8	0.10	%	ASTM D 2216-90
YC-038-3.6 02/21/12 11:05 004				
Percent Moisture	20.0	0.10	%	ASTM D 2216-90
YC-040-1 02/21/12 11:30 005				
Percent Moisture	55.3	0.10	%	ASTM D 2216-90
YC-040-2 02/21/12 11:33 006				
Percent Moisture	39.3	0.10	%	ASTM D 2216-90
YC-040-3 02/21/12 11:55 007				
Percent Moisture	19.1	0.10	%	ASTM D 2216-90
YC-040-3.6 02/21/12 11:57 008				
Percent Moisture	37.6	0.10	%	ASTM D 2216-90
YC-840-2 02/21/12 11:36 009				
Percent Moisture	38.7	0.10	%	ASTM D 2216-90
YC-044-1 02/21/12 12:57 011				
Percent Moisture	51.7	0.10	%	ASTM D 2216-90
YC-044-2 02/21/12 12:38 012				
Percent Moisture	50.1	0.10	%	ASTM D 2216-90

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

G2B220468

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
YC-044-3 02/21/12 12:48 013				
Percent Moisture	56.8	0.10	%	ASTM D 2216-90
YC-044-4 02/21/12 12:58 014				
Percent Moisture	51.7	0.10	%	ASTM D 2216-90
YC-844-3 02/21/12 12:50 015				
Percent Moisture	54.1	0.10	%	ASTM D 2216-90
YC-042-1 02/21/12 13:25 017				
Hexavalent Chromium	0.046 B	0.095	mg/kg	SW846 7196A
Percent Moisture	47.4	0.10	%	ASTM D 2216-90
YC-842-1 02/21/12 13:26 018				
Percent Moisture	47.4	0.10	%	ASTM D 2216-90
YC-042-2 02/21/12 13:34 019				
Percent Moisture	50.0	0.10	%	ASTM D 2216-90
YC-042-3 02/21/12 13:45 021				
Percent Moisture	55.1	0.10	%	ASTM D 2216-90
YC-042-4 02/21/12 13:58 022				
Percent Moisture	50.4	0.10	%	ASTM D 2216-90
YC-041-1 02/21/12 14:20 023				
Percent Moisture	46.3	0.10	%	ASTM D 2216-90
YC-041-2 02/21/12 14:26 024				
Percent Moisture	45.1	0.10	%	ASTM D 2216-90

ANALYTICAL METHODS SUMMARY

G2B220468

PARAMETER	ANALYTICAL METHOD
Hexavalent Chromium	SW846 7196A
Method for Determination of Water Content of Soil	ASTM D 2216-90

References:

ASTM Annual Book Of ASTM Standards.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

G2B220468

ANALYTICAL METHOD	ANALYST	ANALYST ID
ASTM D 2216-90	Steve Valmores	090182
SW846 7196A	Jason Baynes	004928

References:

ASTM Annual Book Of ASTM Standards.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Ecology and Environment, Inc.

Client Sample ID: YC-038-1

General Chemistry

Lot-Sample #...: G2B220468-001 Work Order #...: MQ17L Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 44

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.089	mg/kg	SW846 7196A	03/05-03/06/12	2069067
	Dilution Factor: 1			MDL.....: 0.018		
Percent Moisture	44.1	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
	Dilution Factor: 1			MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-038-2

General Chemistry

Lot-Sample #...: G2B220468-002 **Work Order #...:** MQ17N **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 41

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.085	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.017		
Percent Moisture	**40.9**	**0.10**	**%**	**ASTM D 2216-90**	**02/28-02/29/12**	**2059076**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-038-3

General Chemistry

Lot-Sample #...: G2B220468-003 Work Order #...: MQ17P Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 20

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.062	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.012		
Percent Moisture	19.8	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-038-3.6

General Chemistry

Lot-Sample #...: G2B220468-004 **Work Order #...:** MQ17Q **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 20

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.062	mg/kg	SW846 7196A	03/05-03/06/12	2069067
	Dilution Factor: 1			MDL.....: 0.012		
Percent Moisture	20.0	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
	Dilution Factor: 1			MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-040-1

General Chemistry

Lot-Sample #...: G2B220468-005 Work Order #...: MQ17R Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 55

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.11	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.022		
Percent Moisture	55.3	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-040-2

General Chemistry

Lot-Sample #...: G2B220468-006 **Work Order #...:** MQ17T **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 39

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.082	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.016		
Percent Moisture	**39.3**	**0.10**	**%**	**ASTM D 2216-90**	**02/28-02/29/12**	**2059076**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-040-3

General Chemistry

Lot-Sample #...: G2B220468-007 Work Order #...: MQ17V Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 19

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.062	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.012		
Percent Moisture	19.1	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-040-3.6

General Chemistry

Lot-Sample #...: G2B220468-008 **Work Order #...:** MQ17W **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 38

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.080	mg/kg	SW846 7196A	03/05-03/06/12	2069067
	Dilution Factor: 1			MDL.....: 0.016		
Percent Moisture	**37.6**	**0.10**	**%**	**ASTM D 2216-90**	**02/28-02/29/12**	**2059076**
	Dilution Factor: 1			MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-840-2

General Chemistry

Lot-Sample #...: G2B220468-009 **Work Order #...:** MQ17X **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 39

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.082	mg/kg	SW846 7196A	03/05-03/06/12	2069067
	Dilution Factor: 1			MDL.....: 0.016		
Percent Moisture	**38.7**	**0.10**	**%**	**ASTM D 2216-90**	**02/28-02/29/12**	**2059076**
	Dilution Factor: 1			MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-044-1

General Chemistry

Lot-Sample #...: G2B220468-011 Work Order #...: MQ171 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 52

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.021		
Percent Moisture	51.7	0.10	%	ASTM D 2216-90	02/27-02/28/12	2058164
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-044-2

General Chemistry

Lot-Sample #...: G2B220468-012 **Work Order #...:** MQ172 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 50

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.020		
Percent Moisture	**50.1**	**0.10**	**%**	**ASTM D 2216-90**	**02/27-02/28/12**	**2058164**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-044-3

General Chemistry

Lot-Sample #...: G2B220468-013 Work Order #...: MQ173 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 57

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.12	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.023		
Percent Moisture	56.8	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-044-4

General Chemistry

Lot-Sample #...: G2B220468-014 Work Order #...: MQ174 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 52

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.021		
Percent Moisture	51.7	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-844-3

General Chemistry

Lot-Sample #...: G2B220468-015 Work Order #...: MQ175 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 54

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.11	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.022		
Percent Moisture	54.1	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-042-1

General Chemistry

Lot-Sample #...: G2B220468-017 Work Order #...: MQ177 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 47

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	0.046 B	0.095	mg/kg	SW846 7196A	03/14/12	2069068
	Dilution Factor: 1			MDL.....: 0.019		
Percent Moisture	47.4	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
	Dilution Factor: 1			MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

Ecology and Environment, Inc.

Client Sample ID: YC-842-1

General Chemistry

Lot-Sample #...: G2B220468-018 **Work Order #...:** MQ178 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 47

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.095	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.019		
Percent Moisture	**47.4**	**0.10**	**%**	**ASTM D 2216-90**	**02/28-02/29/12**	**2059076**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-042-2

General Chemistry

Lot-Sample #...: G2B220468-019 Work Order #...: MQ179 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 50

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/14/12	2069068
	Dilution Factor: 1			MDL.....: 0.020		
Percent Moisture	50.0	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
	Dilution Factor: 1			MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-042-3

General Chemistry

Lot-Sample #...: G2B220468-021 Work Order #...: MQ18C Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 55

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.11	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.022		
Percent Moisture	**55.1**	**0.10**	**%**	**ASTM D 2216-90**	**02/28-02/29/12**	**2059076**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-042-4

General Chemistry

Lot-Sample #...: G2B220468-022 **Work Order #...:** MQ18D **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 50

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.020		
Percent Moisture	**50.4**	**0.10**	**%**	**ASTM D 2216-90**	**02/28-02/29/12**	**2059076**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-041-1

General Chemistry

Lot-Sample #...: G2B220468-023 **Work Order #...:** MQ18E **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 46

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.093	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.019		
Percent Moisture	**46.3**	**0.10**	**%**	**ASTM D 2216-90**	**02/28-02/29/12**	**2059076**
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

Ecology and Environment, Inc.

Client Sample ID: YC-041-2

General Chemistry

Lot-Sample #...: G2B220468-024 Work Order #...: MQ18F Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.091	mg/kg	SW846 7196A	03/14/12	2069068
	Dilution Factor: 1			MDL.....: 0.018		
Percent Moisture	45.1	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
	Dilution Factor: 1			MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

QC DATA ASSOCIATION SUMMARY

G2B220468

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 7196A		2069067	2069032
	SOLID	ASTM D 2216-90		2059076	2059028
002	SOLID	SW846 7196A		2069067	2069032
	SOLID	ASTM D 2216-90		2059076	2059028
003	SOLID	SW846 7196A		2069067	2069032
	SOLID	ASTM D 2216-90		2059076	2059028
004	SOLID	SW846 7196A		2069067	2069032
	SOLID	ASTM D 2216-90		2059076	2059028
005	SOLID	SW846 7196A		2069067	2069032
	SOLID	ASTM D 2216-90		2059076	2059028
006	SOLID	SW846 7196A		2069067	2069032
	SOLID	ASTM D 2216-90		2059076	2059028
007	SOLID	SW846 7196A		2069067	2069032
	SOLID	ASTM D 2216-90		2059076	2059028
008	SOLID	SW846 7196A		2069067	2069032
	SOLID	ASTM D 2216-90		2059076	2059028
009	SOLID	SW846 7196A		2069067	2069032
	SOLID	ASTM D 2216-90		2059076	2059028
011	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2058164	2058080
012	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2058164	2058080
013	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2059076	2059028
014	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2059076	2059028
015	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2059076	2059028

(Continued on next page)

QC DATA ASSOCIATION SUMMARY

G2B220468

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
017	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2059076	2059028
018	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2059076	2059028
019	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2059076	2059028
021	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2059076	2059028
022	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2059076	2059028
023	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2059076	2059028
024	SOLID	SW846 7196A		2069068	2069053
	SOLID	ASTM D 2216-90		2059076	2059028

METHOD BLANK REPORT

General Chemistry

Client Lot #...: G2B220468 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium		Work Order #: MRCDP1AA		MB Lot-Sample #:	G2C090000-067	
	ND	0.050	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1				
Hexavalent Chromium		Work Order #: MRCKP1AA		MB Lot-Sample #:	G2C090000-068	
	ND	0.050	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: G2B220468 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium		Work Order #: MRCDP1AC	LCS Lot-Sample#: G2C090000-067		
	102	(85 - 115)	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1			
Hexavalent Chromium		Work Order #: MRCKP1AC	LCS Lot-Sample#: G2C090000-068		
	101	(85 - 115)	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: G2B220468 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium			Work Order #: MRCDP1AC LCS Lot-Sample#: G2C090000-067				
	0.200	0.203	mg/kg	102	SW846 7196A	03/05-03/06/12	2069067
			Dilution Factor: 1				
Hexavalent Chromium			Work Order #: MRCKP1AC LCS Lot-Sample#: G2C090000-068				
	0.200	0.202	mg/kg	101	SW846 7196A	03/14/12	2069068
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: G2B220468 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
						% Moisture.....: 52	
Hexavalent Chromium		WO#: MQ17L1AF-MS/MQ17L1AG-MSD				MS Lot-Sample #: G2B220468-001	
	96	(85 - 115)			SW846 7196A	03/05-03/06/12	2069067
	94	(85 - 115)	2.6	(0-15)	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1					
						% Moisture.....: 52	
Hexavalent Chromium		WO#: MQ1711AE-MS/MQ1711AF-MSD				MS Lot-Sample #: G2B220468-011	
	92	(85 - 115)			SW846 7196A	03/14/12	2069068
	92	(85 - 115)	0.0	(0-15)	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: G2B220468 **Matrix.....:** SOLID
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
					% Moisture.....: 52				
Hexavalent Chromium			WO#: MQ17L1AF-MS/MQ17L1AG-MSD		MS Lot-Sample #: G2B220468-001				
	ND	0.429	0.424	mg/kg	96		SW846 7196A	03/05-03/06/12	2069067
	ND	0.429	0.413	mg/kg	94	2.6	SW846 7196A	03/05-03/06/12	2069067
			Dilution Factor: 1						
					% Moisture.....: 52				
Hexavalent Chromium			WO#: MQ1711AE-MS/MQ1711AF-MSD		MS Lot-Sample #: G2B220468-011				
	ND	0.512	0.474	mg/kg	92		SW846 7196A	03/14/12	2069068
	ND	0.512	0.474	mg/kg	92	0.0	SW846 7196A	03/14/12	2069068
			Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: G2B220468 **Work Order #...:** MQ16M-SMP **Matrix.....:** SOLID
MQ16M-DUP
Date Sampled...: 02/21/12 **Date Received..:** 02/22/12
% Moisture.....: 44

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #: G2B220465-001		
	44.4	44.5	%	0.25	(0-20)	ASTM D 2216-90	02/27-02/28/12	2058164

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: G2B220468 **Work Order #...:** MQ17L-SMP MQ17L-DUP **Matrix.....:** SOLID

Date Sampled...: 02/21/12 **Date Received..:** 02/22/12

% Moisture.....: 44

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #: G2B220468-001		
	44.1	44.5	%	0.81	(0-20)	ASTM D 2216-90	02/28-02/29/12	2059076

Dilution Factor: 1

Raw Data Package

General Chemistry - Various Methods

Gen Chem MDL

Lab Reference Data Summary

Target Analyte List: All Analytes

Matrix: SOLID
Extraction: LEACHATE, DI (Routine)
Method: Chromium, Hexavalent (7196A)
QC Program: STANDARD TEST SET
Location: TestAmerica West Sacramento

Analyte List	Detection Limits					Check List 20005					Spike List 20005				
Compound	RL	Units	MDL	Units	Run Date	Amt	Units	LCL	UCL	RPD	Amt	Units	LCL	UCL	RPD
CR, Hexavalent	0.05	mg/kg	0.010	mg/kg	20090108	0.50	mg/kg	85	115	15	0.50	mg/kg	85	115	15

Gen Chem Analysis Run Log

Test America **West Sacramento**

CURVE CALCULATION BENCHSHEET

(SOP # WS-WC-0020)

ANALYST	JCB	ANALYSIS DATE	03/06/12	METHOD NO.	EPA 7196A	FILE	030612B
REVIEWED BY	LH	REVIEW DATE	3-12-12	INSTRUMENT ID:	GEN20	WAVELENGTH:	540 nm
BATCH NO.	2069067	MS RUN NO.	2069032	ICV SOURCE:	11GCM0186 e. 3/18/12	CCV SOURCE:	11GCM0185 e. 3/14/12

	Lab ID	Time	True Conc. mg/L	Background Absorbance	Sample Aliquot gram	Sample Aliquot mL	Extract Volume mL	Dilution	Absorbance	pH 2.0 +/- 0.5 (Y/N) - Cr+6 only	Raw Result	Hexchrom mg/L	Hexchrom mg/kg	Recovery	Check
1	Std0	15:49	0						0.001	Y	-0.00006	Intercept =	-1.3253E-03		
2	Std1	15:49	0.005						0.005	Y	0.00502	Slope =	1.2689E+00		
3	Std2	15:50	0.01						0.009	Y	0.01009				
4	Std3	15:50	0.025						0.021	Y	0.02532				
5	Std4	15:50	0.05						0.04	Y	0.04943	r =	0.999967 ✓ GK 3/9/12		
6	Std5	15:51	0.1						0.08	Y	0.10019				
7												Linear	Not Forced	Weighting = 1	
8												Absorbance corrected for background absorbance			
9															
10															
11	ICV/LCS	15:52	0.04			10	10	1	0.032	Y	0.03928	0.0393		98% ✓	
12	ICB/MB	15:52				10	10	1	0	Y	-0.00133	-0.0013	✓ (ND)		< RL
13	G2B220468-MB	15:55		0	10		50	1	0.001	Y	-0.00006		0.000 ✓		< RL
14	G2B220468-LCS	15:56	0.2	0	10		50	1	0.033	Y	0.04055		0.203 ✓	101% ✓ ①	
15	G2B220468-1	15:57	LH 3/12/12	0	10.44		50	1	0.002	Y	0.00121		0.006 ✓		< RL
16	G2B220468-1S	15:57	~~0.244~~ 0.240	0	10.42		50	1	0.04	Y	0.04943		0.237	97%	96%
17	G2B220468-1D	15:58	~~0.244~~ 0.240	0	10.42		50	1	0.039	Y	0.04816		0.231	95%	94%
18	G2B220468-2	15:59		0	10.31		50	1	0.001	Y	-0.00006		0.000		< RL
19	G2B220468-3	16:00		0.001	10		50	1	0.002	Y	-0.00006		0.000		< RL
20	G2B220468-4	16:00		0.001	9.99		50	1	0.002	Y	-0.00006		0.000		< RL
21	G2B220468-5	16:03		0	10.29		50	1	0.001	Y	-0.00006		0.000		< RL
22	G2B220468-6	16:04		0	10.16		50	1	0.001	Y	-0.00006		0.000		< RL
23	CCV	16:04	0.05			10	10	1	0.041	Y	0.05070	0.0507	"	101% ✓	
24	CCB	16:04				10	10	1	0	Y	-0.00133	-0.0013	✓ (ND)		< RL
25	G2B220468-7	16:04		0	9.84		50	1	0.001	Y	-0.00006		0.000		< RL
26	G2B220468-8	16:05		0	10.27		50	1	0.001	Y	-0.00006		0.000		< RL
27	G2B220468-9	16:06		0	9.91		50	1	0.002	Y	0.00121		0.006		< RL
28	CCV	16:07	0.05			10	10	1	0.04	Y	0.04943	0.0494		99% ✓	
29	CCB	16:07				10	10	1	0	Y	-0.00133	-0.0013	✓ (ND)		< RL
30															
31															

① 101.5% GK 3/9/12

GK 3/9/12

Test America **West Sacramento**

CURVE CALCULATION BENCHSHEET

(SOP # WS-WC-0020)

ANALYST	JCB	ANALYSIS DATE	03/14/12	METHOD NO.	EPA 7196A	FILE	031412B
REVIEWED BY	JCB	REVIEW DATE	3/15/12	INSTRUMENT ID:	GEN20	WAVELENGTH:	540nm
BATCH NO.	2069068	MS RUN NO.	2069053	ICV SOURCE:	11GCM0186 e.3/18/12	CCV SOURCE:	11GCM0185 e.3/14/12

	Lab ID	Time	True Conc. mg/L	Background Absorbance	Sample Aliquot gram	Sample Aliquot mL	Extract Volume mL	Dilution	Absorbance	pH 2.0 +/- 0.5 (Y/N) - Cr+6 only	Raw Result	Hexchrom mg/L	Hexchrom mg/kg	Hexchrom Recovery	Hexchrom Check
1	Std0	15:27	0						0	Y	0.00047	Intercept = 4.6619E-04			
2	Std1	15:28	0.005						0.003	Y	0.00409	Slope = 1.2078E+00			
3	Std2	15:28	0.01						0.008	Y	0.01013				
4	Std3	15:28	0.025						0.02	Y	0.02462				
5	Std4	15:28	0.05						0.042	Y	0.05119	r = 0.999801 ✓ ok JB 3/14/12			
6	Std5	15:29	0.1						0.082	Y	0.09950				
7	Std6		0									Linear Not Forced Weighting = 1			
8												Absorbance corrected for background absorbance			
9															
11	ICV/LCS	15:29	0.04			10	10	1	0.034	Y	0.04153	0.0415		104% ✓	
12	ICB/MB	15:29				10	10	1	0.001	Y	0.00167	0.0017			< RL
13	G2B220468-MB	15:31		0	10		50	1	0.001	Y	0.00167		0.008		< RL
14	G2B220468-LCS	15:37	0.2	0.001	10		50	1	0.034	Y	0.04032		0.202	101% ✓	
15	G2B220468-11	15:38		0.003	10.42		50	1	0.003	Y	0.00047		0.002		< RL
16	G2B220468-11S	15:38	0.247	0.003	10.13		50	1	0.041	Y	0.04636		0.229	93% ✓	
17	G2B220468-11D	15:39	0.247	0.003	10.13		50	1	0.041	Y	0.04636		0.229	93% ✓	
18	G2B220468-12	15:41		0.002	9.94		50	1	0.002	Y	0.00047		0.002		< RL
19	G2B220468-13	15:41		0.003	10.13		50	1	0.004	Y	0.00167		0.008		< RL
20	G2B220468-14	15:42		0.003	9.96		50	1	0.004	Y	0.00167		0.008		< RL
21	G2B220468-15	15:42		0.003	10.4		50	1	0.004	Y	0.00167		0.008		< RL
22	G2B220468-17	15:42		0.0003	10.22		50	1	0.004	Y	0.00493		0.024		< RL
23	CCV	15:43	0.05			10	10	1	0.044	Y	0.05361	0.0536		107% ✓	
24	CCB	15:43				10	10	1	0.002	Y	0.00288	0.0029			< RL
25	G2B220468-18	15:45		0.004	9.98		50	1	0.004	Y	0.00047		0.002		< RL
26	G2B220468-19	15:45		0.004	10.11		50	1	0.003	Y	-0.00074		-0.004		< RL
27	G2B220468-21	15:45		0.009	10.38		50	1	0.009	Y	0.00047		0.002		< RL
28	G2B220468-22	15:46		0.003	10.06		50	1	0.004	Y	0.00167		0.008		< RL
29	G2B220468-23	15:46		0.004	10.26		50	1	0.004	Y	0.00047		0.002		< RL
30	G2B220468-24	15:47		0.004	10.16		50	1	0.004	Y	0.00047		0.002		< RL
31	CCV	15:47	0.05			10	10	1	0.045	Y	0.05482	0.0548		110% ✓	
32	CCB	15:47				10	10	1	0.002	Y	0.00288	0.0029			< RL

Example Calculation:

$$y = [mx + b]\left[\frac{\text{extract volume}}{\text{sample wt}}\right]$$

y = result
x = absorbance - background absorbance
b = intercept

* MS = $[(1.2078)(.041 - .003) + 4.6619E-4)] \times \frac{50}{10.13}$

= .225 mg/kg JB 3/14/12

OK JB 3/14/12

Gen Chem Raw Data

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica West Sacramento
Level 1 & 2 Review Checklist
General Chemistry

Lots: G2B220468

Analysis: 7196A (Cr6+) Date(s): 3/6/12, 3/8/12 Analyst: JF

Level 1 Review:	YES	NO	N/A
1. Samples properly preserved/verified	✓		
2. Run setup meets std criteria (Curve,ICV,ICB,CCV,etc)	✓		
3. Calibration criteria met (R=0.995, R^2=0.990)	✓		
4. Second source std in control	✓		
5. Batch QC in control (LCS,MB,MS/MSD,DCS-if necessary)	✓		
6. Calculations checked	✓		
7. QAS/QAPP consulted for client specific requirements	✓		
8. Standard tracking #'s recorded on runlog/benchsheet	✓		
9. Manual integration performed, documented & approved			✓
10. Copy of run log included with data package	✓		
11. Copy of conductivity screen logbook (314.0 only)			✓

Level 1 Data Review:	YES	NO	N/A
1. Benchsheet complete	✓		
2. QAS/QAPP consulted for client specific data entry	✓		
3. Copy of prep sheet/checklist submitted			✓
4. NCM(s) submitted			✓

Completed by and Date: JF 3/9/12

Level 2 Review:	YES	NO	N/A
1. Level 1 checklist complete & verified	✓		
2. Deviations, NCM(s), holding times checked & approved	✓		
3. Reprep/Reanalysis documented and chemist notified			✓
4. Client specific criteria met	✓		
5. Data entry checked and released in LIMS	✓		
6. Indication on benchsheet of review (dated and initialed)	✓		
7. Manual integration reviewed, approved (dated and initialed)			✓
8. Copy of run log included with data package	✓		
9. Copy of conductivity screen logbook (314.0 only)			✓

Completed by and Date: CM 3-12-12

Comments:

Reviewed
3-12-12 MH

PDE115

TestAmerica Laboratories, Inc.
Inorganics Batch Review
QC Batch **2069067**

Date 3/12/2012
Time 16:04:44

Method Code:**EA Chromium, Hexavalent (7196A)**
Analyst:**Jason Baynes**

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
MQ17L-1-AC	0.006	mg/kg	0.05	03/05-03/06/12	55.88	N		0.011 B	0.089	1.00
MQ17N-1-AC	ND	mg/kg	0.05	03/05-03/06/12	59.09	N		ND	0.085	1.00
MQ17P-1-AC	ND	mg/kg	0.05	03/05-03/06/12	80.24	N		ND	0.062	1.00
MQ17Q-1-AC	ND	mg/kg	0.05	03/05-03/06/12	80.05	N		ND	0.062	1.00
MQ17R-1-AC	ND	mg/kg	0.05	03/05-03/06/12	44.74	N		ND	0.11	1.00
MQ17T-1-AC	ND	mg/kg	0.05	03/05-03/06/12	60.67	N		ND	0.082	1.00
MQ17V-1-AC	ND	mg/kg	0.05	03/05-03/06/12	80.90	N		ND	0.062	1.00
MQ17W-1-AC	ND	mg/kg	0.05	03/05-03/06/12	62.36	N		ND	0.080	1.00
MQ17X-1-AC	0.006	mg/kg	0.05	03/05-03/06/12	61.30	N		ND	0.082	1.00
MRCDP-1-AA	ND	mg/kg	0.05	03/05-03/06/12	.00			ND	0.05	1.00

Notes:
Results and reporting limits have been adjusted for dry weight.
B Estimated result. Result is less than RL.

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
MRCDP-1-AC		0.20	0.203	101.50	03/05-03/06/12	(85-115)	1.00

Notes:

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	Pct. Recovered SPIKE	DUP	RPD	Prep. - Anal.	Dil.
MQ17L-1-AF		0.006	0.24	0.237	0.231	96.25	93.75	2.56	03/05-03/06/12	1.00

Notes:
Results and reporting limits have been adjusted for dry weight.

PRODUCTION TOTALS

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0

PDE115

TestAmerica Laboratories, Inc.
Inorganics Batch Review
QC Batch **2069068**

Date 3/15/2012
Time 8:08:17

Method Code:**EA Chromium, Hexavalent (7196A)**
Analyst:**Jason Baynes**

Work Order	Result	Units	LDL/Dil	Prep. - Anal.	Total Solids	PSRL Flag	R/R	Rounded Result	Output LDL	Dil.
MQ171-1-AC	0.002	mg/kg	0.05	03/14/12	48.27	N		ND	0.10	1.00
MQ172-1-AC	0.002	mg/kg	0.05	03/14/12	49.93	N		ND	0.10	1.00
MQ173-1-AC	0.008	mg/kg	0.05	03/14/12	43.18	N		0.019 B	0.12	1.00
MQ174-1-AC	0.008	mg/kg	0.05	03/14/12	48.29	N		0.017 B	0.10	1.00
MQ175-1-AC	0.008	mg/kg	0.05	03/14/12	45.87	N		0.017 B	0.11	1.00
MQ177-1-AC	0.024	mg/kg	0.05	03/14/12	52.63	N		0.046 B	0.095	1.00
MQ178-1-AC	0.002	mg/kg	0.05	03/14/12	52.64	N		ND	0.095	1.00
MQ179-1-AC	ND	mg/kg	0.05	03/14/12	50.04	N		ND	0.10	1.00
MQ18C-1-AC	0.002	mg/kg	0.05	03/14/12	44.95	N		ND	0.11	1.00
MQ18D-1-AC	0.008	mg/kg	0.05	03/14/12	49.64	N		0.016 B	0.10	1.00
MQ18E-1-AC	0.002	mg/kg	0.05	03/14/12	53.66	N		ND	0.093	1.00
MQ18F-1-AC	0.002	mg/kg	0.05	03/14/12	54.89	N		ND	0.091	1.00
MRCKP-1-AA	0.008	mg/kg	0.05	03/14/12	.00			ND	0.05	1.00

Notes:
Results and reporting limits have been adjusted for dry weight.
B Estimated result. Result is less than RL.

Check Standard

Work Order	Exception Code	True Spike	Measured Spike	Percent Recovered	Prep. - Anal.	Control Limits	Dil.
MRCKP-1-AC		0.20	0.202	101.00 ✓	03/14/12	(85-115)	1.00

Notes:

OK JB 3/15/12

MS - MSD

Work Order	Exception Code	Measured Sample	True Spike	Measured SPIKE	Measured Dup.	Pct. Recovered SPIKE	Pct. Recovered DUP	RPD	Prep. - Anal.	Dil.
MQ171-1-AE		0.002	0.247	0.229	0.229	91.90 ✓	91.90 ✓	.00	03/14/12	1.00

Notes:
Results and reporting limits have been adjusted for dry weight.

OK JB 3/15/12

PRODUCTION TOTALS

TEST	TOTAL #	SAMPLE #	QC #	MATRIX #	OTHER #	MISC #	HOURS
	0	0	0	0	0	0	.0

Test America **West Sacramento**

CURVE CALCULATION BENCHSHEET

(SOP # WS-WC-0020)

ANALYST	JCB	ANALYSIS DATE	03/06/12	METHOD NO	EPA 7196A	FILE	030612B
REVIEWED BY	LH	REVIEW DATE	3-12-12	INSTRUMENT ID:	GEN20	WAVELENGTH	540 nm
BATCH NO	2069067	MS RUN NO	2069032	ICV SOURCE:	11GCM0186 e. 3/18/12	CCV SOURCE:	11GCM0185 e. 3/14/12

	Lab ID	Time	True Conc mg/L	Background Absorbance	Sample Aliquot gram	Sample Aliquot mL	Extract Volume mL	Dilution	Absorbance	pH 2 0 +/- 0.5 (Y/N) - Cr+6 only	Raw Result	Hexchrom mg/L	Hexchrom mg/kg	Recovery	Check
												Intercept = -1.3253E-03			
												Slope = 1.2689E+00			
1	Std0	15:49	0						0.001	Y	-0.00006				
2	Std1	15:49	0.005						0 005	Y	0.00502				
3	Std2	15:50	0.01						0 009	Y	0.01009				
4	Std3	15:50	0.025						0 021	Y	0.02532				
5	Std4	15:50	0.05						0.04	Y	0.04943	r = 0.999967 ✓ GK 3/9/12			
6	Std5	15:51	0.1						0.08	Y	0.10019				
7												Linear Not Forced Weighting = 1			
8												Absorbance corrected for background absorbance			
9												mg/L	mg/kg	Recovery	Check
11	ICV/LCS	15:52	0.04			10	10	1	0.032	Y	0.03928	0.0393		98% ✓	
12	ICB/MB	15:52				10	10	1	0	Y	-0.00133	-0.0013	✓ ND		< RL
13	G2B220468-MB	15:55		0	10		50	1	0.001	Y	-0.00006		0.000 ✓		< RL
14	G2B220468-LCS	15:56	0.2	0	10		50	1	0.033	Y	0.04055		0.203 ✓	101% ✓	①
15	G2B220468-1	15:57	LH 3/12/12	0	10.44		50	1	0.002	Y	0.00121		0.006 ✓		< RL
16	G2B220468-1S	15:57	~~0.241~~ 0.240	0	10.42		50	1	0.04	Y	0.04943		0.237	97%	96%
17	G2B220468-1D	15:58	~~0.244~~ 0.240	0	10.42		50	1	0.039	Y	0.04816		0.231	95%	94%
18	G2B220468-2	15:59		0	10.31		50	1	0.001	Y	-0.00006		0.000		< RL
19	G2B220468-3	16:00		0.001	10		50	1	0.002	Y	-0.00006		0.000		< RL
20	G2B220468-4	16:00		0.001	9.99		50	1	0.002	Y	-0.00006		0.000		< RL
21	G2B220468-5	16:03		0	10.29		50	1	0.001	Y	-0.00006		0.000		< RL
22	G2B220468-6	16:04		0	10.16		50	1	0.001	Y	-0.00006		0.000		< RL
23	CCV	16:04	0.05			10	10	1	0.041	Y	0.05070	0.0507		101% ✓	
24	CCB	16:04				10	10	1	0	Y	-0.00133	-0.0013	✓ ND		< RL
25	G2B220468-7	16:04		0	9.84		50	1	0.001	Y	-0.00006		0.000		< RL
26	G2B220468-8	16:05		0	10.27		50	1	0.001	Y	-0.00006		0.000		< RL
27	G2B220468-9	16:06		0	9.91		50	1	0.002	Y	0.00121		0.006		< RL
28	CCV	16:07	0.05			10	10	1	0.04	Y	0.04943	0.0494		99% ✓	
29	CCB	16:07				10	10	1	0	Y	-0.00133	-0.0013	✓ ND		< RL
30															
31															

① 101.5% JS 3/9/12 GK JS 3/9/12

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

General Chemistry Standards and Reagent Usage Log

Test: Cr6 Analysis

Method ID: EPA 7196A

SOP ID: WS - WC - 0020

Batch IDs: 2069067

Filter Wavelength: 540 nm

Instrument: (GEN20) GENESYS 20 Spectrophotometer

File ID: 030612B

Standards:

Source Standards	Tracking ID	Expiration Date
1 mg/L Cr+6 (CAL / CCV)	11GCM0185	3/14/2012
10 mg/L Cr+6 (ICV/MS/SD)	11GCM0186	3/18/2012

Calibration Standards

Final Concentration (mg/L)	Amount of Source Std (mL)	Final Volume (mL)
0.005	0.05	10
0.01	0.1	10
0.025	0.25	10
0.05 (CCV)	0.5	10
0.1	1	10

ICV Standard

0.04	0.04	10

MS/SD Standard

0.05	0.05	10

Reagents:

	Lot ID	Expiration Date
Color Reagent		
HACH ChromaVer 3	NA	NA
DPC Color Reagent	4021-WC-44-2	3/9/2012
H_2SO_4	RICCA Lot#1012228	11/30/2012
NaOH	NA	NA

All tracking numbers and expiration dates were checked as accurate prior to reagent or standard use:

Chemist: JCB **Date:** 3/6/2012

Q:\FORMS\QA-534 Cr6 Standard and Reagent Form QA-534 DAW 5/19/06

TestAmerica West Sacramento
Inorganics Department
Reagent and Modifier Tracking Log

Reagent/Modifier Name	Tracking Number	Component One: Name/source/ Lot Number/Amount	Component Two: Name/Source/ Lot Number/Amount	Component Three: Name/Source/ Lot Number/Amount	Final Volume Adjusted with Millipore Water	Date Prepared	Analyst	Expiration Date
1/10x Buffer	4021-WC-44-1	85g NH_4Cl Mallinkrodt #1K06609	EDTA 1g Fisher #024293	125 mL 6N NH_4OH Ricca #1010516	1L	9/2/11	DRA	9/2/12
10X Buffer	4021-WC-44-2	85g NH_4Cl Mallinkrodt #1K06609	EDTA 1g Fisher #024293	125 mL 6N NH_4OH Ricca #1010516	1L			9/2/12 AmC
DPC Color Reagent	4021-WC-44-2	0.5g DPC JT Baker #V09599			100mL Acetone JT Baker #0355237 ~~#J36213~~ AmC 9/9/11	9/9/11	AmC	3/9/12
100 X Eluent	4021-WC-44-3	20.0mL Dionex Eluent #110502 Final conc (after 100x dil) 4.5mM $NaHCO_3$ 4.5mM Na_2CO_3			2L	9/13/11	AmC	~~3/28/12~~ 5/30/12 AmC 9/16/11
150 X Eluent	4021-WC-44-4	13.3mL Dionex Eluent #110502			2L	9/13/11	AmC	~~3/28/12~~ 5/30/12 AmC 9/16/11
150 X Eluent	4021-WC-44-5	13.3mL Dionex Eluent #110502			2L	9/16/11	AmC	~~3/28/12~~ 5/30/12 AmC 9/16/11
1N Sodium Thiosulfate $Na_2S_2O_3$	4021-WC-44-6	24.8g $Na_2S_2O_3 \cdot 5H_2O$ Fisher Lot # 053539			100mL	9/20/11	AmC	10/20/11

Test America — **West Sacramento**

CURVE CALCULATION BENCHSHEET

(SOP # WS-WC-0020)

ANALYST	JCB	ANALYSIS DATE	03/14/12	METHOD NO	EPA 7196A	FILE	031412B
REVIEWED BY	JRB	REVIEW DATE	3/15/12	INSTRUMENT ID	GEN20	WAVELENGTH:	540nm
BATCH NO.	2069068	MS RUN NO.	2069053	ICV SOURCE	11GCM0186 e.3/18/12	CCV SOURCE:	11GCM0185 e.3/14/12

Hexchrom

Intercept = 4.6619E-04
Slope = 1.2078E+00
r = 0.999801 ✓ ok JB 3/14/12
Linear Not Forced Weighting = 1
Absorbance corrected for background absorbance

	Lab ID	Time	True Conc. mg/L	Background Absorbance	Sample Aliquot gram	Sample Aliquot mL	Extract Volume mL	Dilution	Absorbance	pH 2.0 +/- 0.5 (Y/N) - Cr+6 only	Raw Result	mg/L	mg/kg	Recovery	Check
1	Std0	15:27	0						0	Y	0.00047				
2	Std1	15:28	0.005						0.003	Y	0.00409				
3	Std2	15:28	0.01						0.008	Y	0.01013				
4	Std3	15:28	0.025						0.02	Y	0.02462				
5	Std4	15:28	0.05						0.042	Y	0.05119				
6	Std5	15:29	0.1						0.082	Y	0.09950				
7	Std6		0												
8															
9															
11	ICV/LCS	15:29	0.04			10	10	1	0.034	Y	0.04153	0.0415		104% ✓	
12	ICB/MB	15:29				10	10	1	0.001	Y	0.00167	0.0017			< RL
13	G2B220468-MB	15:31		0	10		50	1	0.001	Y	0.00167		0.008		< RL
14	G2B220468-LCS	15:37	0.2	0.001	10		50	1	0.034	Y	0.04032		0.202	101% ✓	
15	G2B220468-11	15:38		0.003	10.42		50	1	0.003	Y	0.00047		0.002		< RL
16	G2B220468-11S	15:38	0.247	0.003	10.13		50	1	0.041	Y	0.04636		0.229	93% ✓	
17	G2B220468-11D	15:39	0.247	0.003	10.13		50	1	0.041	Y	0.04636		0.229	93% ✓	
18	G2B220468-12	15:41		0.002	9.94		50	1	0.002	Y	0.00047		0.002		< RL
19	G2B220468-13	15:41		0.003	10.13		50	1	0.004	Y	0.00167		0.008		< RL
20	G2B220468-14	15:42		0.003	9.96		50	1	0.004	Y	0.00167		0.008		< RL
21	G2B220468-15	15:42		0.003	10.4		50	1	0.004	Y	0.00167		0.008		< RL
22	G2B220468-17	15:42		0.0003	10.22		50	1	0.004	Y	0.00493		0.024		< RL
23	CCV	15:43	0.05			10	10	1	0.044	Y	0.05361	0.0536		107% ✓	
24	CCB	15:43				10	10	1	0.002	Y	0.00288	0.0029			< RL
25	G2B220468-18	15:45		0.004	9.98		50	1	0.004	Y	0.00047		0.002		< RL
26	G2B220468-19	15:45		0.004	10.11		50	1	0.003	Y	-0.00074		-0.004		< RL
27	G2B220468-21	15:45		0.009	10.38		50	1	0.009	Y	0.00047		0.002		< RL
28	G2B220468-22	15:46		0.003	10.06		50	1	0.004	Y	0.00167		0.008		< RL
29	G2B220468-23	15:46		0.004	10.26		50	1	0.004	Y	0.00047		0.002		< RL
30	G2B220468-24	15:47		0.004	10.16		50	1	0.004	Y	0.00047		0.002		< RL
31	CCV	15:47	0.05			10	10	1	0.045	Y	0.05482	0.0548		110% ✓	
32	CCB	15:47				10	10	1	0.002	Y	0.00288	0.0029			< RL

Example Calculation:

$$y = [mx + b]\left[\frac{\text{extract volume}}{\text{sample wt}}\right]$$

y = result
x = absorbance − background absorbance
b = intercept

* 11 MS = $[(1.2078)(.041 - .003) + 4.6619E{-}4)] \times \frac{50}{10.13}$

= .229 mg/kg JB 3/14/12

ok JB 3/14/12

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

General Chemistry Standards and Reagent Usage Log

Test: Cr6 Analysis

Method ID: EPA 7196A

SOP ID: WS - WC - 0020

Batch IDs: 2069068

Filter Wavelength: 540 nm

Instrument: (GEN20) GENESYS 20 Spectrophotometer

File ID: 0301412B

Standards:

Source Standards	Tracking ID	Expiration Date
1 mg/L Cr+6 (CAL / CCV)	11GCM0185	3/14/2012
10 mg/L Cr+6 (ICV/MS/SD)	11GCM0186	3/18/2012

Calibration Standards

Final Concentration (mg/L)	Amount of Source Std (mL)	Final Volume (mL)
0.005	0.05	10
0.01	0.1	10
0.025	0.25	10
0.05 (CCV)	0.5	10
0.1	1	10

ICV Standard

0.04	0.04	10

MS/SD Standard

0.05	0.05	10

Reagents:

	Lot ID	Expiration Date
Color Reagent		
HACH ChromaVer 3	NA	NA
DPC Color Reagent	4525WC-3-3	9/6/2012
H_2SO_4	4525-WC-3-4	9/6/2012
NaOH	N/A	NA

All tracking numbers and expiration dates were checked as accurate prior to reagent or standard use:

Chemist: JCB **Date:** 3/14/2012

Q:\FORMS\QA-534 Cr6 Standard and Reagent Form QA-534 DAW 5/19/06

TestAmerica West Sacramento
Inorganics Department
Reagent and Modifier Tracking Log

Reagent/Modifier Name	Tracking Number	Component One Name/source/ Lot Number/Amount	Component Two Name/Source/ Lot Number/Amount	Component Three Name/Source/ Lot Number/Amount	Final Volume Adjusted with Millipore Water	Date Prepared	Analyst	Expiration Date
150X Eluent	4525-WC-3-1	13.3mL Dionex Eluent Lot# 111216	/	/	2L	2/27/12	[illegible]	12/31/12
100X Eluent	4525-WC-3-2	20.0mL Dionex Eluent Lot# 111216	/	/	2L	2/29/12	[illegible]	12/31/12
DPC Color Reagent	4525-WC-3-3	0.5g 1,5DPC Fisher #113829	/	/	~~100~~ 3/6/12 100mL Acetone Fisher K35E48	3/6/12	[illegible]	9/6/12
50% H_2SO_4	4525-WC-3-4	15mL H_2SO_4 Mall - K03051	/	/	30mL	3/6/12	[illegible]	9/6/12
100X Eluent	4525-WC-3-5	20.0mL Dionex Eluent Lot# 111216	NA	NA	2L	3/7/12	[illegible]	12/31/12

TestAmerica West Sacramento

Standards Preparation Logbook Record

Mar-07-2012

Logbook: \\sacsvr01\WORLD\stdslog\genchem.std

11GCM0185, Hexavalent Chromium Standard (CAL)

Analyst: klopez

Vendor: CPI Lot No.: 11C109 Vendor's Expiration Date: 03-14-2012
Solvent: Water
Date Prep./Opened: 03-28-2011 Date Received: 03-18-2011
Date Expires(1): 03-14-2012 (1 Year)
Date Expires(2): 03-14-2012 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)
Date Reviewed: I2-31--4714 by 3

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Hexavalent Chromium	1.0000	1.0000

11GCM0186, Hexavalent Chromium Standard (REF)

Analyst: klopez

Vendor: CPI International Lot No.: 11C110 Vendor's Expiration Date: 09-14-2012
Solvent: Water
Date Prep./Opened: 03-28-2011 Date Received: 03-18-2011
Date Expires(1): 03-18-2012 (1 Year)
Date Expires(2): 09-14-2012 (None)
Date Verified: 12-31--4714 by 0 (Verification ID: -)
Date Reviewed: 12-31--4714 by 3

Component	Initial Conc (mg/L)	Final Conc (mg/L)
Hexavalent Chromium	10.000	10.000

Reviewed By: _____

Gen Chem Prep Data

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

West Sacramento

DI Leach Preparation

SOP ID: WS-WC-0049

Chemist: ~~X~~ l 3/5/12 l

Lot ID(s): G2B220468

Date: 3/5/12

Batch ID(s): #2069067

Analysis: Cr6

Balance ID: QA-068

EPA Test Method: 7196A

Leach Start① Time ~~14:55~~ 16:55 3/5/12

Leach Stop Time 1803 3/5/12

Lot ID	Sample #	Initial Wt (g)	Final Volume (mL)			
			20	40	50	Other
G2B220468	MB	10.00			✓	
	LCS	10.00			✓	
	1	10.44			✓	
	MS X	10.42			✓	
l 3/5/12	~~1~~	NA			✓	
	2 l 3/5/12	10.31			✓	
	3	10.00			✓	
	4	9.99			✓	
	5	10.29			✓	
	6	10.16			✓	
	7	9.84			✓	
	8	10.27			✓	
	9	9.91			✓	
					l 3/5/12	

Weigh all samples to two decimal places.

Comments: ① leach started @ 4:55 pm, not 14:55 pm. military time is 16:55 pm. jz 3/5/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

West Sacramento

DI Leach Preparation

SOP ID: WS-WC-0049

Chemist: JS | Lot ID(s): 628220468

Date: 3/14/12 | Batch ID(s): 2065068

Analysis: Cr 6 | Balance ID: QA 068

EPA Test Method: 7196A | Leach Start Time ~~11:00~~ 10:10 3/14/12 JS 3/14/12 | Leach Stop Time 11:15 JS 3/14/12

Lot ID	Sample #	Initial Wt (g)	Final Volume (mL)			
			20	40	50	Other
628220468	MB	10.00			✓	
	LCS	10.00			✓	
	11	10.42			✓	
	11X	10.13			✓	
	12	9.94			✓	
	13	10.13			✓	
	14	9.96			✓	
	15	10.40			✓	
	17	10.22			✓	
	18	9.58			✓	
	19	10.11			✓	
	~~20~~ 21 JS 3/14/12	10.38			✓	
	22	10.06			✓	
	23	10.26			✓	
	24	10.16			✓	
						3/14/12

Weigh all samples to two decimal places.

Comments: _____

% Moisture/Solid Worksheet

QCBATCH: 2059076

Analyzed by: valmores Report created: 2/29/12 8:19:56 AM

Lot ID	WorkOrder	Pan Tare	Sample Wet Wt	Sample Dry Wt	Wt Diff (Water)	Percent Water	Percent Solid	Reporting Limit	Foot Note	Date Time
G2B220468-1	MQ17L1AA	1.00	13.51	7.99	5.52	44.12	55.88	0.1		2/29/12 8:17:35 AM
G2B220468-1	MQ17L1AE	1.03	14.72	8.63	6.09	44.49	55.51	0.1		2/29/12 8:17:42 AM
G2B220468-2	MQ17N1AA	1.01	10.64	6.70	3.94	40.91	59.09	0.1		2/29/12 8:17:48 AM
G2B220468-3	MQ17P1AA	1.00	13.85	11.31	2.54	19.77	80.23	0.1		2/29/12 8:17:54 AM
G2B220468-4	MQ17Q1AA	1.02	10.54	8.64	1.90	19.96	80.04	0.1		2/29/12 8:17:59 AM
G2B220468-5	MQ17R1AA	1.06	12.08	5.99	6.09	55.26	44.74	0.1		2/29/12 8:18:05 AM
G2B220468-6	MQ17T1AA	1.04	12.76	8.15	4.61	39.33	60.67	0.1		2/29/12 8:18:11 AM
G2B220468-7	MQ17V1AA	1.03	10.24	8.48	1.76	19.11	80.89	0.1		2/29/12 8:18:18 AM
G2B220468-8	MQ17W1AA	1.03	10.30	6.81	3.49	37.65	62.35	0.1		2/29/12 8:18:24 AM
G2B220468-9	MQ17X1AA	1.04	10.78	7.01	3.77	38.71	61.29	0.1		2/29/12 8:18:33 AM
G2B220468-13	MQ1731AA	1.04	9.03	4.49	4.54	56.82	43.18	0.1		2/29/12 8:18:39 AM
G2B220468-14	MQ1741AA	1.03	10.66	5.68	4.98	51.71	48.29	0.1		2/29/12 8:18:45 AM
G2B220468-15	MQ1751AA	1.02	11.77	5.95	5.82	54.14	45.86	0.1		2/29/12 8:18:51 AM
G2B220468-17	MQ1771AA	1.04	9.42	5.45	3.97	47.37	52.63	0.1		2/29/12 8:19:01 AM
G2B220468-18	MQ1781AA	1.03	12.98	7.32	5.66	47.36	52.64	0.1		2/29/12 8:19:16 AM
G2B220468-19	MQ1791AA	1.03	15.66	8.35	7.31	49.97	50.03	0.1		2/29/12 8:19:22 AM
G2B220468-21	MQ18C1AA	0.99	13.16	6.46	6.70	55.05	44.95	0.1		2/29/12 8:19:27 AM
G2B220468-22	MQ18D1AA	1.03	10.62	5.79	4.83	50.36	49.64	0.1		2/29/12 8:19:33 AM
G2B220468-23	MQ18E1AA	1.02	9.65	5.65	4.00	46.35	53.65	0.1		2/29/12 8:19:39 AM
G2B220468-24	MQ18F1AA	1.01	8.59	5.17	3.42	45.12	54.88	0.1		2/29/12 8:19:45 AM

$$\%\text{diff.} \quad \frac{44.49 - 44.12}{\left(\frac{44.49 + 44.12}{2}\right)} \times 100 = \frac{0.37}{44.31} \times 100 = 0.84\%$$

All weights are in grams.
Sample weights (wet & dry) include the weight (tare) of the sample pan.
Wt. Diff. = sample wet weight (+ tare) - sample dry weight (+ tare).
% Water = (Wt. Diff/(sample wet weight - pan tare))*100
% Solid = 100 - percent Water

% Moisture/Solid Worksheet

QCBATCH: 2058164

Analyzed by: valmores Report created: 2/28/12 9:41:07 AM

Lot ID	WorkOrder	Pan Tare	Sample Wet Wt	Sample Dry Wt	Wt Diff (Water)	Percent Water	Percent Solid	Reporting Limit	Foot Note	Date Time
G2B210434-20	MQ0141AA	1.05	5.55	3.58	1.97	43.78	56.22	0.1		2/28/12 9:37:51 AM
G2B210434-21	MQ0151AA	1.03	5.22	3.40	1.82	43.44	56.56	0.1		2/28/12 9:37:59 AM
G2B220465-1	MQ16M1AA	1.05	11.14	6.66	4.48	44.40	55.60	0.1		2/28/12 9:38:07 AM
G2B220465-1	MQ16M1AE	1.03	12.60	7.45	5.15	44.51	55.49	0.1		2/28/12 9:38:15 AM
G2B220465-2	MQ16N1AA	1.03	11.66	6.82	4.84	45.53	54.47	0.1		2/28/12 9:38:27 AM
G2B220465-3	MQ16P1AA	1.05	12.29	6.66	5.63	50.09	49.91	0.1		2/28/12 9:38:35 AM
G2B220465-5	MQ16R1AA	1.02	14.10	6.74	7.36	56.27	43.73	0.1		2/28/12 9:38:43 AM
G2B220465-6	MQ16V1AA	1.02	10.52	5.70	4.82	50.74	49.26	0.1		2/28/12 9:38:53 AM
G2B220465-7	MQ16X1AA	1.03	9.48	7.04	2.44	28.88	71.12	0.1		2/28/12 9:39:02 AM
G2B220465-8	MQ1601AA	1.04	10.54	5.75	4.79	50.42	49.58	0.1		2/28/12 9:39:11 AM
G2B220465-9	MQ1611AA	1.01	10.10	5.43	4.67	51.38	48.62	0.1		2/28/12 9:39:19 AM
G2B220465-10	MQ1621AA	1.02	11.19	5.67	5.52	54.28	45.72	0.1		2/28/12 9:39:26 AM
G2B220465-11	MQ1631AA	1.04	11.16	5.77	5.39	53.26	46.74	0.1		2/28/12 9:39:33 AM
G2B220465-12	MQ1641AA	1.02	14.89	7.53	7.36	53.06	46.94	0.1		2/28/12 9:39:51 AM
G2B220465-13	MQ1661AA	1.02	12.29	6.57	5.72	50.75	49.25	0.1		2/28/12 9:40:01 AM
G2B220465-14	MQ1671AA	1.03	14.09	7.47	6.62	50.69	49.31	0.1		2/28/12 9:40:10 AM
G2B220465-15	MQ1681AA	1.03	11.70	6.16	5.54	51.92	48.08	0.1		2/28/12 9:40:18 AM
G2B220468-11	MQ1711AA	1.02	10.80	5.74	5.06	51.74	48.26	0.1		2/28/12 9:40:27 AM
G2B220468-12	MQ1721AA	1.00	14.08	7.53	6.55	50.08	49.92	0.1		2/28/12 9:40:35 AM

% diff. $\dfrac{44.51 - 44.40}{\left(\dfrac{44.51 + 44.40}{2}\right)} \times 100 = \dfrac{0.11}{44.46} \times 100$ 0.25%

All weights are in grams.
Sample weights (wet & dry) include the weight (tare) of the sample pan.
Wt. Diff. = sample wet weight (+ tare) - sample dry weight (+ tare).
% Water = (Wt. Diff/(sample wet weight - pan tare))*100
% Solid = 100 - percent Water

Shipping and Receiving Documents

GZB220468

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

GZB220468

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Ecology + Environment	Brian Milton		203843
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 4
1940 Webster St Ste 100	510-893-6700		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Oakland / CA / 94612			
Project Name and Location (State)	**Carrier/Waybill Number**		
Yosemite Creek EE/CA			
Contract/Purchase Order/Quote No			
002693.7008.015006			

Sample I D No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed	Soil	Containers & Preservatives: Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: CrVI 7196	Asbestos PLM	Special Instructions/ Conditions of Receipt
1 YC-038-1	2/21/12	1048			X		X						X	X	
2 YC-038-2		1050											X	X	
3 YC-038-3		1100											X	X	
4 YC-038-3.6		1105											X	X	
5 YC-040-1		1130											X	X	
6 YC-040-2		1133											X	X	
7 YC-040-3		1155											X	X	
8 YC-040-3.6		1157											X	X	
9 YC-840-2		1136											X		
10 YC-840-3.6		1158												X	
11 YC-044-1		1257											X	X	
12 YC-044-2		1238											X	X	

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard TAT

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1		2/22/12	0942		2/22/12	0942
2		2/22/12	1015		2/22/12	1015
3		2/22/12	1300		2/22/12	1305

Comments

DISTRIBUTION: WHITE - Returned to Client with Report. CANARY - Stays with the Sample. PINK - Field Copy

G2B220468

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

G2B220468

Client	Project Manager	Date	Chain of Custody Number
EYE	Brian Milton		203844
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 2 of 4**
1940 Webster St Ste 100	510-893-6700		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	**Analysis (Attach list if more space is needed)**
Oakland / CA / 94612			
Project Name and Location (State)	**Carrier/Waybill Number**		
Yosemite Creek EE/CA			
Contract/Purchase Order/Quote No.			
009693.7008.815006			

Sample I D No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed	Soil	Containers & Preservatives: Unpres	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Cr VI 7196	Asbestos PLM	Special Instructions/ Conditions of Receipt
13 YC-044-3	2/21/12	1248			X		X						X	X	
14 YC-044-4		1258											X	X	
15 YC-844-3		1250											X		
16 YC-844-4		1300												X	
17 YC-042-1		1325											X	X	
18 YC-842-1		1326											X		
19 YC-042-2		1334											X	X	
20 YC-842-2		1335												X	
21 YC-042-3		1345											X	X	
22 YC-042-4		1358											X	X	
23 YC-041-1		1420											X	X	
24 YC-041-2		1426											X	X	

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard TAT

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1		02/22/12	0942		2.22.12	0942
2		2.22.12	10:15		2/22/22	1015
3		2/22/12	1300		2/22/12	1305

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

LOT RECEIPT CHECKLIST
TestAmerica West Sacramento

CLIENT ECOLOGY AND ENVIRONMENT PM KS

LOT# (QUANTIMS ID) G2B220468 QUOTE# 90000 LOCATION W6E

Checked (✓)

DATE RECEIVED 2/22/12 TIME RECEIVED 1305 ☑

DELIVERED BY ☐ FEDEX ☐ ON TRAC ☐ OTHER

☐ GOLDENSTATE ☐ UPS ☐ EZ PARCEL

☑ TAL COURIER ☐ TAL SF ☐ CLIENT ☑

SHIPPPING CONTAINER(S) ☑ TAL ☐ CLIENT ☐ N/A

MULIT-COOLER(S) (If checked see multi-cooler form) ☐

SINGLE COOLER INFORMATION N/A

CUSTODY SEAL STATUS ☐ INTACT ☐ BROKEN ☑ N/A ☐ ☑

CUSTODY SEAL #(S) NA

COC #(S) 203843, 203844 ☐ ☑

TEMPERATURE BLANK Observed: -1 Corrected: 2

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 3,3,3 Average 3 Corrected Average 3

LABORATORY THERMOMETER ID:

IR UNIT: #4 ☑ #5 ☐ ☐ OTHER ☐ ☑

JS (Initials) 2/22/12 (Date)

==========

pH MEASURED ☐ YES ☐ ANOMALY ☑ N/A ☑

LABELED BY CH ☑

LOGGED IN BY CH ☑

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING ☑

WETCHEM ☑ N/A ☑

VOA-ENCORES ☑ N/A ☑

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☑ N/A ☑

☑ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☐ N/A ☑

☐ CLOUSEAU ☐ TEMPERATURE EXCEEDED (0 °C – 6 °C)*1 ☑ N/A

☑ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS USED

JS (Initials) 2/22/12 (Date)

Notes

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Bottle Lot Inventory

Lot ID: G2B220468

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA*																				
VOAh*																				
VOAmeoh																				
AGB																				
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
____AGJ																				
500AGJ																				
250AGJ																				
125AGJ	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	
125AGJmeoh																				
____CGJ																				
500CGJ																				
250CGJ																				
125CGJ																				
PJ																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
_____"CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

h = hydrochloric acid **s** = sulfuric acid **na** = sodium hydroxide **n** = nitric acid **zn** = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Bottle Lot Inventory

Lot ID: G2B220468

	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
VOA*																				
VOAh*																				
VOAmeoh																				
AGB																				
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
____AGJ																				
500AGJ																				
250AGJ																				
125AGJ	1	1	1	1																
125AGJmeoh																				
____CGJ																				
500CGJ																				
250CGJ																				
125CGJ																				
PJ																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
_____"CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

h = hydrochloric acid **s** = sulfuric acid **na** = sodium hydroxide **n** = nitric acid **zn** = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's

ecology and environment, inc.

International Specialists in the Environment

1940 Webster Street, #100
Oakland, CA 94612
Tel: (510) 893-6700, Fax: (510) 550-2760

START AWARD OF ANALYTICAL WORK LETTER

Date: 12/15/2011

To: Karen Sellers
TestAmerica Laboratories, Inc.
880 Riverside Parkway, West Sacramento, CA 95605

Phone: (916) 373-5600
FAX: (916) 372-1059
Email: karen.sellers@testamericainc.com

From: Mindy Song

Through: Howard Edwards

Dear Karen Sellers,

This letter serves to inform you that your laboratory has been awarded the analytical laboratory work for:

Project Name: Yosemite Creek, EE/CA
TDD No.: 09-11-10-0001
Project Number: 002693.7008.01SO06

The work will be performed as per your Basic Ordering Agreement (BOA) environmental analysis subcontract with E&E and is anticipated to consist of the following analysis, matrices, number of samples, and deliverables as per the communication with you on: 12/14/2011

Analytical Method	Sample Matrix	Contract Item #	Sample Qty	Data Summary TAT	Level 4 Package TAT	Unit Cost	TAT Cost	Total Cost
Chromium VI by Coprecipitation/ Colorimetric (Digestion/Extraction Cost EPA 7195/7196	soil	17	30	2-wks - std.	4 wks - Env lab	$17.50	$0.00	$525.00

The Ecology & Environment project manager, Brian Milton (or designee) will contact you prior to shipment to discuss the actual matrices, analyses, quantities, and deliverables as these may differ from the included table.

Please read the following to reconfirm that:

1. Samples will be received starting approximately: ~~1/16/2012~~ 1/20/2012
2. After receipt of samples a summary data package and electronic data will be received by Ecology & Environment as specified in the table above and should be emailed to Brian Milton at bmilton@ene.com.

3. After receipt of samples a Level IV Data Package will be received by Ecology && Environment as specified in the table above, and should be sent to: Mindy Song
3700 Industry Avenue, Suite 102
Lakewood, CA 90712

All billing/invoice statements must contain the following information:

Project Name: Yosemite Creek, EE/CA
TDD No.: 09-11-10-0001
Project Number: 002693.7008.01SO06

BOA Contract Item #
Unit Cost per Contract Item #
Total Cost per Contract Item #

All invoices must be sent to Anita Slater at Ecology && Environment, Inc., 1940 Webster Street, Suite 100, Oakland, CA 94612. The chain-of-custody sheets delivered with each sample shipment contain specific information regarding the number of samples and analyses required as well as the TDD and PAN numbers to reference when invoicing this project. If there are any questions regarding this project, please call me at (310) 947-2853.

cc: Contract Financial Manager
Contract Quality Assurance Officer

G2B220468

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

000891768

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Ecology + Environment	Brian Milton		203343
Address 1940 Webster St Ste 100	Telephone Number (Area Code)/Fax Number 510-893-6700	Lab Number	Page 1 of 4
City Oakland / State CA / Zip Code 94612	Site Contact	Lab Contact	
Project Name and Location (State) Yosemite Creek EE/CA	Carrier/Waybill Number		
Contract/Purchase Order/Quote No. 002693.7008.015006			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: CLP 3/7-6	Asbestos PLM	Special Instructions/ Conditions of Receipt
YC-038-1	2/21/12	1048			X		X						X	X	
YC-038-2		1050											X	X	
YC-038-3		1100											X	X	
YC-038-3.6		1105											X	X	
YC-040-1		1130											X	X	
YC-040-2		1133											X	X	
YC-040-3		1155											X	X	
YC-040-3.6		1157											X	X	
YC-840-2		1136											X		
YC-840-3.6		1158												X	
YC-044-1		1257											X	X	
YC-044-2		1238											X	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard TAT

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1		2/22/12	0942		2/22/12	0942
2		2-22-12	10:15		2/22/12	1015
3		2-22-12	1300		02/22/12	1300
4		02/22/12	1335		2/22/12	1338

Comments

DISTRIBUTION: WHITE - Returned to Client with Report. CANARY - Stays with the Sample. PINK - Field Copy

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

000891768

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
ETE	Brian Milton		203844
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 2 of 4**
1940 Webster St Ste 100	510-893-6700		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Oakland / CA / 94612			
Project Name and Location (State)	**Carrier/Waybill Number**		
Yosemite Creek EE/CA			
Contract/Purchase Order/Quote No.			
009692, 7008.815006			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): Cr VI 7196	Asbestos PLM	Special Instructions/ Conditions of Receipt
YC-044-3	2/21/12	1248			X		X						X	X	
YC-044-4		1258											X	X	
YC-844-3		1250											X		
YC-844-4		1300												X	
YC-042-1		1325											X	X	
YC-842-1		1326											X		
YC-042-2		1334											X	X	
YC-842-2		1335												X	
YC-042-3		1345											X	X	
YC-042-4		1358											X	X	
YC-041-1		1420											X	X	
YC-041-2	↓	1426			↓		↓						X	X	

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard TAT

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1		02/22/12	0942		2-22-12	0942
2		2-22-12	10:15		2/22/12	1015
3		2-22-12	1300		02/22/12	1300
4		02/22/12	1335		2/22/12	1335
5					2/22/12	1030

Comments

DISTRIBUTION: WHITE - Returned to Client with Report. CANARY - Stays with the Sample. PINK - Field Copy

ecology and environment, inc.

International Specialists in the Environment

1940 Webster Street, #100
Oakland, CA 94612
Tel: (510) 893-6700, Fax: (510) 550-2760

START AWARD OF ANALYTICAL WORK LETTER

Date: 12/15/2011

To: Karen Sellers
TestAmerica Laboratories, Inc.
880 Riverside Parkway, West Sacramento, CA 95605

Phone: (916) 373-5600
FAX: (916) 372-1059
Email: karen.sellers@testamericainc.com

From: Mindy Song

Through: Howard Edwards

Dear Karen Sellers,

This letter serves to inform you that your laboratory has been awarded the analytical laboratory work for:

Project Name: Yosemite Creek EE/CA
TDD No.: 09-11-10-0001
Project Number: 002693.7008.01SO06

The work will be performed as per your Basic Ordering Agreement (BOA) emergency air analysis subcontract with E&E and is anticipated to consist of the following analysis, matrices, number of samples, and deliverables as per the communication with you on: 12/14/2011.

Analytical Method	Sample Matrix	Contract Item #	Sample Qty	Data Summary TAT	Level 4 Package TAT	Unit Cost	TAT Cost	Total Cost
Asbestos by PLM Bulk (400 Point Count) EPA 600/R-93/116	soil matrix	6402	30	1wk - Emer Air	2wks - Emer Air	$30.00	$0.00	$900.00

The Ecology & Environment project manager, Brian Milton (or designee) will contact you prior to shipment to discuss the actual matrices, analyses, quantities, and deliverables as these may differ from the included table.

Please read the following to reconfirm that:

1. Samples will be received starting approximately: ~~1/17/2012~~ 1/20/2012

2. After receipt of samples a summary data package and electronic data will be received by Ecology & Environment as specified in the table above and should be emailed to Brian Milton at bmilton@ene.com.

3. After receipt of samples a Level IV Data Package will be received by Ecology && Environment as specified in the table above, and should be sent to: Brian Milton
1940 Webster Street, #100
Oakland, CA 94612

All billing/invoice statements must contain the following information:

Project Name: Yosemite Creek EE/CA
TDD No.: 09-11-10-0001
Project Number: 002693.7008.01SO06

BOA Contract Item #
Unit Cost per Contract Item #
Total Cost per Contract Item #

All invoices must be sent to Anita Slater at Ecology && Environment, Inc., 1940 Webster Street, Suite 100, Oakland, CA 94612. The chain-of-custody sheets delivered with each sample shipment contain specific information regarding the number of samples and analyses required as well as the TDD and PAN numbers to reference when invoicing this project. If there are any questions regarding this project, please call me at (310) 947-2853.

cc: Contract Financial Manager
Contract Quality Assurance Officer

SOLID, E600/R-93/116, Asbestos

Subcontract Report from EMLab P&K, San Bruno, CA

EMLab P&K

Report for:

Ms. Karen Sellers
TestAmerica-West Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Regarding: Project: G2B220468; Ecology and Environment Yosemite Creek EE/CA
EML ID: 891768

Approved by:

Technical Manager
Miguel Ines

Dates of Analysis:
Asbestos-EPA Method 600/R-93/116: 02-27-2012

Service SOPs: Asbestos-EPA Method 600/R-93/116 (EPA-600/M4-82-020 (SOP 01264))

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the items tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data can be provided when requested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	21
Total Samples Analysed:	21
Total Samples with Layer Asbestos Content > 1%:	0

Location: YC-038-1 Lab ID-Version‡: 3963482-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-038-2 Lab ID-Version‡: 3963483-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-038-3 Lab ID-Version‡: 3963484-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-038-3.6 Lab ID-Version‡: 3963485-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-040-1 Lab ID-Version‡: 3963486-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-040-2 Lab ID-Version‡: 3963487-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-040-3 Lab ID-Version‡: 3963488-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-040-3.6 Lab ID-Version‡: 3963489-1

Sample Layers	Asbestos Content
Brown Soil	< 1% Chrysotile
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-840-2 Lab ID-Version‡: 3963490-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
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Client: TestAmerica-West Sacramento
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Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-044-1 Lab ID-Version‡: 3963491-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-044-2 Lab ID-Version‡: 3963492-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-044-3 Lab ID-Version‡: 3963493-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-044-4 Lab ID-Version‡: 3963494-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-844-4 Lab ID-Version‡: 3963495-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-840-3.6 Lab ID-Version‡: 3963496-1

Sample Layers	Asbestos Content
Brown Soil	< 1% Chrysotile
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-042-2 Lab ID-Version‡: 3963497-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-842-2 Lab ID-Version‡: 3963498-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-042-3 Lab ID-Version‡: 3963499-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-042-4 Lab ID-Version‡: 3963500-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-041-1

Lab ID-Version‡: 3963501-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-041-2

Lab ID-Version‡: 3963502-1

Sample Layers	Asbestos Content
Brown Soil	< 1% Chrysotile
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

D

Data Validation Summary Reports

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	**Location: San Francisco, CA**
Project Number: 002693.7008.01SO	**TDD No: 09-11-10-0001**

Laboratory: EPA Region 9 Laboratory	**Lab Project Number: 1202053 SDG 12053D**
Sampling Dates: 2/21/2012	**Sample Matrix: Sediment & Water**
Analytical Method: *PCBs by EPA 8082*	**Data Reviewer: M. Song**

REVIEW AND APPROVAL:

Data Reviewer: Mindy Song — **Date:** 5/11/12
Technical QA Reviewer: Howard Edwards — **Date:** _____
Project Manager: Brian Milton — **Date:** _____

SAMPLE IDENTIFICATION:

Sample No.	Sample I.D.	Laboratory I.D.
1	YC-038-1	1202053-01
2	YC-038-2	1202053-02
3	YC-038-3	1202053-03
4	YC-838-3	1202053-04
5	YC-038-3.6	1202053-05
6	YC-040-1	1202053-06
7	YC-040-2	1202053-08
8	YC-040-3	1202053-09
9	YC-040-3.6	1202053-10
10	YC-044-1	1202053-11
11	YC-044-2	1202053-13
12	YC-844-2	1202053-14
13	YC-044-3	1202053-15
14	YC-044-4	1202053-16
15	YC-042-1	1202053-17
16	YC-042-2	1202053-18
17	YC-042-3	1202053-19
18	YC-842-3	1202053-20
19	YC-042-4	1202053-21
20	YC-041-1	1202053-23

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

Sample No.	Sample I.D.	Laboratory I.D.
21	YC-041-2	1202053-25
22	YC-841-2	1202053-26
23	YC-041-3	1202053-27
24	YC-041-4	1202053-28
25	YC-039-1	1202053-29
26	YC-039-2	1202053-30
27	YC-039-3	1202053-31
28	YC-039-3.3	1202053-32
29	YC-043-1	1202053-33
30	YC-043-2	1202053-34
31	YC-043-3	1202053-35
32	YC-043-4	1202053-36
33	YC-045-1	1202053-37
34	YC-045-2	1202053-38
35	YC-045-3	1202053-39
36	YC-045-4	1202053-40
37	YC-022112-RB	1202053-41

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

DATA PACKAGE COMPLETENESS CHECKLIST:

Checklist Code:

- X Included: no problems
- * Included: problems noted in review
- O Not Included and/or Not Available
- NR Not Required
- RS Provided As Re-submission

Case Narrative:

- X Case Narrative present

Quality Control Summary Package:

- X Data Summary sheets
- X Matrix Spike/Spike Duplicate Recoveries
- X Laboratory Control Sample Recoveries
- X Method Blank Summaries
- X Initial Calibration Data
- X Continuing Calibration Data
- X Surrogate Compound Recovery Summary
- NR DDT and Endrin Degradation Check Data
- NR Internal Standard Area Summary

Sample and Blank Data Package Section

- X Chromatograms
- X Quantitation Reports

Raw QC Data Package Section

- X Quantitation Reports for Standards, LCS, and MS/MSD
- X List of Instrument Detection Limits
- X Chain-of-Custody Records
- X Sample Preparation and Analysis Run Logs

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

DATA VALIDATION SUMMARY

The data were reviewed following procedures and limits specified in the EPA OSWER directive, *Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures* (EPA/540/G-90/004, OSWER Directive 9360.4-01, dated April 1990).

Indicate with a YES or NO whether each item is acceptable without qualification:

1	Holding Times	YES
2	Instrument Performance Criteria	YES
3	Initial Calibrations	YES
4	Continuing Calibrations	YES
5	Laboratory Control Sample	YES
6	Matrix Spike/Matrix Spike Duplicate	YES
7	Blanks and Background Samples	YES
8	Surrogate Compounds	YES
9	Internal Standards	N/A
10	Duplicate Analyses	NO
11	Analyte Identification	YES
12	Analyte Quantitation	YES
13	Overall Assessment of Data	YES
14	Usability of Data	YES

Comments: N/A: Not Applicable

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

1. HOLDING TIMES

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable

Samples were extracted and analyzed within required holding times except as noted under Comments. In addition, no problems were identified with regard to sample preservation or custody unless specified. For those samples analyzed outside holding time requirements, the detected results have been qualified as estimated (J), and the nondetected results have been qualified either as estimated (UJ) or rejected (R) based on the reviewer's judgement.

Water Samples
Extractable analyses: 7 days (from collection) to extraction; 40 days (from extraction) to analysis.
Soil or Other Matrices:
Extractable analyses: 14 days (from collection) to extraction; 40 days (from extraction) to analysis.

Comments: The recently-updated holding time of soil samples for PCB analysis by EPA 8082 is none per USEPA SW-846, Table 4-1 in Chapter 4.

2. INSTRUMENT PERFORMANCE CRITERIA

__N/A__ Raw data has been checked to verify that the DDT retention time is greater than 12 minutes and that there is adequate resolution (>25%) between peaks of the other standard compounds.
__X__ Raw data has been checked to verify that retention time windows are reported and that all standard compounds are within the windows.
__N/A__ Raw data has been checked to verify that the percent breakdown for DDT and endrin does not exceed 20% in the degradation check standard.
__X__ Raw data has been checked to verify that the percent difference in retention time for the surrogate in all standards and samples does not exceed 0.3% (capillary columns) or 1.5% (wide-bore capillary columns).

Comments:

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

3. INITIAL CALIBRATIONS

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable

Unless flagged below, a 5-point initial calibration was run. In addition, average Relative Response Factor (RRF), and percent relative Standard Deviation (%RSD) values were within control limits (%RSD <= 20). For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the low calibration level was not detected, the nondetected results are qualified (UJ).

Comments: PCB 1016/1260 was used for a 5-point initial calibration and percent relative standard deviation values were within the control limits.

4. CONTINUING CALIBRATIONS

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable

Unless flagged below, continuing calibrations were performed at the beginning and at the end of any group of samples and at least every 12 hours. In addition, Relative Response Factors (RRF), and Percent Difference (%D) values were within control limits (%D <= 15). For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the %D is very high and indicates a severe loss of instrument sensitivity, the associated nondetected results may be qualified as estimated (UJ) or rejected (R) based on the professional judgement of the reviewer.

Comments: Percent Difference (%D) values were within control limits.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

5. LABORATORY CONTROL SAMPLE

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Laboratory Control Samples Analyzed

Laboratory control sample recoveries are used for a qualitative indication of accuracy (bias) independent of matrix effects. LCS recovery limits should either be specified in the Sampling and Analysis Plan or can be established by the laboratory. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J).

Comments: LCS recoveries for PCB 1016 and PCB 1260 were within control limits.

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Matrix Spike/Matrix Spike Duplicates Analyzed

Matrix spike and matrix spike duplicate recoveries are used for a qualitative indication of accuracy (bias) due to matrix effects. The RPD between the recoveries is used for a qualitative indication of precision. Spike recovery limits of 80% to 120% are specified in EPA/540/G-90/004. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). At the discretion of the reviewer, other limits may be used only if justification can be provided.

Comments: Samples YC-038-3.6 and YC-039-3.3 were used for MS/MSD and the recoveries were within the control limits.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

7. BLANKS AND BACKGROUND SAMPLES

__X__ Acceptable
_____ Detection Limits Adjusted

The following blanks were analyzed:
__X__ Method (preparation) Blanks
_____ Field Blanks
_____ Instrument Blanks
__X__ Rinsate Blanks
_____ Background Samples
_____ VOA Trip Blanks

Preparation (method) blanks were prepared for each batch of samples extracted. A preparation blank was analyzed after every continuing calibration standard, prior to sample analysis unless noted below. Any compound detected in the sample and also detected in any associated blank, must be qualified as non-detect (U) when the sample concentration is less than 5x the blank concentration.

Comments: No contamination was found in the method blank or rinsate blank at reporting limit level.

8. SURROGATE COMPOUNDS

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No surrogates analyzed

Surrogate compound recoveries for samples analyzed within a sample group must be within the limits specified in the method. If the surrogate recovery is between 10% and the lower limit, the associated detected results are qualified as estimated (J) and the nondetected results are qualified as estimated (UJ). If the surrogate recovery is <10%, the associated detected results are qualified as estimated (J) and the nondetected results are rejected (R). If the surrogate recovery is above the upper limit, the associated detected results are qualified as estimated (J). Surrogate recoveries which exceeded these limits are noted below and the associated results are qualified on the attached sample report forms. If there are no limits specified in the method, laboratory limits based on historical performance may be used at the discretion of the reviewer.

Comments: Surrogate recoveries were within the control limits.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

9. INTERNAL STANDARDS

_____ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
__X__ No internal standards analyzed

Internal Standard area counts for samples analyzed within a sample group must be within the range of 50% to 200% of the internal standard area for the continuing calibration. If the internal standard area is between 10% and 50% of this value, the associated detected results are qualified as estimated (J) and the non-detected results are qualified as estimated (UJ). If the internal standard area is <10% of the calibration area, both the detected and non-detected results are rejected (R). If the internal standard area is >200% of the calibration area, the associated detected results are qualified as estimated (J). Internal standards which exceeded these limits are noted below and the associated results are qualified on the attached sample report forms.

Comments: External standards were used.

10. DUPLICATE ANALYSES

_____ Acceptable
__X__ Acceptable with qualification
_____ Unacceptable
_____ No Duplicates Analyzed

Type of duplicates analyzed:
__X__ Field Duplicates
_____ Laboratory Duplicates

Calculate the relative Percent Difference (RPD) between the members of duplicate pairs using the equation indicated below. Qualify the results as estimated (J) for any analyte whose RPD exceeds that specified in the Sampling and Analysis Plan.

$$RPD = \frac{2(Value\ 1 - Value\ 2)}{Value\ 1 + Value\ 2} \times 100\%$$

Comments:

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

Analyte (ug/kg)	YC-038-3	YC-838-3	RPD (%)
Aroclor 1254	970	940	3
Aroclor 1260	660	630	5

Analyte (ug/kg)	YC-044-2	YC-844-2	RPD (%)
Aroclor 1254	970	1200	21
Aroclor 1260	860	990	14

Analyte (ug/kg)	YC-042-3	YC-842-3	RPD (%)
Aroclor 1254	8900	7600	16
Aroclor 1260	7600	6600	14

Analyte (ug/kg)	YC-041-2	YC-841-2	RPD (%)
Aroclor 1254	5100	3300	43*
Aroclor 1260	2700	2100	25

*: RPD>35%

Comments: Sample YC-841-2 was a field duplicate of YC-041-2 and the RPD of Aroclor 1254 was outside of control limit. The detected Aroclor 1254 results in YC-041-2 and YC-841-2 were qualified as estimated (J)

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

11. ANALYTE IDENTIFICATION

Verify that positive results have been confirmed on a dissimilar second column, that the sample chromatograms agree with the correct daily standard chromatograms, and that the retention time windows match. When sample results are confirmed by a second column, the relative percent difference (RPD) between the two results is calculated. If the RPD is less than 40% and there is no evidence of chromatographic problems, the higher result is reported. If the RPD is greater than 40%, the chromatogram is checked for anomalies and results are selected based on the best professional judgment of the reviewer. If there is no evidence of any chromatographic problems, the higher result is reported.

Comments: Reported results were acceptable. Region 9 laboratory reports the lower results (this is the same as the Superfund CLP protocols) because the most common interferences are due to co-elution and these usually results in high bias.

12. ANALYTE QUANTITATION

Confirm that analyte quantitation was performed correctly using the following formulas:

Extractable analyses, water samples:

$$\text{ug/L} = \frac{\text{(analyte area)(amount of external standard, ng)(total volume of extract, uL)}}{\text{(external standard area)(volume of sample extracted, mL)(injection volume, uL)}}$$

Extractable analyses, soil samples:

$$\text{ug/kg} = \frac{\text{(analyte area)(amount of external standard, ng)(total volume of extract, uL)}}{\text{(external standard area)(weight of sample extracted, g)(fraction solids)(injection volume, uL)}}$$

Comments: Analyte quantitation was acceptable.
For samples from this site were contaminated with both Aroclor 1254 and Aroclor 1260 therefore the common peaks used to quantitate Aroclors 1254 and 1260 may have resulted in a high bias. ESAT reviewed the data and the method and concluded that the two Aroclors do interfere with each other, resulting in a high bias for one or both Aroclors. Region 9 Laboratory SOP 330 R4 does not allow for the exclusion of interfering peaks except when one of the fives is a significant statistical outlier (using the Q test). The overlapping compounds from Aroclor 1260 and 1254 encompass more than one peak and were not all excluded after applying the outlier test. EPA SW-846 method 8280A allows for the quantitaiton of an aroclor by using 3 to 5 peaks. For four sediment samples, YC-038-2, YC-041-3, YC-041-4, and YC-039-2, the laboratory chose for quantitation 3 or 4 peaks that were deemed to be free of potential co-elutions. The re-calculated concentrations necessitated the use of an RF for each Aroclor peak, as per the method, as opposed to the R9 SOP which uses an RF for the total area of the five Aroclor peaks summed together. For this project, interfering peaks were dropped and the results recalculated, as follows:

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

	1254 Peak # dropped	1260	1254/1260 using all 5 peaks	1254/1260 recalculated not using dropped peaks
YC-038-2	4, 5	1	29/20, mg/kg	21/17, mg/kg
YC-041-3	None	1, 2	29/3.0, mg/kg	29/2.7, mg/kg
YC-041-4	4, 5	1	35/34, mg/kg	16/30, mg/kg
YC-039-2	4, 5	1	26/20, mg/kg	15/ 17, mg/kg

Sample YC-038-1
Aroclor 1260: 5 peaks used
(128.7E6 + 42490434 + 29590693 + 82582206 + 45707612) / (453.050E3) = 726.346 ng/mL.
(726.346 ng/mL) (5mL/2.97g) (100/52) = 2351.5 ng/g= 2351.5 ug/kg.
Lab reported 2400 ug/kg.

Aroclor 1254: 5 peaks used
(4164700 + 7298771 + 5510175 + 8304759 + 9934399) / (159.509E3) = 220.757 ng/mL.
(220.757 ng/mL) (5mL/2.97g) (100/52) (5) = 3573.5 ng/g= 3573.5 ug/kg.
Lab reported 3600 ug/kg.

13. OVERALL ASSESSMENT OF DATA

On the basis of this review, the following determination has been made with regard to the overall data usability for the specified level.

_____ **Acceptable**
__X__ **Acceptable with Qualification**
_____ **Rejected**

Accepted data meet the minimum requirements for the following EPA data category:
_____ **ERS Screening**
_____ **Non-definitive with 10 % Conformation by Definitive Methodology**
_____ **Definitive, Comprehensive Statistical Error Determination was performed.**
__X__ **Definitive, Comprehensive Statistical Error Determination was not performed.**

Any qualifications to individual sample analysis results are detailed in the appropriate section above or appear under the comments section below. In cases where several QC criteria are out of specification, it may be appropriate to further qualify the data usability. The data reviewer must use professional judgment and express concerns and comments on the data validity for each specific data package.

Comments: Data as reported are valid.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
Project Number: 002693.7008.01SO	TDD No: 09-11-10-0001

14. USABILITY OF DATA

A. These data are considered usable for the data use objectives stated in the *SAMPLING AND ANALYSIS PLAN YOSEMITE CREEK SEDIMENT WASTE CHARACTERIZATION STUDY, SAN FRANCISCO, CALIFORNIA, JANUARY 9, 2012 (SAP).*

The following data use objective was indicated in the *SAP:*

TO DOCUMENT THE CONCENTRAITON OF PCBS, ASBESTOS, AND METALS (CHROMIUM, LEAD, MERCURY, AND ZINC) IN SEDIMENT ATH THE SITE AND DETERMINE WHERE THESE CONCENTRAITONS EXCEED STATE AND FEDERAL WASTE DISPOSAL CRITERIA.

USING THE WASTE CHARACTRIZATION STUDY DATA AND DATA SETS FROM PREVIOUS INVESTIGAITONS, ESTIMATE THE VOLUME OF SEDIMENT CONTAINING CONCENTRATIONS OF ASBESTOS, PCBS, AND METALS (CHROMIUM, LEAD, MERCURY, AND ZINCE) THAT EXCEED STATE AND FEDERAL WASTE DISPOSAL CRITERIA.

THE DATA ARE USABLE FOR THE ABOVE OBJECTIVES.

B. These data meet quality objectives stated in the *SAP.*

AS INDICATED IN SECTION 3 OF THE SAP, THE INVESTIGATION WILL GENERATE DEFINITIVE DATA AND TABLE 3-1 OF THE SAP OUTLINES THE DATA QUALITY INDICATOR GOALS APPLICABLE TO THE DEFINITIVE DATA QUALITY LEVEL. THE DATA IN THIS PACKAGE MEET THESE REQUIREMENTS.

15. DOCUMENTATION OF LABORATORY CORRECTIVE ACTION

Problem: No problems requiring corrective action were found.

Resolution: Not required.

Attached are copies of all data summary sheets, with data (a qualifiers indicated, and a copy of the chain of custody for the samples.

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-01									**Sediment - Sampled: 02/21/12 10:48**
Sample ID: YC-038-1									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	RE1	ND	U	58	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	120	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	58	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	58	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	58	"	"	"	"	8082A/SOP335
Aroclor-1254	RE2	3,600		290	"	"	"	03/01/12	8082A/SOP335
Aroclor 1260	RE1	2,400		58	"	"	"	02/29/12	8082A/SOP335
Aroclor 1262	RE1	ND	U	58	"	"	"	"	8082A/SOP335
Aroclor 1268	RE1	ND	U	58	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*	92 %		*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*	76 %		*28.8-154%*		"	"	"	
Sample ID: YC-038-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		52		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-02									**Sediment - Sampled: 02/21/12 10:50**
Sample ID: YC-038-2									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	RE1	ND	U	53	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	110	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	53	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	53	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	53	"	"	"	"	8082A/SOP335
Aroclor-1254	RE3	21,000		1,100	"	"	"	03/02/12	8082A/SOP335
Aroclor 1260	RE3	17,000		1,100	"	"	"	"	8082A/SOP335
Aroclor 1262	RE1	ND	U	53	"	"	"	02/29/12	8082A/SOP335
Aroclor 1268	RE1	ND	U	53	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*	97 %		*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*	94 %		*28.8-154%*		"	"	"	
Sample ID: YC-038-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		56		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-03									**Sediment - Sampled: 02/21/12 11:00**
Sample ID: YC-038-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	RE1	ND	U	40	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	81	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	40	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	40	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	40	"	"	"	"	8082A/SOP335
Aroclor-1254	RE1	970		40	"	"	"	"	8082A/SOP335
Aroclor 1260	RE1	660		40	"	"	"	"	8082A/SOP335

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-03									**Sediment - Sampled: 02/21/12 11:00**
Sample ID: YC-038-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1262	REI	ND	U	40	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1268	REI	ND	U	40	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*REI*		92 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*REI*		78 %	*28.8-154%*		"	"	"	
Sample ID: YC-038-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		77		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-04									**Sediment - Sampled: 02/21/12 11:02**
Sample ID: YC-838-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	REI	ND	U	36	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	REI	ND	U	71	"	"	"	"	8082A/SOP335
Aroclor 1232	REI	ND	U	36	"	"	"	"	8082A/SOP335
Aroclor 1242	REI	ND	U	36	"	"	"	"	8082A/SOP335
Aroclor 1248	REI	ND	U	36	"	"	"	"	8082A/SOP335
Aroclor-1254	REI	940		36	"	"	"	"	8082A/SOP335
Aroclor 1260	REI	630		36	"	"	"	"	8082A/SOP335
Aroclor 1262	REI	ND	U	36	"	"	"	"	8082A/SOP335
Aroclor 1268	REI	ND	U	36	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*REI*		103 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*REI*		85 %	*28.8-154%*		"	"	"	
Sample ID: YC-838-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		80		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-05									**Sediment - Sampled: 02/21/12 11:05**
Sample ID: YC-038-3.6									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	REI	ND	U	37	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	REI	ND	U	74	"	"	"	"	8082A/SOP335
Aroclor 1232	REI	ND	U	37	"	"	"	"	8082A/SOP335
Aroclor 1242	REI	ND	U	37	"	"	"	"	8082A/SOP335
Aroclor 1248	REI	ND	U	37	"	"	"	"	8082A/SOP335
Aroclor 1254	REI	ND	U	37	"	"	"	"	8082A/SOP335
Aroclor 1260	REI	78		37	"	"	"	"	8082A/SOP335
Aroclor 1262	REI	ND	U	37	"	"	"	"	8082A/SOP335
Aroclor 1268	REI	ND	U	37	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*REI*		93 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*REI*		73 %	*28.8-154%*		"	"	"	
Sample ID: YC-038-3.6									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		78		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-06									**Sediment - Sampled: 02/21/12 11:30**

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Sample ID: YC-040-1									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	RE1	ND	U	69	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	140	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	69	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	69	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	69	"	"	"	"	8082A/SOP335
Aroclor 1254	RE1	1,200		69	"	"	"	"	8082A/SOP335
Aroclor 1260	RE1	1,000		69	"	"	"	"	8082A/SOP335
Aroclor 1262	RE1	ND	U	69	"	"	"	"	8082A/SOP335
Aroclor 1268	RE1	ND	U	69	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*		75 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*		50 %	*28.8-154%*		"	"	"	
Sample ID: YC-040-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		43		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-08									**Sediment - Sampled: 02/21/12 11:33**
Sample ID: YC-040-2									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	RE1	ND	U	47	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	94	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	47	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	47	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	47	"	"	"	"	8082A/SOP335
Aroclor-1254	RE1	830		47	"	"	"	"	8082A/SOP335
Aroclor 1260	RE1	600		47	"	"	"	"	8082A/SOP335
Aroclor 1262	RE1	ND	U	47	"	"	"	"	8082A/SOP335
Aroclor 1268	RE1	ND	U	47	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*		93 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*		75 %	*28.8-154%*		"	"	"	
Sample ID: YC-040-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		60		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-09									**Sediment - Sampled: 02/21/12 11:55**
Sample ID: YC-040-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	RE1	ND	U	35	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	69	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	35	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	35	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	35	"	"	"	"	8082A/SOP335
Aroclor-1254	RE2	2,800		170	"	"	"	03/01/12	8082A/SOP335
Aroclor 1260	RE1	1,500		35	"	"	"	02/29/12	8082A/SOP335
Aroclor 1262	RE1	ND	U	35	"	"	"	"	8082A/SOP335

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12053D
Project Number: R12S41	75 Hawthorne Street	Reported: 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-09									**Sediment - Sampled: 02/21/12 11:55**
Sample ID: YC-040-3									
									Polychlorinated Biphenyls by EPA Method 8082A
Aroclor 1268	RE1	ND	U	35	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*	94 %		*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*	81 %		*28.8-154%*		"	"	"	
Sample ID: YC-040-3									
									Conventional Chemistry Parameters by APHA/EPA Methods
% Solids		81		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-10									**Sediment - Sampled: 02/21/12 11:57**
Sample ID: YC-040-3.6									
									Polychlorinated Biphenyls by EPA Method 8082A
Aroclor 1016	RE1	ND	U	48	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	96	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	48	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	48	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	48	"	"	"	"	8082A/SOP335
Aroclor-1254	RE2	15,000		480	"	"	"	03/01/12	8082A/SOP335
Aroclor-1260	RE2	6,400		480	"	"	"	"	8082A/SOP335
Aroclor 1262	RE1	ND	U	48	"	"	"	02/29/12	8082A/SOP335
Aroclor 1268	RE1	ND	U	48	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*	107 %		*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*	110 %		*28.8-154%*		"	"	"	
Sample ID: YC-040-3.6									
									Conventional Chemistry Parameters by APHA/EPA Methods
% Solids		61		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-11									**Sediment - Sampled: 02/21/12 12:57**
Sample ID: YC-044-1									
									Polychlorinated Biphenyls by EPA Method 8082A
Aroclor 1016	RE1	ND	U	66	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	130	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	66	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	66	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	66	"	"	"	"	8082A/SOP335
Aroclor 1254	RE1	ND	U	66	"	"	"	"	8082A/SOP335
Aroclor-1260	RE1	470		66	"	"	"	"	8082A/SOP335
Aroclor 1262	RE1	ND	U	66	"	"	"	"	8082A/SOP335
Aroclor 1268	RE1	ND	U	66	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*	99 %		*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*	67 %		*28.8-154%*		"	"	"	
Sample ID: YC-044-1									
									Conventional Chemistry Parameters by APHA/EPA Methods
% Solids		49		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-13									**Sediment - Sampled: 02/21/12 12:38**

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12053D
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-13									**Sediment - Sampled: 02/21/12 12:38**
Sample ID: YC-044-2									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	REI	ND	U	61	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	REI	ND	U	120	"	"	"	"	8082A/SOP335
Aroclor 1232	REI	ND	U	61	"	"	"	"	8082A/SOP335
Aroclor 1242	REI	ND	U	61	"	"	"	"	8082A/SOP335
Aroclor 1248	REI	ND	U	61	"	"	"	"	8082A/SOP335
Aroclor 1254	REI	970		61	"	"	"	"	8082A/SOP335
Aroclor 1260	REI	860		61	"	"	"	"	8082A/SOP335
Aroclor 1262	REI	ND	U	61	"	"	"	"	8082A/SOP335
Aroclor 1268	REI	ND	U	61	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*REI*		74 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*REI*		54 %	*28.8-154%*		"	"	"	
Sample ID: YC-044-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		50		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-14									**Sediment - Sampled: 02/21/12 12:40**
Sample ID: YC-844-2									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	REI	ND	U	62	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	REI	ND	U	120	"	"	"	"	8082A/SOP335
Aroclor 1232	REI	ND	U	62	"	"	"	"	8082A/SOP335
Aroclor 1242	REI	ND	U	62	"	"	"	"	8082A/SOP335
Aroclor 1248	REI	ND	U	62	"	"	"	"	8082A/SOP335
Aroclor-1254	REI	1,200		62	"	"	"	"	8082A/SOP335
Aroclor 1260	REI	990		62	"	"	"	"	8082A/SOP335
Aroclor 1262	REI	ND	U	62	"	"	"	"	8082A/SOP335
Aroclor 1268	REI	ND	U	62	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*REI*		77 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*REI*		57 %	*28.8-154%*		"	"	"	
Sample ID: YC-844-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		51		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-15									**Sediment - Sampled: 02/21/12 12:48**
Sample ID: YC-044-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	REI	ND	U	66	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	REI	ND	U	130	"	"	"	"	8082A/SOP335
Aroclor 1232	REI	ND	U	66	"	"	"	"	8082A/SOP335
Aroclor 1242	REI	ND	U	66	"	"	"	"	8082A/SOP335
Aroclor 1248	REI	ND	U	66	"	"	"	"	8082A/SOP335
Aroclor-1254	REI	2,400		66	"	"	"	"	8082A/SOP335
Aroclor-1260	REI	3,300		66	"	"	"	"	8082A/SOP335

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-15									**Sediment - Sampled: 02/21/12 12:48**
Sample ID: YC-044-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1262	RE1	ND	U	66	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1268	RE1	ND	U	66	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*		106 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*		92 %	*28.8-154%*		"	"	"	
Sample ID: YC-044-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		44		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-16									**Sediment - Sampled: 02/21/12 12:58**
Sample ID: YC-044-4									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	RE1	ND	U	68	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	140	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	68	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	68	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	68	"	"	"	"	8082A/SOP335
Aroclor-1254	RE2	5,000		340	"	"	"	03/01/12	8082A/SOP335
Aroclor 1260	RE1	3,700		68	"	"	"	02/29/12	8082A/SOP335
Aroclor 1262	RE1	ND	U	68	"	"	"	"	8082A/SOP335
Aroclor 1268	RE1	ND	U	68	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*		72 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*		59 %	*28.8-154%*		"	"	"	
Sample ID: YC-044-4									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		47		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-17									**Sediment - Sampled: 02/21/12 13:25**
Sample ID: YC-042-1									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	RE1	ND	U	59	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	120	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	59	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	59	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	59	"	"	"	"	8082A/SOP335
Aroclor-1254	RE1	1,600		59	"	"	"	"	8082A/SOP335
Aroclor 1260	RE1	1,300		59	"	"	"	"	8082A/SOP335
Aroclor 1262	RE1	ND	U	59	"	"	"	"	8082A/SOP335
Aroclor 1268	RE1	ND	U	59	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*		65 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*		47 %	*28.8-154%*		"	"	"	
Sample ID: YC-042-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		52		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-18									**Sediment - Sampled: 02/21/12 13:34**

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12053D
Project Number: R12S41	75 Hawthorne Street	Reported: 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Sample ID: YC-042-2									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	RE1	ND	U	54	ug/kg dry	B2B0120	02/23/12	02/29/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	110	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	54	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	54	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	54	"	"	"	"	8082A/SOP335
Aroclor-1254	RE2	5,600		270	"	"	"	03/01/12	8082A/SOP335
Aroclor 1260	RE2	3,900		270	"	"	"	"	8082A/SOP335
Aroclor 1262	RE1	ND	U	54	"	"	"	02/29/12	8082A/SOP335
Aroclor 1268	RE1	ND	U	54	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*		89 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*		80 %	*28.8-154%*		"	"	"	
Sample ID: YC-042-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		51		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-19									**Sediment - Sampled: 02/21/12 13:45**
Sample ID: YC-042-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	RE1	ND	U	63	ug/kg dry	B2B0120	02/23/12	03/01/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	130	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	63	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	63	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	63	"	"	"	"	8082A/SOP335
Aroclor-1254	RE2	8,900		320	"	"	"	03/02/12	8082A/SOP335
Aroclor 1260	RE2	7,600		320	"	"	"	"	8082A/SOP335
Aroclor 1262	RE1	ND	U	63	"	"	"	03/01/12	8082A/SOP335
Aroclor 1268	RE1	ND	U	63	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*		86 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*		79 %	*28.8-154%*		"	"	"	
Sample ID: YC-042-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		47		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-20									**Sediment - Sampled: 02/21/12 13:48**
Sample ID: YC-842-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016	RE1	ND	U	63	ug/kg dry	B2B0120	02/23/12	03/01/12	8082A/SOP335
Aroclor 1221	RE1	ND	U	130	"	"	"	"	8082A/SOP335
Aroclor 1232	RE1	ND	U	63	"	"	"	"	8082A/SOP335
Aroclor 1242	RE1	ND	U	63	"	"	"	"	8082A/SOP335
Aroclor 1248	RE1	ND	U	63	"	"	"	"	8082A/SOP335
Aroclor-1254	RE2	7,600		320	"	"	"	03/02/12	8082A/SOP335
Aroclor 1260	RE2	6,600		320	"	"	"	"	8082A/SOP335
Aroclor 1262	RE1	ND	U	63	"	"	"	03/01/12	8082A/SOP335

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United States Environmental Protection Agency
Region 9 Laboratory
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Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12053D
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-20									**Sediment - Sampled: 02/21/12 13:48**
Sample ID: YC-842-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1268	RE1	ND	U	63	ug/kg dry	B2B0120	02/23/12	03/01/12	8082A/SOP335
Surrogate: Tetrachloro-m-xylene	*RE1*		82 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl	*RE1*		76 %	*28.8-154%*		"	"	"	
Sample ID: YC-842-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		47		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-21									**Sediment - Sampled: 02/21/12 13:58**
Sample ID: YC-042-4									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	67	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	130	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	67	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	67	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	67	"	"	"	"	8082A/SOP335
Aroclor 1254		490		67	"	"	"	"	8082A/SOP335
Aroclor 1260		290		67	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	67	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	67	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			81 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			72 %	*28.8-154%*		"	"	"	
Sample ID: YC-042-4									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		48		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-23									**Sediment - Sampled: 02/21/12 14:20**
Sample ID: YC-041-1									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	58	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	120	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	58	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	58	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	58	"	"	"	"	8082A/SOP335
Aroclor-1254		660		58	"	"	"	"	8082A/SOP335
Aroclor 1260		570		58	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	58	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	58	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			81 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			68 %	*28.8-154%*		"	"	"	
Sample ID: YC-041-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		53		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-25									**Sediment - Sampled: 02/21/12 14:26**
Sample ID: YC-041-2									**Polychlorinated Biphenyls by EPA Method 8082A**

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-25									**Sediment - Sampled: 02/21/12 14:26**
Sample ID: YC-041-2									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	55	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	110	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	55	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	55	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	55	"	"	"	"	8082A/SOP335
Aroclor-1254	RE1	5,100	J	280	"	"	"	03/05/12	8082A/SOP335
Aroclor 1260		2,700		55	"	"	"	03/01/12	8082A/SOP335
Aroclor 1262		ND	U	55	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	55	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			78 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			70 %	*28.8-154%*		"	"	"	
Sample ID: YC-041-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		57		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-26									**Sediment - Sampled: 02/21/12 14:28**
Sample ID: YC-841-2									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	52	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	100	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	52	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	52	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	52	"	"	"	"	8082A/SOP335
Aroclor-1254	RE1	3,300	J	260	"	"	"	03/05/12	8082A/SOP335
Aroclor 1260		2,100		52	"	"	"	03/01/12	8082A/SOP335
Aroclor 1262		ND	U	52	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	52	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			77 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			68 %	*28.8-154%*		"	"	"	
Sample ID: YC-841-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		57		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-27									**Sediment - Sampled: 02/21/12 14:29**
Sample ID: YC-041-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	59	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	120	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	59	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	59	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	59	"	"	"	"	8082A/SOP335
Aroclor-1254	RE1	29,000		590	"	"	"	03/05/12	8082A/SOP335
Aroclor 1260		2,700		59	"	"	"	03/01/12	8082A/SOP335

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-27									**Sediment - Sampled: 02/21/12 14:29**
Sample ID: YC-041-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1262		ND	U	59	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1268		ND	U	59	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			79 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			74 %	*28.8-154%*		"	"	"	
Sample ID: YC-041-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		54		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-28									**Sediment - Sampled: 02/21/12 14:45**
Sample ID: YC-041-4									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	67	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	130	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	67	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	67	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	67	"	"	"	"	8082A/SOP335
Aroclor-1254	RE1	16,000		1,300	"	"	"	03/05/12	8082A/SOP335
Aroclor 1260	RE1	30,000		1,300	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	67	"	"	"	03/01/12	8082A/SOP335
Aroclor 1268		ND	U	67	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			80 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			82 %	*28.8-154%*		"	"	"	
Sample ID: YC-041-4									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		48		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-29									**Sediment - Sampled: 02/21/12 15:00**
Sample ID: YC-039-1									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	70	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	140	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	70	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	70	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	70	"	"	"	"	8082A/SOP335
Aroclor-1254	RE1	12,000		700	"	"	"	03/05/12	8082A/SOP335
Aroclor 1260		3,200		70	"	"	"	03/01/12	8082A/SOP335
Aroclor 1262		ND	U	70	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	70	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			78 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			73 %	*28.8-154%*		"	"	"	
Sample ID: YC-039-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		44		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-30									**Sediment - Sampled: 02/21/12 15:02**

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Sample ID: YC-039-2									Polychlorinated Biphenyls by EPA Method 8082A
Aroclor 1016		ND	U	54	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	110	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	54	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	54	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	54	"	"	"	"	8082A/SOP335
Aroclor-1254	RE1	15,000		540	"	"	"	03/05/12	8082A/SOP335
Aroclor 1260	RE1	17,000		540	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	54	"	"	"	03/01/12	8082A/SOP335
Aroclor 1268		ND	U	54	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			81 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			77 %	*28,8-154%*		"	"	"	
Sample ID: YC-039-2									Conventional Chemistry Parameters by APHA/EPA Methods
% Solids		55		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-31									**Sediment - Sampled: 02/21/12 15:15**
Sample ID: YC-039-3									Polychlorinated Biphenyls by EPA Method 8082A
Aroclor 1016		ND	U	43	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	86	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	43	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	43	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	43	"	"	"	"	8082A/SOP335
Aroclor 1254	RE1	4,800		210	"	"	"	03/05/12	8082A/SOP335
Aroclor 1260	RE1	3,400		210	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	43	"	"	"	03/01/12	8082A/SOP335
Aroclor 1268		ND	U	43	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			85 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			73 %	*28,8-154%*		"	"	"	
Sample ID: YC-039-3									Conventional Chemistry Parameters by APHA/EPA Methods
% Solids		65		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-32									**Sediment - Sampled: 02/21/12 15:12**
Sample ID: YC-039-3.3									Polychlorinated Biphenyls by EPA Method 8082A
Aroclor 1016		ND	U	42	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	83	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	42	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	42	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	42	"	"	"	"	8082A/SOP335
Aroclor 1254		ND	U	42	"	"	"	"	8082A/SOP335
Aroclor 1260		340		42	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	42	"	"	"	"	8082A/SOP335

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12053D
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-32									**Sediment - Sampled: 02/21/12 15:12**
Sample ID: YC-039-3.3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1268		ND	U	42	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			74 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			64 %	*28.8-154%*		"	"	"	
Sample ID: YC-039-3.3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		75		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-33									**Sediment - Sampled: 02/21/12 15:32**
Sample ID: YC-043-1									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	58	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	120	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	58	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	58	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	58	"	"	"	"	8082A/SOP335
Aroclor-1254		540		58	"	"	"	"	8082A/SOP335
Aroclor 1260		510		58	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	58	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	58	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			70 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			50 %	*28.8-154%*		"	"	"	
Sample ID: YC-043-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		50		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-34									**Sediment - Sampled: 02/21/12 15:33**
Sample ID: YC-043-2									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	64	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	130	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor-1254		3,100		64	"	"	"	"	8082A/SOP335
Aroclor 1260		2,700		64	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	64	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			84 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			72 %	*28.8-154%*		"	"	"	
Sample ID: YC-043-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		50		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-35									**Sediment - Sampled: 02/21/12 15:43**
Sample ID: YC-043-3									**Polychlorinated Biphenyls by EPA Method 8082A**

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United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-35									**Sediment - Sampled: 02/21/12 15:43**
Sample ID: YC-043-3									
						Polychlorinated Biphenyls by EPA Method 8082A			
Aroclor 1016		ND	U	69	ug/kg dry	B2B0127	02/27/12	03/01/12	8082A/SOP335
Aroclor 1221		ND	U	140	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	69	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	69	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	69	"	"	"	"	8082A/SOP335
Aroclor-1254		1,700		69	"	"	"	"	8082A/SOP335
Aroclor 1260		1,400		69	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	69	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	69	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene		85 %		*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl		73 %		*28.8-154%*		"	"	"	
Sample ID: YC-043-3									
						Conventional Chemistry Parameters by APHA/EPA Methods			
% Solids		44		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-36									**Sediment - Sampled: 02/21/12 15:44**
Sample ID: YC-043-4									
						Polychlorinated Biphenyls by EPA Method 8082A			
Aroclor 1016		ND	U	64	ug/kg dry	B2B0127	02/27/12	03/02/12	8082A/SOP335
Aroclor 1221		ND	U	130	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor-1254		230		64	"	"	"	"	8082A/SOP335
Aroclor 1260		170		64	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	64	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene		84 %		*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl		69 %		*28.8-154%*		"	"	"	
Sample ID: YC-043-4									
						Conventional Chemistry Parameters by APHA/EPA Methods			
% Solids		46		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-37									**Sediment - Sampled: 02/21/12 16:00**
Sample ID: YC-045-1									
						Polychlorinated Biphenyls by EPA Method 8082A			
Aroclor 1016		ND	U	64	ug/kg dry	B2B0127	02/27/12	03/02/12	8082A/SOP335
Aroclor 1221		ND	U	130	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1254		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor-1260		300		64	"	"	"	"	8082A/SOP335

United States Environmental Protection Agency
Region 9 Laboratory
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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-37									**Sediment - Sampled: 02/21/12 16:00**
Sample ID: YC-045-1									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1262		ND	U	64	ug/kg dry	B2B0127	02/27/12	03/02/12	8082A/SOP335
Aroclor 1268		ND	U	64	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			101 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			87 %	*28.8-154%*		"	"	"	
Sample ID: YC-045-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		48		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-38									**Sediment - Sampled: 02/21/12 16:02**
Sample ID: YC-045-2									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	66	ug/kg dry	B2B0127	02/27/12	03/02/12	8082A/SOP335
Aroclor 1221		ND	U	130	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	66	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	66	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	66	"	"	"	"	8082A/SOP335
Aroclor-1254		990		66	"	"	"	"	8082A/SOP335
Aroclor-1260		1,000		66	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	66	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	66	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			91 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			78 %	*28.8-154%*		"	"	"	
Sample ID: YC-045-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		49		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-39									**Sediment - Sampled: 02/21/12 16:12**
Sample ID: YC-045-3									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	69	ug/kg dry	B2B0127	02/27/12	03/02/12	8082A/SOP335
Aroclor 1221		ND	U	140	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	69	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	69	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	69	"	"	"	"	8082A/SOP335
Aroclor-1254		3,400		69	"	"	"	"	8082A/SOP335
Aroclor 1260		3,500		69	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	69	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	69	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			80 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			69 %	*28.8-154%*		"	"	"	
Sample ID: YC-045-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		48		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-40									**Sediment - Sampled: 02/21/12 16:14**

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United States Environmental Protection Agency
Region 9 Laboratory

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12053D
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Sample ID: YC-045-4									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	64	ug/kg dry	B2B0127	02/27/12	03/02/12	8082A/SOP335
Aroclor 1221		ND	U	130	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor-1254		740		64	"	"	"	"	8082A/SOP335
Aroclor-1260		700		64	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	64	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	64	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			86 %	*20-151%*		"	"	"	
Surrogate: Decachlorobiphenyl			74 %	*28.8-154%*		"	"	"	
Sample ID: YC-045-4									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		49		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-41									**Water - Sampled: 02/21/12 16:30**
Sample ID: YC-022112-RB									**Polychlorinated Biphenyls by EPA Method 8082A**
Aroclor 1016		ND	U	0.19	ug/L	B2B0119	02/23/12	02/24/12	8082A/SOP335
Aroclor 1221		ND	U	0.38	"	"	"	"	8082A/SOP335
Aroclor 1232		ND	U	0.19	"	"	"	"	8082A/SOP335
Aroclor 1242		ND	U	0.19	"	"	"	"	8082A/SOP335
Aroclor 1248		ND	U	0.19	"	"	"	"	8082A/SOP335
Aroclor 1254		ND	U	0.19	"	"	"	"	8082A/SOP335
Aroclor 1260		ND	U	0.19	"	"	"	"	8082A/SOP335
Aroclor 1262		ND	U	0.19	"	"	"	"	8082A/SOP335
Aroclor 1268		ND	U	0.19	"	"	"	"	8082A/SOP335
Surrogate: Tetrachloro-m-xylene			78 %	*32.2-136%*		"	"	"	
Surrogate: Decachlorobiphenyl			59 %	*20-147%*		"	"	"	

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Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12053D
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2B0119 - 3520C CLLE - PCBs								**Prepared: 02/23/12 Analyzed: 02/24/12**		
								Polychlorinated Biphenyls by EPA Method 8082A - Quality Control		
Blank (B2B0119-BLK1)										
Aroclor 1016	ND	U	0.2	ug/L						
Aroclor 1221	ND	U	0.4	"						
Aroclor 1232	ND	U	0.2	"						
Aroclor 1242	ND	U	0.2	"						
Aroclor 1248	ND	U	0.2	"						
Aroclor 1254	ND	U	0.2	"						
Aroclor 1260	ND	U	0.2	"						
Aroclor 1262	ND	U	0.2	"						
Aroclor 1268	ND	U	0.2	"						
Surrogate: Tetrachloro-m-xylene	*0.150*			"	*0.200*		75	*32.2-136*		
Surrogate: Decachlorobiphenyl	*0.162*			"	*0.200*		81	*20-147*		
LCS (B2B0119-BS1)										
Aroclor 1016	0.98		0.2	ug/L	1.00		98	58.7-144		200
Aroclor 1260	0.977		0.2	"	1.00		98	53.4-149		200
Surrogate: Tetrachloro-m-xylene	*0.144*			"	*0.200*		72	*32.2-136*		
Surrogate: Decachlorobiphenyl	*0.158*			"	*0.200*		79	*20-147*		
Batch B2B0120 - Soxhlet Extraction - PCBs								**Prepared: 02/23/12 Analyzed: 02/29/12**		
								Polychlorinated Biphenyls by EPA Method 8082A - Quality Control		
Blank (B2B0120-BLK2)										
Aroclor 1016	ND	U	3	ug/kg wet						
Aroclor 1221	ND	U	6	"						
Aroclor 1232	ND	U	3	"						
Aroclor 1242	ND	U	3	"						
Aroclor 1248	ND	U	3	"						
Aroclor 1254	ND	U	3	"						
Aroclor 1260	ND	U	3	"						
Aroclor 1262	ND	U	3	"						
Aroclor 1268	ND	U	3	"						
Surrogate: Tetrachloro-m-xylene	*5.70*			"	*6.67*		86	*20-151*		
Surrogate: Decachlorobiphenyl	*5.27*			"	*6.67*		79	*28.8-154*		
LCS (B2B0120-BS2)										
Aroclor 1016	31.5		3	ug/kg wet	33.3		95	24.8-143		200
Aroclor 1260	31.8		3	"	33.3		95	20-159		200
Surrogate: Tetrachloro-m-xylene	*5.71*			"	*6.67*		86	*20-151*		
Surrogate: Decachlorobiphenyl	*5.21*			"	*6.67*		78	*28.8-154*		

6/18/12

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12053D
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 03/27/12 17:15
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2B0120 - Soxhlet Extraction - PCBs								**Prepared: 02/23/12 Analyzed: 02/29/12**		
								Polychlorinated Biphenyls by EPA Method 8082A - Quality Control		
Matrix Spike (B2B0120-MS2)			**Source: 1202053-05RE1**							
Aroclor 1016	445		39	ug/kg dry	430	ND	104	65-135		20
Aroclor 1260	526		39	"	430	78.1	104	65-135		20
Surrogate: Tetrachloro-m-xylene		*80.9*		"	*86.0*		94	*20-151*		
Surrogate: Decachlorobiphenyl		*76.6*		"	*86.0*		89	*28.8-154*		
Matrix Spike Dup (B2B0120-MSD2)			**Source: 1202053-05RE1**							
Aroclor 1016	518		39	ug/kg dry	433	ND	120	65-135	15	20
Aroclor 1260	569		39	"	433	78.1	114	65-135	8	20
Surrogate: Tetrachloro-m-xylene		*90.2*		"	*86.5*		104	*20-151*		
Surrogate: Decachlorobiphenyl		*78.7*		"	*86.5*		91	*28.8-154*		
Batch B2B0127 - Soxhlet Extraction - PCBs								**Prepared: 02/27/12 Analyzed: 03/01/12**		
								Polychlorinated Biphenyls by EPA Method 8082A - Quality Control		
Blank (B2B0127-BLK1)										
Aroclor-1016	ND	U	3	ug/kg wet						
Aroclor 1221	ND	U	6	"						
Aroclor-1232	ND	U	3	"						
Aroclor-1242	ND	U	3	"						
Aroclor 1248	ND	U	3	"						
Aroclor 1254	ND	U	3	"						
Aroclor 1260	ND	U	3	"						
Aroclor 1262	ND	U	3	"						
Aroclor 1268	ND	U	3	"						
Surrogate: Tetrachloro-m-xylene		*5.57*		"	*6.67*		83	*20-151*		
Surrogate: Decachlorobiphenyl		*5.11*		"	*6.67*		77	*28.8-154*		
LCS (B2B0127-BS1)										
Aroclor 1016	31.9		3	ug/kg wet	33.3		96	24.8-143		200
Aroclor 1260	32.3		3	"	33.3		97	20-159		200
Surrogate: Tetrachloro-m-xylene		*5.80*		"	*6.67*		87	*20-151*		
Surrogate: Decachlorobiphenyl		*5.31*		"	*6.67*		80	*28.8-154*		
Matrix Spike (B2B0127-MS1)			**Source: 1202053-32**							
Aroclor 1016	424		42	ug/kg dry	465	ND	91	65-135		20
Aroclor 1260	826		42	"	465	337	105	65-135		20
Surrogate: Tetrachloro-m-xylene		*79.7*		"	*93.0*		86	*20-151*		

5/8/12

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

PROJ. NO. R12S41 | PROJECT NAME Yosemite Creek EECA

SAMPLERS: (Signature)

Page 1 of 3

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471)					REMARKS
2/21/12	1048	Sediment		X	YC-038-1	2	X	X					Additional analyses (TCLP, STLC) may be required; please hold all extra volume.
	1050				YC-038-2	2	X	X					
	1100				YC-038-3	2	X	X					
	1102				YC-838-3	1	X						
	1105				YC-038-3.6	2	X	X					Please report results to
	1130				YC-040-1	2	X	X					Brian Milton
	1132				YC-840-1	1		X					bmilton@ene.com
	1133				YC-040-2	2	X	X					510-893-6700
	1155				YC-040-3	2	X	X					
	1157				YC-040-3.6	2	X	X					
	1257				YC-044-1	2	X	X					
	1258				YC-844-1	1		X					
	1238				YC-044-2	2	X	X					
	1240				YC-844-2	1	X						
↓	1248	↓		↓	YC-044-3	2	X	X					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	2/22/12				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received for Laboratory by: (Signature)	Date / Time	Temp.	Seals Intact (Y/N)	Conditions / Remarks	
	2/22/12 1317	9°	NO SEALS	HAND DEL.	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2491

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

PROJ. NO. R12S41 | PROJECT NAME Yosemite Creek EE CA

SAMPLERS: (Signature)

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471A)					REMARKS
2/21/12	1258	Sediment		X	YC-044-4	2	X	X					Additional analyses (TCLP, STLC)
	1325				YC-042-1	2	X	X					may be required. Please hold
	1334				YC-042-2	2	X	X					all extra volume.
	1345				YC-042-3	2	X	X					
	1348				YC-842-3	1	X						Please report results to
	1358				YC-042-4	2	X	X					Brian Milton
	1400				YC-842-4	1		X					bmilton@ene.com
	1420				YC-041-1	2	X	X					510-893-6700
	1421				YC-841-1	1		X					
	1426				YC-041-2	2	X	X					
	1428				YC-841-2	1	X						
	1429				YC-041-3	2	X	X					
	1445				YC-041-4	2	X	X					
	1500				YC-039-1	2	X	X					
	1502				YC-039-2	2	X	X					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	2/22/12				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Received for Laboratory by: (Signature)	Date / Time	Temp.	Seals Intact (Y/N)	Conditions / Remarks
	2/22/12 1312	9°C	Y SEALED	HOLD DEL.

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2492

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

Page 3 of 3

PROJ. NO.	PROJECT NAME
R12541	Yosemite Creek EE/CA

SAMPLERS: (Signature)

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471)				REMARKS
2/21/12	1515	Sediment		X	YC-039-3	2	X	X				Additional analyses (TCLP, STLC) may be required; please hold all extra volume.
	1512				YC-039-3,3		X	X				
	1532				YC-043-1		X	X				
	1533				YC-043-2		X	X				
	1543				YC-043-3		X	X				Please report results to Brian Milton bmilton@ene.com 510-893-6700
	1544				YC-043-4		X	X				
	1600				YC-045-1		X	X				
	1602				YC-045-2		X	X				
	1612				YC-045-3		X	X				
	1614				YC-045-4		X	X				
	1630	Water			YC-022112-RB	2	X	X				WATER SAMPLE FOR METALS REC'D @ pH < 2 pgB

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	2/22/12	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received for Laboratory by: (Signature)	Date / Time	Temp. / Seals Intact (Y/N)
	2/22/12 1312	9°C / no seals

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Conditions / Remarks: HOLD DEL.

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2493

00232.17

3/21/12

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	**Location: San Francisco, CA**
TDD Number: TO2-09-11-10-0001	**Project Number: 002693.7008.01SO**

Laboratory: Region 9 Laboratory	**Lab Project No: 1202053, SDG 12053D**
Sampling Dates: 2/21/2012	**Sample Matrix: Sediment & Water**
Analytical Method: CAM Metals *(6010B/7471A)*	**Data Reviewer: M. Song**

REVIEW AND APPROVAL:

Data Reviewer: Mindy Song — **Date:** 4/20/12
Technical QA Reviewer: Howard Edwards — **Date:** _____
Project Manager: Brian Milton — **Date:** _____

SAMPLE IDENTIFICATION:

Sample No.	Sample I.D.	Laboratory I.D.
1	YC-038-1	1202053-01
2	YC-038-2	1202053-02
3	YC-038-3	1202053-03
4	YC-038-3.6	1202053-05
5	YC-040-1	1202053-06
6	YC-840-1	1202053-07
7	YC-040-2	1202053-08
8	YC-040-3	1202053-09
9	YC-040-3.6	1202053-10
10	YC-044-1	1202053-11
11	YC-844-1	1202053-12
12	YC-044-2	1202053-13
13	YC-044-3	1202053-15
14	YC-044-4	1202053-16
15	YC-042-1	1202053-17
16	YC-042-2	1202053-18
17	YC-042-3	1202053-19
18	YC-042-4	1202053-21
19	YC-842-4	1202053-22
20	YC-041-1	1202053-23

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

Sample No.	Sample I.D.	Laboratory I.D.
21	YC-841-1	1202053-24
22	YC-041-2	1202053-25
23	YC-041-3	1202053-27
24	YC-041-4	1202053-28
25	YC-039-1	1202053-29
26	YC-039-2	1202053-30
27	YC-039-3	1202053-31
28	YC-039-3.3	1202053-32
29	YC-043-1	1202053-33
30	YC-043-2	1202053-34
31	YC-043-3	1202053-35
32	YC-043-4	1202053-36
33	YC-045-1	1202053-37
34	YC-045-2	1202053-38
35	YC-045-3	1202053-39
36	YC-045-4	1202053-40
37	YC-022112-RB	1202053-41

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

DATA PACKAGE COMPLETENESS CHECKLIST:

Checklist Code:

- X — Included: no problems
- * — Included: problems noted in review
- O — Not Included and/or Not Available
- NR — Not Required
- RS — Provided As Re-submission

Case Narrative:

- X — Case Narrative present

Quality Control Summary Package:

- X — Data Summary sheets
- X — Initial and Continuing Calibration results
- NR — CRDL Standard results
- X — Preparation Blank and Calibration Blank results
- X — ICP Interference Check Sample results
- * — Matrix Spike recoveries
- * — Matrix Duplicate results
- X — Laboratory Control Sample recoveries
- NR — Method of Standard Additions results
- NR — ICP Serial Dilution results
- NR — Instrument Detection Limits
- NR — ICP Interelement Correction Factors
- NR — ICP Linear Ranges
- X — Preparation Log
- X — Analysis Run Log

Raw QC Data Package Section

- X — Chain-of-Custody Records
- X — Instrument Printouts
- X — Sample Preparation Notebook Pages
- X — Logbook and Worksheet Pages
- X — Percent Solids Determination

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

DATA VALIDATION SUMMARY

The data were reviewed following procedures and limits specified in the EPA OSWER directive, *Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures* (EPA/540/G-90/004, OSWER Directive 9360.4-01, dated April 1990).

Indicate with a YES or NO whether each item is acceptable without qualification:

1	Holding Times	YES
2	Initial and Continuing Calibrations	YES
3	Laboratory Control Sample	YES
4	Matrix Spike	NO
5	Blanks and Background Samples	YES
6	Duplicate Analyses	YES
7	Interference Check Samples and Serial Dilution Analysis	YES
8	Post Digestion Spike and Standard Addition Analysis	N/A
9	Analyte Quantitation	YES
10	Overall Assessment of Data	YES
11	Usability of Data	NO

Comments: N/A: Not Applicable.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

1. HOLDING TIMES

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable

Samples were extracted and analyzed within required holding times except as noted under Comments. In addition, no problems were identified with regard to sample preservation or custody unless specified. For those samples analyzed outside holding time requirements, the detected results have been qualified as estimated (J), and the nondetected results have been qualified either as estimated (UJ) or rejected (R) based on the reviewer's judgement.

All Sample Matrices:
Mercury: 28 days (from collection) for analysis.
Hexavalent chromium: 24 hours (from collection) for analysis.
All other metals: 180 days (from collection) for analysis.

Comments: All holding times were met.

2. INITIAL AND CONTINUING CALIBRATION VERIFICATION

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable

Unless flagged below, an initial calibration verification (ICV) and a calibration blank were analyzed at the beginning of the run, and a continuing calibration verification (CCV) and a calibration blank were analyzed after every ten samples, and at the end of the run. ICV and CCV recoveries were within a range of 80-120% for mercury and tin, and 90-110% for all other metals. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 65% or above 135% (for mercury and tin) or below 75% or above 125% (for all other metals), all associated data are rejected (R).

Comments: All recoveries of metals in initial and continuing calibration verifications were within the control limits.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

3. LABORATORY CONTROL SAMPLE

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Laboratory Control Samples Analyzed

Laboratory control sample recoveries are used for a qualitative indication of accuracy (bias) independent of matrix effects. LCS recovery limits should either be specified in the Sampling and Analysis Plan or can be established by the laboratory. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 30%, all associated nondetected results are rejected (R) and detected results are qualified as estimated (J).

Comments: Percent recoveries of LCS were within the control limits.

4. MATRIX SPIKE

_____ Acceptable
__X__ Acceptable with qualification
_____ Unacceptable
_____ No Matrix Spikes Analyzed

Matrix spike recoveries are used for a qualitative indication of accuracy (bias) due to matrix effects. Unless flagged below, one laboratory control sample was analyzed at a rate of one per batch or one per 20 samples. Recoveries were within a range of 75-125%. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 30%, all associated nondetected results are rejected (R) and detected results are qualified as estimated (J).

Comments: Samples YC-044-3 and YC-039-2 were designated for MS/MSD analysis and the recoveries except antimony were within the control limits. The detected antimony results were qualified as estimated (J).

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

5. BLANKS AND BACKGROUND SAMPLES

__X__ Acceptable
_____ Detection Limits Adjusted

The following blanks were analyzed:
__X__ Method (preparation) Blanks
_____ Field Blanks
_____ Calibration Blanks
__X__ Rinsate Blanks
_____ Background Samples

Preparation (method) blanks were prepared for each batch of samples extracted. A preparation blank was analyzed after every continuing calibration standard, prior to sample analysis unless noted below. Any compound detected in the sample and also detected in any associated blank, must be qualified as non-detect (U) when the sample concentration is less than 5x the blank concentration.

Comments: No contamination was detected in the method blank.

6. DUPLICATE ANALYSES

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Duplicates Analyzed

Type of duplicates analyzed:
__X__ Field Duplicates
_____ Laboratory Duplicates

Calculate the relative Percent Difference (RPD) between the members of duplicate pairs using the equation indicated below. Qualify the detected results as estimated (J) for any analyte whose RPD in a laboratory duplicate exceeds 20% for water samples or 35% for soil samples.

$$RPD = \frac{2(Value\ 1 - Value\ 2)}{Value\ 1 + Value\ 2} \times 100\%$$

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

Analyte (mg/kg)	YC-040-1	YC-840-1	RPD (%)
Antimony	<4.7	<4.6	0
Arsenic	10	10	0
Barium	100	93	7
Beryllium	0.69	0.65	6
Cadmium	0.71	0.74	4
Chromium	130	130	0
Cobalt	14	13	7
Copper	94	83	12
Lead	130	130	0
Mercury	0.58	0.66	13
Molybdenum	<12	<12	0
Nickel	91	89	2
Selenium	<4.7	<4.6	0
Silver	<2.3	<2.3	0
Thallium	<12	<12	0
Vanadium	89	85	5
Zinc	210	200	5

Comments: Sample YC-840-1 was a field duplicate of YC-040-1 and all RPDs were within the control limits. (<35%)

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

Analyte (mg/kg)	YC-044-1	YC-844-1	RPD (%)
Antimony	<4.1	<4.3	0
Arsenic	11	11	0
Barium	93	91	2
Beryllium	0.73	0.70	4
Cadmium	0.59	0.72	20
Chromium	130	130	0
Cobalt	15	14	7
Copper	75	79	5
Lead	91	92	1
Mercury	0.47	0.46	2
Molybdenum	<10	<11	0
Nickel	94	92	2
Selenium	<4.1	<4.3	0
Silver	<2.1	<2.2	0
Thallium	<10	<11	0
Vanadium	89	90	1
Zinc	200	190	5

Comments: Sample YC-844-1 was a field duplicate of sample YC-044-1 and all RPDs were within the control limits. (<35%)

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

Analyte (mg/kg)	YC-042-4	YC-842-4	RPD (%)
Antimony	<3.9	<4.2	0
Arsenic	14	14	0
Barium	140	140	0
Beryllium	0.69	0.69	0
Cadmium	2.4	2.4	0
Chromium	200	200	0
Cobalt	14	14	0
Copper	78	77	1
Lead	150	150	0
Mercury	1.2	1.0	18
Molybdenum	<9.8	<11	0
Nickel	93	94	1
Selenium	<3.9	<4.2	0
Silver	1.2	1.2	0
Thallium	<9.8	<11	0
Vanadium	89	90	1
Zinc	330	330	0

Comments: Sample YC-842-4 was a field duplicate of sample YC-042-4 and all RPDs were within the control limits. (<35%)

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

7. INTERFERENCE CHECK SAMPLES AND SERIAL DILUTION ANALYSIS

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ Not required

Interference Check Samples (ICS) - Unless flagged below, an ICS was analyzed at the beginning and end of each run and at least twice every eight hours. Recoveries were within a range of 80-120%. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J) if the concentrations of Al, Ca, Fe, or Mg are higher in the sample than in the ICS.

Serial Dilution Analysis - Unless flagged below, a serial dilution analysis was performed at a rate of one per 20 samples on a sample having analyte concentrations greater than 50 times the IDL. Percent differences were within a range of 0-10%. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J).

Comments: ICS recoveries were within the control limit.
Serial Dilution: Not analyzed

8. POST DIGESTION SPIKE AND STANDARD ADDITIONS

_____ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
__X__ Not required

Post-digestion spikes - If a furnace AA result was flagged by the laboratory with an E to indicate interference, and the associated post-digestion spike recovery was less than 10%, the associated results are rejected (R).

Method of Standard Additions - If the method of standard additions was required and the correlation coefficient was less than 0.995, the associated results were qualified as estimated (J).

Comments:

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

9. ANALYTE QUANTITATION

Confirm that analyte quantitation was performed correctly using the following formulas:

Water samples:

ug/L = (Instrument printout concentration, mg/L)(1000 ug/mg)(final volume of extract, mL)
(Initial volume of extract, mL)

Soil samples:

mg/kg = (Instrument printout concentration, mg/L)(final volume of extract, mL)(0.001 L/mL)
(weight of sample extracted, g)(0.001 kg/g)(fraction solids)

Comments: Analyte quantitation is acceptable.
Sample YC-040-3.6
As: (0.03096 mg/L) (0.05 L/1.0 g) (100/61) (2) (1000 g/1kg) = 5.0754 mg/kg.
Lab reported 5.1 mg/kg.
Cu: (0.6797 mg/L) (0.05 L/1.0 g) (100/61) (2) (1000 g/1kg) = 111 mg/kg.
Lab reported 110 mg/kg.
Pb: (2.840 mg/L) (0.05 L/1.0 g) (100/61) (2) (1000 g/1 kg) = 465.57 mg/kg.
Lab reported 460 mg/kg.
Zn: (2.553 mg/L) (0.05 L/1.0 g) (100/61) (2) (1000 g/1 kg) = 418.52 mg/kg.
Lab reported 420 mg/kg.

Sample YC-039-3
As: (0.08774 mg/L) (0.05 L/1.06 g) (100/65) (2) (1000 g/1kg) = 12.734 mg/kg.
Lab reported 13 mg/kg.
Cu: (0.4798 mg/L) (0.05 L/1.06 g) (100/65) (2) (1000 g/1kg) = 69.637 mg/kg.
Lab reported 70 mg/kg.
Pb: (3.192 mg/L) (0.05 L/1.06 g) (100/65) (2) (1000 g/1 kg) = 463.28 mg/kg.
Lab reported 460 mg/kg.
Zn: (3.217 mg/L) (0.05 L/1.06 g) (100/65) (2) (1000 g/1 kg) = 466.91 mg/kg.
Lab reported 470 mg/kg.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

10. OVERALL ASSESSMENT OF DATA

On the basis of this review, the following determination has been made with regard to the overall data usability for the specified level.

_____ **Acceptable**
__X__ **Acceptable with Qualification**
_____ **Rejected**

Accepted data meet the minimum requirements for the following EPA data category:
_____ **ERS Screening**
_____ **Non-definitive with 10 % Conformation by Definitive Methodology**
_____ **Definitive, Comprehensive Statistical Error Determination was performed.**
__X__ **Definitive, Comprehensive Statistical Error Determination was not performed.**

Any qualifications to individual sample analysis results are detailed in the appropriate section above or appear under the comments section below. In cases where several QC criteria are out of specification, it may be appropriate to further qualify the data usability. The data reviewer must use professional judgment and express concerns and comments on the data validity for each specific data package.

Comments: Data as reported are valid.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	**Location: San Francisco, CA**
TDD Number: TO2-09-11-10-0001	**Project Number: 002693.7008.01SO**

11. USABILITY OF DATA

A. These data are considered usable for the data use objectives stated in the *SAMPLING AND ANALYSIS PLAN YOSEMITE CREEK SEDIMENT WASTE CHARACTERIZATION STUDY, SAN FRANCISCO, CALIFORNIA, JANUARY 9, 2012 (SAP).*

The following data use objective was indicated in the *SAP:*

TO DOCUMENT THE CONCENTRAITON OF PCBs, ASBESTOS, AND METALS (CHROMIUM, LEAD, MERCURY, AND ZINC) IN SEDIMENT ATH THE SITE AND DETERMINE WHERE THESE CONCENTRAITONS EXCEED STATE AND FEDERAL WASTE DISPOSAL CRITERIA.

USING THE WASTE CHARACTRIZATION STUDY DATA AND DATA SETS FROM PREVIOUS INVESTIGAITONS, ESTIMATE THE VOLUME OF SEDIMENT CONTAINING CONCENTRATIONS OF ASBESTOS, PCBS, AND METALS (CHROMIUM, LEAD, MERCURY, AND ZINCE) THAT EXCEED STATE AND FEDERAL WASTE DISPOSAL CRITERIA.

THE DATA ARE USABLE FOR THE ABOVE OBJECTIVES.

B. These data meet quality objectives stated in the *SAP.*

AS INDICATED IN SECTION 3 OF THE SAP, THE INVESTIGATION WILL GENERATE DEFINITIVE DATA AND TABLE 3-1 OF THE SAP OUTLINES THE DATA QUALITY INDICATOR GOALS APPLICABLE TO THE DEFINITIVE DATA QUALITY LEVEL. THE DATA IN THIS PACKAGE MEET THESE REQUIREMENTS.

12. DOCUMENTATION OF LABORATORY CORRECTIVE ACTION

Problem: No problems requiring corrective action were found.

Resolution: Not required.

Attached are copies of all data summary sheets, with data qualifiers indicated, and a copy of the chain of custody for the samples.

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-01									**Sediment - Sampled: 02/21/12 10:48**
Sample ID: YC-038-1									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.2		0.048	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	3.9	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		8.7		3.9	"	"	"	"	6010C/SOP503
Barium		150		9.6	"	"	"	"	6010C/SOP503
Beryllium		0.51		0.19	"	"	"	"	6010C/SOP503
Cadmium		2.3		0.96	"	"	"	"	6010C/SOP503
Chromium		150		1.9	"	"	"	"	6010C/SOP503
Cobalt		12		3.9	"	"	"	"	6010C/SOP503
Copper		90		7.7	"	"	"	"	6010C/SOP503
Lead		330		5.8	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	9.6	"	"	"	"	6010C/SOP503
Nickel		75		9.6	"	"	"	"	6010C/SOP503
Selenium		ND	U	3.9	"	"	"	"	6010C/SOP503
Silver		1.1	Cl, J	1.9	"	"	"	"	6010C/SOP503
Thallium		ND	U	9.6	"	"	"	"	6010C/SOP503
Vanadium		75		3.9	"	"	"	"	6010C/SOP503
Zinc		320		15	"	"	"	"	6010C/SOP503
Sample ID: YC-038-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		52		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-02									**Sediment - Sampled: 02/21/12 10:50**
Sample ID: YC-038-2									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.5	J, Q4, Q6	0.045	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		2.1	Cl, J J	3.6	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		7.1		3.6	"	"	"	"	6010C/SOP503
Barium		260		8.9	"	"	"	"	6010C/SOP503
Beryllium		0.42		0.18	"	"	"	"	6010C/SOP503
Cadmium		10		0.89	"	"	"	"	6010C/SOP503
Chromium		330		1.8	"	"	"	"	6010C/SOP503
Cobalt		15		3.6	"	"	"	"	6010C/SOP503
Copper		71		7.2	"	"	"	"	6010C/SOP503
Lead		650		5.4	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	8.9	"	"	"	"	6010C/SOP503
Nickel		60		8.9	"	"	"	"	6010C/SOP503
Selenium		2.4	Cl, J	3.6	"	"	"	"	6010C/SOP503
Silver		1.2	Cl, J	1.8	"	"	"	"	6010C/SOP503
Thallium		ND	U	8.9	"	"	"	"	6010C/SOP503
Vanadium		74		3.6	"	"	"	"	6010C/SOP503
Zinc		480		14	"	"	"	"	6010C/SOP503
Sample ID: YC-038-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		56		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460

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Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-03									**Sediment - Sampled: 02/21/12 11:00**
Sample ID: YC-038-3									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.15		0.032	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	2.6	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		6.9		2.6	"	"	"	"	6010C/SOP503
Barium		36		6.5	"	"	"	"	6010C/SOP503
Beryllium		0.31		0.13	"	"	"	"	6010C/SOP503
Cadmium		0.36	C1, J	0.65	"	"	"	"	6010C/SOP503
Chromium		49		1.3	"	"	"	"	6010C/SOP503
Cobalt		8.0		2.6	"	"	"	"	6010C/SOP503
Copper		16		5.2	"	"	"	"	6010C/SOP503
Lead		27		3.9	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	6.5	"	"	"	"	6010C/SOP503
Nickel		30		6.5	"	"	"	"	6010C/SOP503
Selenium		ND	U	2.6	"	"	"	"	6010C/SOP503
Silver		ND	U	1.3	"	"	"	"	6010C/SOP503
Thallium		ND	U	6.5	"	"	"	"	6010C/SOP503
Vanadium		62		2.6	"	"	"	"	6010C/SOP503
Zinc		56		10	"	"	"	"	6010C/SOP503
Sample ID: YC-038-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		77		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-04									**Sediment - Sampled: 02/21/12 11:02**
Sample ID: YC-838-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		80		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-05									**Sediment - Sampled: 02/21/12 11:05**
Sample ID: YC-038-3.6									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.40		0.032	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	2.6	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		7.4		2.6	"	"	"	"	6010C/SOP503
Barium		38		6.4	"	"	"	"	6010C/SOP503
Beryllium		0.31		0.13	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.64	"	"	"	"	6010C/SOP503
Chromium		48		1.3	"	"	"	"	6010C/SOP503
Cobalt		7.7		2.6	"	"	"	"	6010C/SOP503
Copper		15		5.1	"	"	"	"	6010C/SOP503
Lead		16		3.8	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	6.4	"	"	"	"	6010C/SOP503
Nickel		33		6.4	"	"	"	"	6010C/SOP503
Selenium		ND	U	2.6	"	"	"	"	6010C/SOP503
Silver		ND	U	1.3	"	"	"	"	6010C/SOP503
Thallium		ND	U	6.4	"	"	"	"	6010C/SOP503

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Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-05									**Sediment - Sampled: 02/21/12 11:05**
Sample ID: YC-038-3.6									**Metals by EPA 6000/7000 Series Methods**
Vanadium		49		2.6	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Zinc		48		10	"	"	"	"	6010C/SOP503
Sample ID: YC-038-3.6									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		78		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-06									**Sediment - Sampled: 02/21/12 11:30**
Sample ID: YC-040-1									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.58		0.059	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	4.7	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		10		4.7	"	"	"	"	6010C/SOP503
Barium		100		12	"	"	"	"	6010C/SOP503
Beryllium		0.69		0.23	"	"	"	"	6010C/SOP503
Cadmium		0.71	C1, J	1.2	"	"	"	"	6010C/SOP503
Chromium		130		2.3	"	"	"	"	6010C/SOP503
Cobalt		14		4.7	"	"	"	"	6010C/SOP503
Copper		94		9.4	"	"	"	"	6010C/SOP503
Lead		130		7	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	12	"	"	"	"	6010C/SOP503
Nickel		91		12	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.7	"	"	"	"	6010C/SOP503
Silver		ND	U	2.3	"	"	"	"	6010C/SOP503
Thallium		ND	U	12	"	"	"	"	6010C/SOP503
Vanadium		89		4.7	"	"	"	"	6010C/SOP503
Zinc		210		19	"	"	"	"	6010C/SOP503
Sample ID: YC-040-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		43		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-07									**Sediment - Sampled: 02/21/12 11:32**
Sample ID: YC-840-1									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.66		0.058	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	4.6	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		10		4.6	"	"	"	"	6010C/SOP503
Barium		93		12	"	"	"	"	6010C/SOP503
Beryllium		0.65		0.23	"	"	"	"	6010C/SOP503
Cadmium		0.74	C1, J	1.2	"	"	"	"	6010C/SOP503
Chromium		130		2.3	"	"	"	"	6010C/SOP503
Cobalt		13		4.6	"	"	"	"	6010C/SOP503
Copper		83		9.2	"	"	"	"	6010C/SOP503
Lead		130		6.9	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	12	"	"	"	"	6010C/SOP503
Nickel		89		12	"	"	"	"	6010C/SOP503

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Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-07									**Sediment - Sampled: 02/21/12 11:32**
Sample ID: YC-840-1									**Metals by EPA 6000/7000 Series Methods**
Selenium		ND	U	4.6	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Silver		ND	U	2.3	"	"	"	"	6010C/SOP503
Thallium		ND	U	12	"	"	"	"	6010C/SOP503
Vanadium		85		4.6	"	"	"	"	6010C/SOP503
Zinc		200		18	"	"	"	"	6010C/SOP503
Sample ID: YC-840-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		43		1	%	B2C0017	03/05/12	03/06/12	3550C/SOP460
Lab ID: 1202053-08									**Sediment - Sampled: 02/21/12 11:33**
Sample ID: YC-040-2									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.55		0.041	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	3.3	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		7.6		3.3	"	"	"	"	6010C/SOP503
Barium		76		8.3	"	"	"	"	6010C/SOP503
Beryllium		0.48		0.17	"	"	"	"	6010C/SOP503
Cadmium		0.89		0.83	"	"	"	"	6010C/SOP503
Chromium		110		1.7	"	"	"	"	6010C/SOP503
Cobalt		11		3.3	"	"	"	"	6010C/SOP503
Copper		86		6.6	"	"	"	"	6010C/SOP503
Lead		110		5	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	8.3	"	"	"	"	6010C/SOP503
Nickel		69		8.3	"	"	"	"	6010C/SOP503
Selenium		ND	U	3.3	"	"	"	"	6010C/SOP503
Silver		ND	U	1.7	"	"	"	"	6010C/SOP503
Thallium		ND	U	8.3	"	"	"	"	6010C/SOP503
Vanadium		74		3.3	"	"	"	"	6010C/SOP503
Zinc		190		13	"	"	"	"	6010C/SOP503
Sample ID: YC-040-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		60		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-09									**Sediment - Sampled: 02/21/12 11:55**
Sample ID: YC-040-3									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.32		0.031	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	2.5	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		3.4		2.5	"	"	"	"	6010C/SOP503
Barium		59		6.2	"	"	"	"	6010C/SOP503
Beryllium		0.23		0.12	"	"	"	"	6010C/SOP503
Cadmium		1.1		0.62	"	"	"	"	6010C/SOP503
Chromium		110		1.2	"	"	"	"	6010C/SOP503
Cobalt		7.4		2.5	"	"	"	"	6010C/SOP503
Copper		39		4.9	"	"	"	"	6010C/SOP503

4/20/12

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Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-09									**Sediment - Sampled: 02/21/12 11:55**
Sample ID: YC-040-3									**Metals by EPA 6000/7000 Series Methods**
Lead		150		3.7	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Molybdenum		ND	U	6.2	"	"	"	"	6010C/SOP503
Nickel		38		6.2	"	"	"	"	6010C/SOP503
Selenium		ND	U	2.5	"	"	"	"	6010C/SOP503
Silver		ND	U	1.2	"	"	"	"	6010C/SOP503
Thallium		ND	U	6.2	"	"	"	"	6010C/SOP503
Vanadium		50		2.5	"	"	"	"	6010C/SOP503
Zinc		210		9.9	"	"	"	"	6010C/SOP503
Sample ID: YC-040-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		81		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-10									**Sediment - Sampled: 02/21/12 11:57**
Sample ID: YC-040-3.6									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.1		0.041	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		4.0	J	3.3	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		5.1		3.3	"	"	"	"	6010C/SOP503
Barium		160		8.2	"	"	"	"	6010C/SOP503
Beryllium		0.31		0.16	"	"	"	"	6010C/SOP503
Cadmium		3.2		0.82	"	"	"	"	6010C/SOP503
Chromium		170		1.6	"	"	"	"	6010C/SOP503
Cobalt		11		3.3	"	"	"	"	6010C/SOP503
Copper		110		6.5	"	"	"	"	6010C/SOP503
Lead		460		4.9	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	8.2	"	"	"	"	6010C/SOP503
Nickel		72		8.2	"	"	"	"	6010C/SOP503
Selenium		ND	U	3.3	"	"	"	"	6010C/SOP503
Silver		1.5	CI, J	1.6	"	"	"	"	6010C/SOP503
Thallium		ND	U	8.2	"	"	"	"	6010C/SOP503
Vanadium		79		3.3	"	"	"	"	6010C/SOP503
Zinc		420		13	"	"	"	"	6010C/SOP503
Sample ID: YC-040-3.6									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		61		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-11									**Sediment - Sampled: 02/21/12 12:57**
Sample ID: YC-044-1									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.47		0.052	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	4.1	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		11		4.1	"	"	"	"	6010C/SOP503
Barium		93		10	"	"	"	"	6010C/SOP503
Beryllium		0.73		0.21	"	"	"	"	6010C/SOP503
Cadmium		0.59	CI, J	1	"	"	"	"	6010C/SOP503

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-11									**Sediment - Sampled: 02/21/12 12:57**
Sample ID: YC-044-1									**Metals by EPA 6000/7000 Series Methods**
Chromium		130		2.1	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Cobalt		15		4.1	"	"	"	"	6010C/SOP503
Copper		75		8.2	"	"	"	"	6010C/SOP503
Lead		91		6.2	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	10	"	"	"	"	6010C/SOP503
Nickel		94		10	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.1	"	"	"	"	6010C/SOP503
Silver		ND	U	2.1	"	"	"	"	6010C/SOP503
Thallium		ND	U	10	"	"	"	"	6010C/SOP503
Vanadium		89		4.1	"	"	"	"	6010C/SOP503
Zinc		200		16	"	"	"	"	6010C/SOP503
Sample ID: YC-044-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		49		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-12									**Sediment - Sampled: 02/21/12 12:58**
Sample ID: YC-844-1									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.46		0.054	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	4.3	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		11		4.3	"	"	"	"	6010C/SOP503
Barium		91		11	"	"	"	"	6010C/SOP503
Beryllium		0.70		0.22	"	"	"	"	6010C/SOP503
Cadmium		0.72	C1, J	1.1	"	"	"	"	6010C/SOP503
Chromium		130		2.2	"	"	"	"	6010C/SOP503
Cobalt		14		4.3	"	"	"	"	6010C/SOP503
Copper		79		8.6	"	"	"	"	6010C/SOP503
Lead		92		6.5	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	11	"	"	"	"	6010C/SOP503
Nickel		92		11	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.3	"	"	"	"	6010C/SOP503
Silver		ND	U	2.2	"	"	"	"	6010C/SOP503
Thallium		ND	U	11	"	"	"	"	6010C/SOP503
Vanadium		90		4.3	"	"	"	"	6010C/SOP503
Zinc		190		17	"	"	"	"	6010C/SOP503
Sample ID: YC-844-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		46		1	%	B2C0017	03/05/12	03/06/12	3550C/SOP460
Lab ID: 1202053-13									**Sediment - Sampled: 02/21/12 12:38**
Sample ID: YC-044-2									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.74		0.050	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	4	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		13		4	"	"	"	"	6010C/SOP503

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United States Environmental Protection Agency
Region 9 Laboratory

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12053D
Project Number: R12S41	75 Hawthorne Street	Reported: 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-13									**Sediment - Sampled: 02/21/12 12:38**
Sample ID: YC-044-2									**Metals by EPA 6000/7000 Series Methods**
Barium		110		9.9	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Beryllium		0.73		0.20	"	"	"	"	6010C/SOP503
Cadmium		1.6		0.99	"	"	"	"	6010C/SOP503
Chromium		180		2	"	"	"	"	6010C/SOP503
Cobalt		15		4	"	"	"	"	6010C/SOP503
Copper		95		8	"	"	"	"	6010C/SOP503
Lead		180		6	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	9.9	"	"	"	"	6010C/SOP503
Nickel		100		9.9	"	"	"	"	6010C/SOP503
Selenium		ND	U	4	"	"	"	"	6010C/SOP503
Silver		1.2	C1, J	2	"	"	"	"	6010C/SOP503
Thallium		ND	U	9.9	"	"	"	"	6010C/SOP503
Vanadium		92		4	"	"	"	"	6010C/SOP503
Zinc		290		16	"	"	"	"	6010C/SOP503
Sample ID: YC-044-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		50		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-14									**Sediment - Sampled: 02/21/12 12:40**
Sample ID: YC-844-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		51		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-15									**Sediment - Sampled: 02/21/12 12:48**
Sample ID: YC-044-3									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.4		0.057	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	J, Q4, U	4.6	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		14		4.6	"	"	"	"	6010C/SOP503
Barium		180		11	"	"	"	"	6010C/SOP503
Beryllium		0.73		0.23	"	"	"	"	6010C/SOP503
Cadmium		4.5		1.1	"	"	"	"	6010C/SOP503
Chromium		310		2.3	"	"	"	"	6010C/SOP503
Cobalt		15		4.6	"	"	"	"	6010C/SOP503
Copper		130		9.2	"	"	"	"	6010C/SOP503
Lead		340		6.9	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	11	"	"	"	"	6010C/SOP503
Nickel		110		11	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.6	"	"	"	"	6010C/SOP503
Silver		1.5	C1, J	2.3	"	"	"	"	6010C/SOP503
Thallium		ND	U	11	"	"	"	"	6010C/SOP503
Vanadium		95		4.6	"	"	"	"	6010C/SOP503
Zinc		550		18	"	"	"	"	6010C/SOP503
Sample ID: YC-044-3									**Conventional Chemistry Parameters by APHA/EPA Methods**

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Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-15									**Sediment - Sampled: 02/21/12 12:48**
Sample ID: YC-044-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		44		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-16									**Sediment - Sampled: 02/21/12 12:58**
Sample ID: YC-044-4									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.1		0.053	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	4.2	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		14		4.2	"	"	"	"	6010C/SOP503
Barium		190		11	"	"	"	"	6010C/SOP503
Beryllium		0.66		0.21	"	"	"	"	6010C/SOP503
Cadmium		4.4		1.1	"	"	"	"	6010C/SOP503
Chromium		250		2.1	"	"	"	"	6010C/SOP503
Cobalt		15		4.2	"	"	"	"	6010C/SOP503
Copper		110		8.5	"	"	"	"	6010C/SOP503
Lead		350		6.4	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	11	"	"	"	"	6010C/SOP503
Nickel		99		11	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.2	"	"	"	"	6010C/SOP503
Silver		1.4	C1, J	2.1	"	"	"	"	6010C/SOP503
Thallium		ND	U	11	"	"	"	"	6010C/SOP503
Vanadium		88		4.2	"	"	"	"	6010C/SOP503
Zinc		440		17	"	"	"	"	6010C/SOP503
Sample ID: YC-044-4									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		47		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-17									**Sediment - Sampled: 02/21/12 13:25**
Sample ID: YC-042-1									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.3		0.048	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	3.8	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		11		3.8	"	"	"	"	6010C/SOP503
Barium		120		9.6	"	"	"	"	6010C/SOP503
Beryllium		0.56		0.19	"	"	"	"	6010C/SOP503
Cadmium		1.9		0.96	"	"	"	"	6010C/SOP503
Chromium		150		1.9	"	"	"	"	6010C/SOP503
Cobalt		13		3.8	"	"	"	"	6010C/SOP503
Copper		97		7.7	"	"	"	"	6010C/SOP503
Lead		200		5.8	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	9.6	"	"	"	"	6010C/SOP503
Nickel		90		9.6	"	"	"	"	6010C/SOP503
Selenium		ND	U	3.8	"	"	"	"	6010C/SOP503
Silver		1.2	C1, J	1.9	"	"	"	"	6010C/SOP503
Thallium		ND	U	9.6	"	"	"	"	6010C/SOP503

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-17									**Sediment - Sampled: 02/21/12 13:25**
Sample ID: YC-042-1									**Metals by EPA 6000/7000 Series Methods**
Vanadium		76		3.8	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Zinc		310		15	"	"	"	"	6010C/SOP503
Sample ID: YC-042-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		52		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-18									**Sediment - Sampled: 02/21/12 13:34**
Sample ID: YC-042-2									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.96		0.049	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	3.9	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		12		3.9	"	"	"	"	6010C/SOP503
Barium		180		9.9	"	"	"	"	6010C/SOP503
Beryllium		0.57		0.20	"	"	"	"	6010C/SOP503
Cadmium		3.9		0.99	"	"	"	"	6010C/SOP503
Chromium		220		2	"	"	"	"	6010C/SOP503
Cobalt		14		3.9	"	"	"	"	6010C/SOP503
Copper		110		7.9	"	"	"	"	6010C/SOP503
Lead		320		5.9	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	9.9	"	"	"	"	6010C/SOP503
Nickel		100		9.9	"	"	"	"	6010C/SOP503
Selenium		ND	U	3.9	"	"	"	"	6010C/SOP503
Silver		1.1	C1, J	2	"	"	"	"	6010C/SOP503
Thallium		ND	U	9.9	"	"	"	"	6010C/SOP503
Vanadium		76		3.9	"	"	"	"	6010C/SOP503
Zinc		390		16	"	"	"	"	6010C/SOP503
Sample ID: YC-042-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		51		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-19									**Sediment - Sampled: 02/21/12 13:45**
Sample ID: YC-042-3									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.1		0.053	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	4.2	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		13		4.2	"	"	"	"	6010C/SOP503
Barium		240		11	"	"	"	"	6010C/SOP503
Beryllium		0.62		0.21	"	"	"	"	6010C/SOP503
Cadmium		5.8		1.1	"	"	"	"	6010C/SOP503
Chromium		310		2.1	"	"	"	"	6010C/SOP503
Cobalt		15		4.2	"	"	"	"	6010C/SOP503
Copper		120		8.4	"	"	"	"	6010C/SOP503
Lead		370		6.3	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	11	"	"	"	"	6010C/SOP503
Nickel		100		11	"	"	"	"	6010C/SOP503

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United States Environmental Protection Agency
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Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-19									**Sediment - Sampled: 02/21/12 13:45**
Sample ID: YC-042-3									**Metals by EPA 6000/7000 Series Methods**
Selenium		ND	U	4.2	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Silver		1.2	C1, J	2.1	"	"	"	"	6010C/SOP503
Thallium		ND	U	11	"	"	"	"	6010C/SOP503
Vanadium		84		4.2	"	"	"	"	6010C/SOP503
Zinc		440		17	"	"	"	"	6010C/SOP503
Sample ID: YC-042-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		47		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-20									**Sediment - Sampled: 02/21/12 13:48**
Sample ID: YC-842-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		47		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-21									**Sediment - Sampled: 02/21/12 13:58**
Sample ID: YC-042-4									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.2		0.052	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	3.9	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		14		3.9	"	"	"	"	6010C/SOP503
Barium		140		9.8	"	"	"	"	6010C/SOP503
Beryllium		0.69		0.20	"	"	"	"	6010C/SOP503
Cadmium		2.4		0.98	"	"	"	"	6010C/SOP503
Chromium		200		2	"	"	"	"	6010C/SOP503
Cobalt		14		3.9	"	"	"	"	6010C/SOP503
Copper		78		7.8	"	"	"	"	6010C/SOP503
Lead		150		5.9	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	9.8	"	"	"	"	6010C/SOP503
Nickel		93		9.8	"	"	"	"	6010C/SOP503
Selenium		ND	U	3.9	"	"	"	"	6010C/SOP503
Silver		1.2	C1, J	2	"	"	"	"	6010C/SOP503
Thallium		ND	U	9.8	"	"	"	"	6010C/SOP503
Vanadium		89		3.9	"	"	"	"	6010C/SOP503
Zinc		330		16	"	"	"	"	6010C/SOP503
Sample ID: YC-042-4									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		48		1	%	B2B0141	02/29/12	03/01/12	3550C/SOP460
Lab ID: 1202053-22									**Sediment - Sampled: 02/21/12 14:00**
Sample ID: YC-842-4									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.0		0.053	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	4.2	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		14		4.2	"	"	"	"	6010C/SOP503
Barium		140		11	"	"	"	"	6010C/SOP503
Beryllium		0.69		0.21	"	"	"	"	6010C/SOP503
Cadmium		2.4		1.1	"	"	"	"	6010C/SOP503

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United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-22									**Sediment - Sampled: 02/21/12 14:00**
Sample ID: YC-842-4									**Metals by EPA 6000/7000 Series Methods**
Chromium		200		2.1	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Cobalt		14		4.2	"	"	"	"	6010C/SOP503
Copper		77		8.5	"	"	"	"	6010C/SOP503
Lead		150		6.4	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	11	"	"	"	"	6010C/SOP503
Nickel		94		11	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.2	"	"	"	"	6010C/SOP503
Silver		1.2	C1, J	2.1	"	"	"	"	6010C/SOP503
Thallium		ND	U	11	"	"	"	"	6010C/SOP503
Vanadium		90		4.2	"	"	"	"	6010C/SOP503
Zinc		330		17	"	"	"	"	6010C/SOP503
Sample ID: YC-842-4									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		47		1	%	B2C0017	03/05/12	03/06/12	3550C/SOP460
Lab ID: 1202053-23									**Sediment - Sampled: 02/21/12 14:20**
Sample ID: YC-041-1									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.48		0.047	mg/kg dry	B2C0002	03/01/12	03/01/12	7473/SOP535
Antimony		ND	U	3.8	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		10		3.8	"	"	"	"	6010C/SOP503
Barium		150		9.4	"	"	"	"	6010C/SOP503
Beryllium		0.57		0.19	"	"	"	"	6010C/SOP503
Cadmium		0.94		0.94	"	"	"	"	6010C/SOP503
Chromium		130		1.9	"	"	"	"	6010C/SOP503
Cobalt		13		3.8	"	"	"	"	6010C/SOP503
Copper		99		7.5	"	"	"	"	6010C/SOP503
Lead		180		5.6	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	9.4	"	"	"	"	6010C/SOP503
Nickel		89		9.4	"	"	"	"	6010C/SOP503
Selenium		ND	U	3.8	"	"	"	"	6010C/SOP503
Silver		0.96	C1, J	1.9	"	"	"	"	6010C/SOP503
Thallium		ND	U	9.4	"	"	"	"	6010C/SOP503
Vanadium		81		3.8	"	"	"	"	6010C/SOP503
Zinc		270		15	"	"	"	"	6010C/SOP503
Sample ID: YC-041-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		53		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-24									**Sediment - Sampled: 02/21/12 14:21**
Sample ID: YC-841-1									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.48		0.047	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		2.9	C1, J J	3.8	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		9.8		3.8	"	"	"	"	6010C/SOP503

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-24									**Sediment - Sampled: 02/21/12 14:21**
Sample ID: YC-841-1									**Metals by EPA 6000/7000 Series Methods**
Barium		160		9.5	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Beryllium		0.56		0.19	"	"	"	"	6010C/SOP503
Cadmium		0.87	C1, J	0.95	"	"	"	"	6010C/SOP503
Chromium		120		1.9	"	"	"	"	6010C/SOP503
Cobalt		12		3.8	"	"	"	"	6010C/SOP503
Copper		100		7.6	"	"	"	"	6010C/SOP503
Lead		190		5.7	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	9.5	"	"	"	"	6010C/SOP503
Nickel		85		9.5	"	"	"	"	6010C/SOP503
Selenium		ND	U	3.8	"	"	"	"	6010C/SOP503
Silver		0.95	C1, J	1.9	"	"	"	"	6010C/SOP503
Thallium		ND	U	9.5	"	"	"	"	6010C/SOP503
Vanadium		77		3.8	"	"	"	"	6010C/SOP503
Zinc		280		15	"	"	"	"	6010C/SOP503
Sample ID: YC-841-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		53		1	%	B2C0017	03/05/12	03/06/12	3550C/SOP460
Lab ID: 1202053-25									**Sediment - Sampled: 02/21/12 14:26**
Sample ID: YC-041-2									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.99	J, Q4, Q6	0.044	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		4.5	U	3.5	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		11		3.5	"	"	"	"	6010C/SOP503
Barium		230		8.8	"	"	"	"	6010C/SOP503
Beryllium		0.54		0.18	"	"	"	"	6010C/SOP503
Cadmium		3.2		0.88	"	"	"	"	6010C/SOP503
Chromium		200		1.8	"	"	"	"	6010C/SOP503
Cobalt		13		3.5	"	"	"	"	6010C/SOP503
Copper		240		7.1	"	"	"	"	6010C/SOP503
Lead		550		5.3	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	8.8	"	"	"	"	6010C/SOP503
Nickel		120		8.8	"	"	"	"	6010C/SOP503
Selenium		ND	U	3.5	"	"	"	"	6010C/SOP503
Silver		1.5	C1, J	1.8	"	"	"	"	6010C/SOP503
Thallium		ND	U	8.8	"	"	"	"	6010C/SOP503
Vanadium		75		3.5	"	"	"	"	6010C/SOP503
Zinc		650		14	"	"	"	"	6010C/SOP503
Sample ID: YC-041-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		57		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-26									**Sediment - Sampled: 02/21/12 14:28**
Sample ID: YC-841-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		57		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12053D
Project Number: R12S41	75 Hawthorne Street	Reported: 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-26									**Sediment - Sampled: 02/21/12 14:28**
Lab ID: 1202053-27									**Sediment - Sampled: 02/21/12 14:29**
Sample ID: YC-041-3									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.8		0.047	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		9.4	J	3.7	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		12		3.7	"	"	"	"	6010C/SOP503
Barium		720		9.3	"	"	"	"	6010C/SOP503
Beryllium		0.47		0.19	"	"	"	"	6010C/SOP503
Cadmium		9.1		0.93	"	"	"	"	6010C/SOP503
Chromium		360		1.9	"	"	"	"	6010C/SOP503
Cobalt		16		3.7	"	"	"	"	6010C/SOP503
Copper		260		7.5	"	"	"	"	6010C/SOP503
Lead		2,800		5.6	"	"	"	"	6010C/SOP503
Molybdenum		5.4	CI, J	9.3	"	"	"	"	6010C/SOP503
Nickel		160		9.3	"	"	"	"	6010C/SOP503
Selenium		ND	U	3.7	"	"	"	"	6010C/SOP503
Silver		3.4		1.9	"	"	"	"	6010C/SOP503
Thallium		ND	U	9.3	"	"	"	"	6010C/SOP503
Vanadium		72		3.7	"	"	"	"	6010C/SOP503
Zinc		1,200		15	"	"	"	"	6010C/SOP503
Sample ID: YC-041-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		54		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-28									**Sediment - Sampled: 02/21/12 14:45**
Sample ID: YC-041-4									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.3		0.052	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		ND	U	4.2	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		9.0		4.2	"	"	"	"	6010C/SOP503
Barium		320		10	"	"	"	"	6010C/SOP503
Beryllium		0.49		0.21	"	"	"	"	6010C/SOP503
Cadmium		8.5		1	"	"	"	"	6010C/SOP503
Chromium		440		2.1	"	"	"	"	6010C/SOP503
Cobalt		13		4.2	"	"	"	"	6010C/SOP503
Copper		130		8.4	"	"	"	"	6010C/SOP503
Lead		650		6.3	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	10	"	"	"	"	6010C/SOP503
Nickel		83		10	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.2	"	"	"	"	6010C/SOP503
Silver		1.4	CI, J	2.1	"	"	"	"	6010C/SOP503
Thallium		ND	U	10	"	"	"	"	6010C/SOP503
Vanadium		71		4.2	"	"	"	"	6010C/SOP503
Zinc		550		17	"	"	"	"	6010C/SOP503
Sample ID: YC-041-4									**Conventional Chemistry Parameters by APHA/EPA Methods**

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United States Environmental Protection Agency
Region 9 Laboratory

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-28									**Sediment - Sampled: 02/21/12 14:45**
Sample ID: YC-041-4									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		48		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-29									**Sediment - Sampled: 02/21/12 15:00**
Sample ID: YC-039-1									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.9		0.057	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		ND	U	4.6	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		12		4.6	"	"	"	"	6010C/SOP503
Barium		250		11	"	"	"	"	6010C/SOP503
Beryllium		0.70		0.23	"	"	"	"	6010C/SOP503
Cadmium		5.6		1.1	"	"	"	"	6010C/SOP503
Chromium		280		2.3	"	"	"	"	6010C/SOP503
Cobalt		17		4.6	"	"	"	"	6010C/SOP503
Copper		140		9.1	"	"	"	"	6010C/SOP503
Lead		760		6.9	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	11	"	"	"	"	6010C/SOP503
Nickel		120		11	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.6	"	"	"	"	6010C/SOP503
Silver		1.6	C1, J	2.3	"	"	"	"	6010C/SOP503
Thallium		ND	U	11	"	"	"	"	6010C/SOP503
Vanadium		99		4.6	"	"	"	"	6010C/SOP503
Zinc		660		18	"	"	"	"	6010C/SOP503
Sample ID: YC-039-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		44		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-30									**Sediment - Sampled: 02/21/12 15:02**
Sample ID: YC-039-2									**Metals by EPA 6000/7000 Series Methods**
Mercury		1.1		0.046	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		ND	J, Q4, U	3.7	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		7.0		3.7	"	"	"	"	6010C/SOP503
Barium		200		9.1	"	"	"	"	6010C/SOP503
Beryllium		0.41		0.18	"	"	"	"	6010C/SOP503
Cadmium		5.5		0.91	"	"	"	"	6010C/SOP503
Chromium		290		1.8	"	"	"	"	6010C/SOP503
Cobalt		13		3.7	"	"	"	"	6010C/SOP503
Copper		110		7.3	"	"	"	"	6010C/SOP503
Lead		440		5.5	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	9.1	"	"	"	"	6010C/SOP503
Nickel		76		9.1	"	"	"	"	6010C/SOP503
Selenium		ND	U	3.7	"	"	"	"	6010C/SOP503
Silver		0.95	C1, J	1.8	"	"	"	"	6010C/SOP503
Thallium		ND	U	9.1	"	"	"	"	6010C/SOP503

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12053D
Project Number: R12S41	75 Hawthorne Street	Reported: 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-30									**Sediment - Sampled: 02/21/12 15:02**
Sample ID: YC-039-2									Metals by EPA 6000/7000 Series Methods
Vanadium		71		3.7	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Zinc		360		15	"	"	"	"	6010C/SOP503
Sample ID: YC-039-2									Conventional Chemistry Parameters by APHA/EPA Methods
% Solids		55		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-31									**Sediment - Sampled: 02/21/12 15:15**
Sample ID: YC-039-3									Metals by EPA 6000/7000 Series Methods
Mercury		0.87		0.038	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		2.4	C1, J	2.9	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		13		2.9	"	"	"	"	6010C/SOP503
Barium		260		7.2	"	"	"	"	6010C/SOP503
Beryllium		0.41		0.14	"	"	"	"	6010C/SOP503
Cadmium		2.8		0.72	"	"	"	"	6010C/SOP503
Chromium		150		1.4	"	"	"	"	6010C/SOP503
Cobalt		13		2.9	"	"	"	"	6010C/SOP503
Copper		70		5.8	"	"	"	"	6010C/SOP503
Lead		460		4.3	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	7.2	"	"	"	"	6010C/SOP503
Nickel		73		7.2	"	"	"	"	6010C/SOP503
Selenium		ND	U	2.9	"	"	"	"	6010C/SOP503
Silver		0.94	C1, J	1.4	"	"	"	"	6010C/SOP503
Thallium		ND	U	7.2	"	"	"	"	6010C/SOP503
Vanadium		71		2.9	"	"	"	"	6010C/SOP503
Zinc		470		12	"	"	"	"	6010C/SOP503
Sample ID: YC-039-3									Conventional Chemistry Parameters by APHA/EPA Methods
% Solids		65		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-32									**Sediment - Sampled: 02/21/12 15:12**
Sample ID: YC-039-3.3									Metals by EPA 6000/7000 Series Methods
Mercury		0.36		0.033	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		ND	U	2.7	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		11		2.7	"	"	"	"	6010C/SOP503
Barium		71		6.7	"	"	"	"	6010C/SOP503
Beryllium		0.31		0.13	"	"	"	"	6010C/SOP503
Cadmium		0.70		0.67	"	"	"	"	6010C/SOP503
Chromium		73		1.3	"	"	"	"	6010C/SOP503
Cobalt		10		2.7	"	"	"	"	6010C/SOP503
Copper		26		5.3	"	"	"	"	6010C/SOP503
Lead		87		4	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	6.7	"	"	"	"	6010C/SOP503
Nickel		48		6.7	"	"	"	"	6010C/SOP503
Selenium		ND	U	2.7	"	"	"	"	6010C/SOP503

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
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Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-32									**Sediment - Sampled: 02/21/12 15:12**
Sample ID: YC-039-3.3									**Metals by EPA 6000/7000 Series Methods**
Silver		ND	U	1.3	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Thallium		ND	U	6.7	"	"	"	"	6010C/SOP503
Vanadium		52		2.7	"	"	"	"	6010C/SOP503
Zinc		110		11	"	"	"	"	6010C/SOP503
Sample ID: YC-039-3.3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		75		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-33									**Sediment - Sampled: 02/21/12 15:32**
Sample ID: YC-043-1									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.54		0.050	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		ND	U	4	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		12		4	"	"	"	"	6010C/SOP503
Barium		83		10	"	"	"	"	6010C/SOP503
Beryllium		0.66		0.20	"	"	"	"	6010C/SOP503
Cadmium		0.59	CI, J	1	"	"	"	"	6010C/SOP503
Chromium		120		2	"	"	"	"	6010C/SOP503
Cobalt		14		4	"	"	"	"	6010C/SOP503
Copper		75		8.1	"	"	"	"	6010C/SOP503
Lead		96		6.1	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	10	"	"	"	"	6010C/SOP503
Nickel		90		10	"	"	"	"	6010C/SOP503
Selenium		ND	U	4	"	"	"	"	6010C/SOP503
Silver		ND	U	2	"	"	"	"	6010C/SOP503
Thallium		ND	U	10	"	"	"	"	6010C/SOP503
Vanadium		79		4	"	"	"	"	6010C/SOP503
Zinc		190		16	"	"	"	"	6010C/SOP503
Sample ID: YC-043-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		50		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-34									**Sediment - Sampled: 02/21/12 15:33**
Sample ID: YC-043-2									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.85		0.050	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		ND	U	4	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		13		4	"	"	"	"	6010C/SOP503
Barium		120		9.9	"	"	"	"	6010C/SOP503
Beryllium		0.62		0.20	"	"	"	"	6010C/SOP503
Cadmium		2.8		0.99	"	"	"	"	6010C/SOP503
Chromium		220		2	"	"	"	"	6010C/SOP503
Cobalt		14		4	"	"	"	"	6010C/SOP503
Copper		100		8	"	"	"	"	6010C/SOP503
Lead		220		6	"	"	"	"	6010C/SOP503

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Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-34									**Sediment - Sampled: 02/21/12 15:33**
Sample ID: YC-043-2									**Metals by EPA 6000/7000 Series Methods**
Molybdenum		ND	U	9.9	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Nickel		94		9.9	"	"	"	"	6010C/SOP503
Selenium		ND	U	4	"	"	"	"	6010C/SOP503
Silver		1.3	CI, J	2	"	"	"	"	6010C/SOP503
Thallium		ND	U	9.9	"	"	"	"	6010C/SOP503
Vanadium		79		4	"	"	"	"	6010C/SOP503
Zinc		310		16	"	"	"	"	6010C/SOP503
Sample ID: YC-043-2									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		50		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-35									**Sediment - Sampled: 02/21/12 15:43**
Sample ID: YC-043-3									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.84		0.056	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		ND	U	4.5	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		15		4.5	"	"	"	"	6010C/SOP503
Barium		170		11	"	"	"	"	6010C/SOP503
Beryllium		0.71		0.23	"	"	"	"	6010C/SOP503
Cadmium		3.5		1.1	"	"	"	"	6010C/SOP503
Chromium		270		2.3	"	"	"	"	6010C/SOP503
Cobalt		15		4.5	"	"	"	"	6010C/SOP503
Copper		100		9	"	"	"	"	6010C/SOP503
Lead		250		6.8	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	11	"	"	"	"	6010C/SOP503
Nickel		100		11	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.5	"	"	"	"	6010C/SOP503
Silver		1.2	CI, J	2.3	"	"	"	"	6010C/SOP503
Thallium		ND	U	11	"	"	"	"	6010C/SOP503
Vanadium		93		4.5	"	"	"	"	6010C/SOP503
Zinc		390		18	"	"	"	"	6010C/SOP503
Sample ID: YC-043-3									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		44		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-36									**Sediment - Sampled: 02/21/12 15:44**
Sample ID: YC-043-4									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.52		0.054	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		ND	U	4.3	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		13		4.3	"	"	"	"	6010C/SOP503
Barium		80		11	"	"	"	"	6010C/SOP503
Beryllium		0.66		0.22	"	"	"	"	6010C/SOP503
Cadmium		1.5		1.1	"	"	"	"	6010C/SOP503
Chromium		150		2.2	"	"	"	"	6010C/SOP503

4/20/12

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12053D
Project Number: R12S41	75 Hawthorne Street	Reported: 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-36									**Sediment - Sampled: 02/21/12 15:44**
Sample ID: YC-043-4									**Metals by EPA 6000/7000 Series Methods**
Cobalt		14		4.3	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Copper		58		8.6	"	"	"	"	6010C/SOP503
Lead		64		6.5	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	11	"	"	"	"	6010C/SOP503
Nickel		93		11	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.3	"	"	"	"	6010C/SOP503
Silver		ND	U	2.2	"	"	"	"	6010C/SOP503
Thallium		ND	U	11	"	"	"	"	6010C/SOP503
Vanadium		83		4.3	"	"	"	"	6010C/SOP503
Zinc		180		17	"	"	"	"	6010C/SOP503
Sample ID: YC-043-4									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		46		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-37									**Sediment - Sampled: 02/21/12 16:00**
Sample ID: YC-045-1									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.39		0.052	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		ND	U	4.2	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		10		4.2	"	"	"	"	6010C/SOP503
Barium		69		10	"	"	"	"	6010C/SOP503
Beryllium		0.62		0.21	"	"	"	"	6010C/SOP503
Cadmium		ND	U	1	"	"	"	"	6010C/SOP503
Chromium		110		2.1	"	"	"	"	6010C/SOP503
Cobalt		13		4.2	"	"	"	"	6010C/SOP503
Copper		57		8.3	"	"	"	"	6010C/SOP503
Lead		61		6.3	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	10	"	"	"	"	6010C/SOP503
Nickel		81		10	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.2	"	"	"	"	6010C/SOP503
Silver		ND	U	2.1	"	"	"	"	6010C/SOP503
Thallium		ND	U	10	"	"	"	"	6010C/SOP503
Vanadium		74		4.2	"	"	"	"	6010C/SOP503
Zinc		140		17	"	"	"	"	6010C/SOP503
Sample ID: YC-045-1									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		48		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-38									**Sediment - Sampled: 02/21/12 16:02**
Sample ID: YC-045-2									**Metals by EPA 6000/7000 Series Methods**
Mercury		0.56		0.051	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		ND	U	4.1	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		12		4.1	"	"	"	"	6010C/SOP503
Barium		86		10	"	"	"	"	6010C/SOP503

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Craig Cooper	Navy and Army Section	SDG: 12053D
Project Number: R12S41	75 Hawthorne Street	Reported: 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-38									**Sediment - Sampled: 02/21/12 16:02**
Sample ID: YC-045-2									Metals by EPA 6000/7000 Series Methods
Beryllium		0.64		0.20	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Cadmium		1.1		1	"	"	"	"	6010C/SOP503
Chromium		160		2	"	"	"	"	6010C/SOP503
Cobalt		14		4.1	"	"	"	"	6010C/SOP503
Copper		80		8.1	"	"	"	"	6010C/SOP503
Lead		140		6.1	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	10	"	"	"	"	6010C/SOP503
Nickel		91		10	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.1	"	"	"	"	6010C/SOP503
Silver		1.1	Cl, J	2	"	"	"	"	6010C/SOP503
Thallium		ND	U	10	"	"	"	"	6010C/SOP503
Vanadium		79		4.1	"	"	"	"	6010C/SOP503
Zinc		220		16	"	"	"	"	6010C/SOP503
Sample ID: YC-045-2									Conventional Chemistry Parameters by APHA/EPA Methods
% Solids		49		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-39									**Sediment - Sampled: 02/21/12 16:12**
Sample ID: YC-045-3									Metals by EPA 6000/7000 Series Methods
Mercury		0.92		0.052	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535
Antimony		ND	U	4.1	"	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		14		4.1	"	"	"	"	6010C/SOP503
Barium		140		10	"	"	"	"	6010C/SOP503
Beryllium		0.67		0.21	"	"	"	"	6010C/SOP503
Cadmium		3.1		1	"	"	"	"	6010C/SOP503
Chromium		230		2.1	"	"	"	"	6010C/SOP503
Cobalt		15		4.1	"	"	"	"	6010C/SOP503
Copper		110		8.3	"	"	"	"	6010C/SOP503
Lead		250		6.2	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	10	"	"	"	"	6010C/SOP503
Nickel		97		10	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.1	"	"	"	"	6010C/SOP503
Silver		1.3	Cl, J	2.1	"	"	"	"	6010C/SOP503
Thallium		ND	U	10	"	"	"	"	6010C/SOP503
Vanadium		87		4.1	"	"	"	"	6010C/SOP503
Zinc		370		17	"	"	"	"	6010C/SOP503
Sample ID: YC-045-3									Conventional Chemistry Parameters by APHA/EPA Methods
% Solids		48		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-40									**Sediment - Sampled: 02/21/12 16:14**
Sample ID: YC-045-4									Metals by EPA 6000/7000 Series Methods
Mercury		0.56		0.051	mg/kg dry	B2C0049	03/09/12	03/09/12	7473/SOP535

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Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202053-40									**Sediment - Sampled: 02/21/12 16:14**
Sample ID: YC-045-4									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	4.1	mg/kg dry	B2C0016	03/05/12	03/16/12	6010C/SOP503
Arsenic		14		4.1	"	"	"	"	6010C/SOP503
Barium		93		10	"	"	"	"	6010C/SOP503
Beryllium		0.70		0.20	"	"	"	"	6010C/SOP503
Cadmium		1.8		1	"	"	"	"	6010C/SOP503
Chromium		170		2	"	"	"	"	6010C/SOP503
Cobalt		15		4.1	"	"	"	"	6010C/SOP503
Copper		66		8.2	"	"	"	"	6010C/SOP503
Lead		92		6.1	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	10	"	"	"	"	6010C/SOP503
Nickel		95		10	"	"	"	"	6010C/SOP503
Selenium		ND	U	4.1	"	"	"	"	6010C/SOP503
Silver		ND	U	2	"	"	"	"	6010C/SOP503
Thallium		ND	U	10	"	"	"	"	6010C/SOP503
Vanadium		86		4.1	"	"	"	"	6010C/SOP503
Zinc		200		16	"	"	"	"	6010C/SOP503
Sample ID: YC-045-4									**Conventional Chemistry Parameters by APHA/EPA Methods**
% Solids		49		1	%	B2B0142	02/29/12	03/02/12	3550C/SOP460
Lab ID: 1202053-41									**Water - Sampled: 02/21/12 16:30**
Sample ID: YC-022112-RB									**Metals by EPA 200 Series Methods**
Mercury		ND	U	0.030	ug/L	B2B0133	02/29/12	02/29/12	245.1/SOP515
Antimony		ND	U	20	"	B2B0128	02/27/12	03/19/12	200.7/SOP505
Arsenic		ND	U	20	"	"	"	"	200.7/SOP505
Barium		ND	U	10	"	"	"	"	200.7/SOP505
Beryllium		ND	U	1	"	"	"	"	200.7/SOP505
Cadmium		ND	U	5	"	"	"	"	200.7/SOP505
Chromium		ND	U	10	"	"	"	"	200.7/SOP505
Cobalt		ND	U	10	"	"	"	"	200.7/SOP505
Copper		ND	U	10	"	"	"	"	200.7/SOP505
Lead		ND	U	20	"	"	"	"	200.7/SOP505
Molybdenum		ND	U	20	"	"	"	"	200.7/SOP505
Nickel		ND	U	10	"	"	"	"	200.7/SOP505
Selenium		ND	U	20	"	"	"	"	200.7/SOP505
Silver		ND	U	10	"	"	"	"	200.7/SOP505
Thallium		ND	U	20	"	"	"	"	200.7/SOP505
Vanadium		ND	U	10	"	"	"	"	200.7/SOP505
Zinc		ND	U	10	"	"	"	"	200.7/SOP505

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Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12053D
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2B0128 - 200 Series Digest - Metals by 200.7										
								Prepared: 02/27/12 Analyzed: 03/19/12		
								Metals by EPA 200 Series Methods - Quality Control		
Blank (B2B0128-BLK1)										
Antimony	ND	U	20	ug/L						
Arsenic	ND	U	20	"						
Barium	ND	U	10	"						
Beryllium	ND	U	1	"						
Cadmium	ND	U	5	"						
Chromium	ND	U	10	"						
Cobalt	ND	U	10	"						
Copper	ND	U	10	"						
Iron	ND	U	100	"						
Lead	ND	U	20	"						
Manganese	ND	U	5	"						
Molybdenum	ND	U	20	"						
Nickel	ND	U	10	"						
Selenium	ND	U	20	"						
Silver	ND	U	10	"						
Thallium	ND	U	20	"						
Vanadium	ND	U	10	"						
Zinc	ND	U	10	"						
LCS (B2B0128-BS1)										
Antimony	911		20	ug/L	800		114	85-115		
Arsenic	944		20	"	800		118	85-115		
Barium	224		10	"	200		112	85-115		
Beryllium	224		1	"	200		112	85-115		
Cadmium	221		5	"	200		110	85-115		
Chromium	430		10	"	400		107	85-115		
Cobalt	215		10	"	200		108	85-115		
Copper	316		10	"	300		105	85-115		
Iron	2,960		100	"	3000		99	85-115		
Lead	1,120		20	"	1000		112	85-115		
Manganese	211		5	"	200		106	85-115		
Molybdenum	435		20	"	400		109	85-115		
Nickel	568		10	"	500		114	85-115		
Selenium	2,490		20	"	2000		124	85-115		
Silver	82.4		10	"	75.0		110	85-115		
Thallium	2,170		20	"	2000		108	85-115		
Vanadium	332		10	"	300		111	85-115		
Zinc	222		10	"	200		111	85-115		
Matrix Spike (B2B0128-MS1)		**Source: 1202053-41**								
Antimony	902		20	ug/L	800	ND	113	70-130		20
Arsenic	931		20	"	800	ND	116	70-130		20
Barium	224		10	"	200	ND	112	70-130		20

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Project Manager: Craig Cooper	Navy and Army Section	SDG: 12053D
Project Number: R12S41	75 Hawthorne Street	Reported: 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2B0128 - 200 Series Digest - Metals by 200.7								**Prepared: 02/27/12 Analyzed: 03/19/12**		
								Metals by EPA 200 Series Methods - Quality Control		
Matrix Spike (B2B0128-MS1)		**Source: 1202053-41**								
Beryllium	225		1	"	200	ND	113	70-130		20
Cadmium	216		5	"	200	ND	108	70-130		20
Chromium	429		10	"	400	ND	107	70-130		20
Cobalt	215		10	"	200	ND	108	70-130		20
Copper	313		10	"	300	ND	104	70-130		20
Lead	1,120		20	"	1000	ND	112	70-130		20
Molybdenum	437		20	"	400	ND	109	70-130		20
Nickel	568		10	"	500	ND	114	70-130		20
Selenium	2,320		20	"	2000	ND	116	70-130		20
Silver	81.5		10	"	75.0	ND	109	70-130		20
Thallium	2,170		20	"	2000	ND	108	70-130		20
Vanadium	332		10	"	300	ND	111	70-130		20
Zinc	220		10	"	200	ND	110	70-130		20
Matrix Spike Dup (B2B0128-MSD1)		**Source: 1202053-41**								
Antimony	884		20	ug/L	800	ND	110	70-130	2	20
Arsenic	915		20	"	800	ND	114	70-130	2	20
Barium	220		10	"	200	ND	110	70-130	2	20
Beryllium	221		1	"	200	ND	110	70-130	2	20
Cadmium	213		5	"	200	ND	106	70-130	2	20
Chromium	422		10	"	400	ND	106	70-130	2	20
Cobalt	212		10	"	200	ND	106	70-130	2	20
Copper	308		10	"	300	ND	103	70-130	2	20
Lead	1,100		20	"	1000	ND	110	70-130	1	20
Molybdenum	430		20	"	400	ND	107	70-130	2	20
Nickel	558		10	"	500	ND	112	70-130	2	20
Selenium	2,270		20	"	2000	ND	114	70-130	2	20
Silver	80.2		10	"	75.0	ND	107	70-130	2	20
Thallium	2,120		20	"	2000	ND	106	70-130	2	20
Vanadium	326		10	"	300	ND	109	70-130	2	20
Zinc	216		10	"	200	ND	108	70-130	2	20
Batch B2B0133 - 245.1 Hg Prep. - Mercury								**Prepared & Analyzed: 02/29/12**		
								Metals by EPA 200 Series Methods - Quality Control		
Blank (B2B0133-BLK1)										
Mercury	ND	U	0.03	ug/L						
LCS (B2B0133-BS1)										
Mercury	0.218		0.03	ug/L	0.200		109	85-115		
Matrix Spike (B2B0133-MS5)		**Source: 1202053-41**								
Mercury	0.234		0.03	ug/L	0.200	ND	117	70-130		20
Matrix Spike Dup (B2B0133-MSD5)		**Source: 1202053-41**								
Mercury	0.212		0.03	ug/L	0.200	ND	106	70-130	10	20

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Project Number: R12S41	75 Hawthorne Street	Reported: 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2B0141 - Solids, Dry Weight (Prep) - Solids, Dry Weight								Prepared: 02/29/12 Analyzed: 03/01/12		
								Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control		
Blank (B2B0141-BLK1)										
% Solids	ND	U	1	%						
Duplicate (B2B0141-DUP1)		Source: 1202053-05								
% Solids	79		1	%		78			0.3	20
Batch B2B0142 - Solids, Dry Weight (Prep) - Solids, Dry Weight								Prepared: 02/29/12 Analyzed: 03/02/12		
								Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control		
Blank (B2B0142-BLK1)										
% Solids	ND	U	1	%						
Duplicate (B2B0142-DUP1)		Source: 1202053-32								
% Solids	75		1	%		75			0.3	20
Batch B2C0002 - 7473 Hg Prep - Mercury								Prepared & Analyzed: 03/01/12		
								Metals by EPA 6000/7000 Series Methods - Quality Control		
Blank (B2C0002-BLK1)										
Mercury	ND	U	0.025	mg/kg wet						
Matrix Spike (B2C0002-MS1)		Source: 1202053-02								
Mercury	2.26		0.045	mg/kg dry	0.805	1.46	100	80-120		20
Matrix Spike Dup (B2C0002-MSD1)		Source: 1202053-02								
Mercury	3.47		0.045	mg/kg dry	0.773	1.46	261	80-120	89	20
Reference (B2C0002-SRM1)										
Mercury	1.18		0.025	mg/kg wet	1.10		107	80-120		
Batch B2C0016 - 3050B Sld Acid Dig - Metals by 6010								Prepared: 03/05/12 Analyzed: 03/16/12		
								Metals by EPA 6000/7000 Series Methods - Quality Control		
Blank (B2C0016-BLK1)										
Antimony	ND	U	2	mg/kg wet						
Arsenic	ND	U	2	"						
Barium	ND	U	5	"						
Beryllium	ND	U	0.1	"						
Cadmium	ND	U	0.5	"						
Chromium	ND	U	1	"						
Cobalt	ND	U	2	"						
Copper	ND	U	4	"						
Lead	ND	U	3	"						
Molybdenum	ND	U	5	"						
Nickel	ND	U	5	"						
Selenium	ND	U	2	"						
Silver	ND	U	1	"						
Thallium	ND	U	5	"						
Vanadium	ND	U	2	"						
Zinc	ND	U	8	"						

4/20/12

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12053D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2C0016 - 3050B Sld Acid Dig - Metals by 6010										
								Prepared: 03/05/12 Analyzed: 03/16/12		
								Metals by EPA 6000/7000 Series Methods - Quality Control		
Blank (B2C0016-BLK2)										
Antimony	ND	U	2	mg/kg wet						
Arsenic	ND	U	2	"						
Barium	ND	U	5	"						
Beryllium	ND	U	0.1	"						
Cadmium	ND	U	0.5	"						
Chromium	ND	U	1	"						
Cobalt	ND	U	2	"						
Copper	ND	U	4	"						
Lead	ND	U	3	"						
Molybdenum	ND	U	5	"						
Nickel	ND	U	5	"						
Selenium	ND	U	2	"						
Silver	ND	U	1	"						
Thallium	ND	U	5	"						
Vanadium	ND	U	2	"						
Zinc	ND	U	8	"						
Matrix Spike (B2C0016-MS1)		**Source: 1202053-15**								
Antimony	113		4.6	mg/kg dry	229	ND	49	75-125		20
Arsenic	913		4.6	"	917	13.6	98	75-125		20
Barium	1,030		11	"	917	184	92	75-125		20
Beryllium	22.5		0.23	"	22.9	0.725	95	75-125		20
Cadmium	25.7		1.1	"	22.9	4.45	93	75-125		20
Chromium	401		2.3	"	91.7	307	102	75-125		20
Cobalt	212		4.6	"	229	15.2	86	75-125		20
Copper	230		9.2	"	115	127	90	75-125		20
Lead	567		6.9	"	229	344	97	75-125		20
Molybdenum	220		11	"	229	ND	96	75-125		20
Nickel	317		11	"	229	109	91	75-125		20
Selenium	880		4.6	"	917	ND	96	75-125		20
Silver	22.6		2.3	"	22.9	1.47	92	75-125		20
Thallium	817		11	"	917	ND	89	75-125		20
Vanadium	314		4.6	"	229	94.7	96	75-125		20
Zinc	799		18	"	229	553	107	75-125		20
Matrix Spike (B2C0016-MS2)		**Source: 1202053-30**								
Antimony	92.1		3.7	mg/kg dry	183	ND	50	75-125		20
Arsenic	740		3.7	"	732	7	100	75-125		20
Barium	885		9.1	"	732	198	94	75-125		20
Beryllium	18.3		0.18	"	18.3	0.409	98	75-125		20
Cadmium	22.3		0.91	"	18.3	5.47	92	75-125		20
Chromium	370	Q10	1.8	"	73.2	295	102	75-125		20

4/20/12

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12053D
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 03/26/12 15:30
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2C0016 - 3050B Sld Acid Dig - Metals by 6010								**Prepared: 03/05/12 Analyzed: 03/16/12**		
								Metals by EPA 6000/7000 Series Methods - Quality Control		
Reference (B2C0016-SRM2)										
Selenium	9.41		2	"	9.99		94	41-159		
Silver	5.82		1	"	5.89		99	45.8-154		
Thallium	6.3		5	"	9.49		66	30.5-169		
Vanadium	16.6		2	"	17.6		94	65.9-135		
Zinc	43.7		8	"	47.5		92	43.2-157		
Reference (B2C0016-SRM3)										
Copper	1,370		4	mg/kg wet	1770		77	74.6-126		
Batch B2C0017 - Solids, Dry Weight (Prep) - Solids, Dry Weight								**Prepared: 03/05/12 Analyzed: 03/06/12**		
								Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control		
Blank (B2C0017-BLK1)										
% Solids	ND	U	1	%						
Duplicate (B2C0017-DUP1)		**Source: 1202053-07**								
% Solids	43		1	%		43			0.04	20
Batch B2C0049 - 7473 Hg Prep - Mercury								**Prepared & Analyzed: 03/09/12**		
								Metals by EPA 6000/7000 Series Methods - Quality Control		
Blank (B2C0049-BLK1)										
Mercury	ND	U	0.025	mg/kg wet						
Matrix Spike (B2C0049-MS1)		**Source: 1202053-25**								
Mercury	2.08		0.044	mg/kg dry	0.829	0.989	131	80-120		20
Matrix Spike Dup (B2C0049-MSD1)		**Source: 1202053-25**								
Mercury	1.78		0.044	mg/kg dry	0.770	0.989	103	80-120	24	20
Reference (B2C0049-SRM1)										
Mercury	1.13		0.025	mg/kg wet	1.10		103	80-120		

4/2/12

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

PROJ. NO. R12541 | PROJECT NAME: Yosemite Creek EE CA

SAMPLERS: (Signature)

Page 1 of 3

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471)				REMARKS
7/21/12	1048	Sediment		X	YC-038-1	2	X	X				Additional analyses (TCLP, STLC) may be required; please hold all extra volume.
	1050				YC-038-2	2	X	X				
	1100				YC-038-3	2	X	X				
	1102				YC-838-3	1	X					
	1105				YC-038-3.6	2	X	X				Please report results to: Brian Milton bmilton@ene.com 510-893-6700
	1130				YC-040-1	2	X	X				
	1132				YC-840-1	1		X				
	1133				YC-040-2	2	X	X				
	1155				YC-040-3	2	X	X				
	1157				YC-040-3.6	2	X	X				
	1257				YC-044-1	2	X	X				
	1258				YC-844-1	1		X				
	1238				YC-044-2	2	X	X				
	1240				YC-844-2	1	X					
↓	1248	↓		↓	YC-044-3	2	X	X				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	7/22/12				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received for Laboratory by: (Signature)	Date / Time	Temp.	Seals Intact (Y/N)	Conditions / Remarks	
	7/22/12 1313	3.9	NO SEALS	HOLD DEL.	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2491

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

PROJ. NO.	PROJECT NAME
R12S41	Yosemite Creek EE CA

SAMPLERS: (Signature)

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471A)					REMARKS
2/21/12	1258	Sediment		X	YC-044-4	2	X	X					Page 2 of 3
	1325				YC-042-1	2	X	X					Additional analyses (TCLP, STLC)
	1334				YC-042-2	2	X	X					may be required. Please hold
	1345				YC-042-3	2	X	X					all extra volume.
	1348				YC-842-3	1	X						Please report results to
	1358				YC-042-4	2	X	X					Brian Milton
	1400				YC-842-4	1		X					bmilton@ene.com
	1420				YC-041-1	2	X	X					510-893-6700
	1421				YC-841-1	1		X					
	1426				YC-041-2	2	X	X					
	1428				YC-841-2	1	X						
	1429				YC-041-3	2	X	X					
	1445				YC-041-4	2	X	X					
	1500				YC-039-1	2	X	X					
↓	1502	↓		↓	YC-039-2	2	X	X					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	2/21/12				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Received for Laboratory by: (Signature)	Date / Time	Temp.	Seals Intact (Y/N)	Conditions / Remarks
	2/22/12 13:25	9°C	no SEALS	HAND DEL.

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2492

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

Page 3 of 3

PROJ. NO.	PROJECT NAME
R12S41	Yosemite Creek EE/CA

SAMPLERS: (Signature)

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471)					REMARKS
2/21/12	1515	Sediment		X	YC-039-3	2	X	X					Additional analyses (TCLP, STLC)
	1512				YC-039-3,3		X	X					may be required; please hold
	1532				YC-043-1		X	X					all extra volume.
	1533				YC-043-2		X	X					
	1543				YC-043-3		X	X					Please report results to
	1544				YC-043-4		X	X					Brian Milton
	1600				YC-045-1		X	X					bmilton@ene.com
	1602				YC-045-2		X	X					510-893-6700
	1612				YC-045-3		X	X					
	1614				YC-045-4		X	X					
	1630	Water			YC-022112-RB	2	X	X					WATER SAMPLE FOR METALS RECD @ pH<2 BY LAB

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	2/22/12	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received for Laboratory by: (Signature)	Date / Time	Temp.	Seals Intact (Y/N)
[signature]	2/22/12 1312	9°C	NO SEALS

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Conditions / Remarks
HOLD DEL.

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2493

C2093

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, California
Project Number: 002693.7008.01SO	TDD NO: 02-09-11-10-0001

Laboratory: TestAmerica	Lab Project Number: G2B220468
Sampling Dates: 2/21/2012	Sample Matrix: Sediment
Analytical Method: Cr+6 by EPA 7196A	Data Reviewer: M. Song

REVIEW AND APPROVAL:

Data Reviewer: Mindy Song Date: 4/20/12
Technical QA Reviewer: Howard Edwards Date: _____
Project Manager: Brian Milton Date: _____

SAMPLE IDENTIFICATION:

Sample No.	Sample I.D.	Laboratory I.D.
1	YC-038-1	G2B220468-001
2	YC-038-2	G2B220468-002
3	YC-038-3	G2B220468-003
4	YC-038-3.6	G2B220468-004
5	YC-040-1	G2B220468-005
6	YC-040-2	G2B220468-006
7	YC-040-3	G2B220468-007
8	YC-040-3.6	G2B220468-008
9	YC-840-2	G2B220468-009
10	YC-044-1	G2B220468-011
11	YC-044-2	G2B220468-012
12	YC-044-3	G2B220468-013
13	YC-044-4	G2B220468-014
14	YC-844-3	G2B220468-015
15	YC-042-1	G2B220468-017
16	YC-842-1	G2B220468-018
17	YC-042-2	G2B220468-019
18	YC-042-3	G2B220468-021
19	YC-042-4	G2B220468-022
20	YC-041-1	G2B220468-023
21	YC-041-2	G2B220468-024

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, California
Project Number: 002693.7008.01SO	TDD NO: 02-09-11-10-0001

DATA PACKAGE COMPLETENESS CHECKLIST:

Checklist Code:

- X Included: no problems
- * Included: problems noted in review
- O Not Included and/or Not Available
- NR Not Required
- RS Provided As Re-submission

Case Narrative:

- X Case Narrative present

Quality Control Summary Package:

- X Data Summary sheets
- X Initial and Continuing Calibration results
- X Preparation Blank and Calibration Blank results
- X Matrix Spike recoveries
- X Matrix Duplicate results
- X Laboratory Control Sample recoveries
- NR Instrument Detection Limits
- X Preparation Log
- X Analysis Run Log

Raw QC Data Package Section

- X Chain-of-Custody Records
- NR Instrument Printouts
- X Sample Preparation Notebook Pages
- X Logbook and Worksheet Pages
- NR Percent Solids Determination

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, California
Project Number: 002693.7008.01SO	TDD NO: 02-09-11-10-0001

DATA VALIDATION SUMMARY

The data were reviewed following procedures and limits specified in the EPA OSWER directive, *Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures* (EPA/540/G-90/004, OSWER Directive 9360.4-01, dated April 1990).

Indicate with a YES or NO whether each item is acceptable without qualification:

1	Holding Times	YES
2	Initial and Continuing Calibrations	YES
3	Laboratory Control Sample	YES
4	Matrix Spike	YES
5	Blanks and Background Samples	YES
6	Duplicate Analyses	YES
7	Analyte Quantitation	YES
8	Overall Assessment of Data	YES
9	Usability of Data	YES

Comments:

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, California
Project Number: 002693.7008.01SO	TDD NO: 02-09-11-10-0001

1. HOLDING TIMES

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable

Samples were extracted and analyzed within required holding times except as noted under Comments. In addition, no problems were identified with regard to sample preservation or custody unless specified. For those samples analyzed outside holding time requirements, the detected results have been qualified as estimated (J), and the non-detected results have been qualified either as estimated (UJ) or rejected (R) based on the reviewer's judgement.

All Sample Matrices:
Cyanide: 14 days (from collection) for analysis.
Nitrate (unpreserved water samples): 48 hours (from collection) for analysis.
All other anions: 28 days (from collection) for analysis.

Comments: Samples met the analytical holding times.

2. INITIAL AND CONTINUING CALIBRATION VERIFICATION

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable

Unless flagged below, an initial calibration verification (ICV) and a calibration blank were analyzed at the beginning of the run, and a continuing calibration verification (CCV) and a calibration blank were analyzed after every ten samples, and at the end of the run. ICV and CCV recoveries were within a range of 90-110%. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 75% or above 125%, all associated data are rejected (R).

Comments: ICV and CCV recoveries were within the control limits.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, California
Project Number: 002693.7008.01SO	TDD NO: 02-09-11-10-0001

3. LABORATORY CONTROL SAMPLE

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Laboratory Control Samples Analyzed

Laboratory control sample recoveries are used for a qualitative indication of accuracy (bias) independent of matrix effects. LCS recovery limits should either be specified in the Sampling and Analysis Plan or can be established by the laboratory. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 30%, all associated nondetected results are rejected (R) and detected results are qualified as estimated (J).

Comments: LCS recovery was within the control limit.

4. MATRIX SPIKE

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Matrix Spikes Analyzed

Matrix spike recoveries are used for a qualitative indication of accuracy (bias) due to matrix effects. Unless flagged below, one laboratory control sample was analyzed at a rate of one per batch or one per 20 samples. Recoveries were within a range of 75-125%. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 30%, all associated nondetected results are rejected (R) and detected results are qualified as estimated (J).

Comments: Samples YC-038-1 and YC-004-1 were used for MS/MSD analysis and the recoveries were within the control limits.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, California
Project Number: 002693.7008.01SO	TDD NO: 02-09-11-10-0001

5. BLANKS AND BACKGROUND SAMPLES

__X__ Acceptable
_____ Detection Limits Adjusted

The following blanks were analyzed:
__X__ Method (preparation) Blanks
_____ Field Blanks
_____ Calibration Blanks
_____ Rinsate Blanks
_____ Background Samples

Preparation (method) blanks were prepared for each batch of samples extracted. A preparation blank was analyzed after every continuing calibration standard, prior to sample analysis unless noted below. Any compound detected in the sample and also detected in any associated blank, must be qualified as non-detect (U) when the sample concentration is less than 5x the blank concentration.

Comments: No contamination was found in the method blank at reporting limit level.

6. DUPLICATE ANALYSES

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Duplicates Analyzed

Type of duplicates analyzed:
__X__ Field Duplicates
_____ Laboratory Duplicates

Calculate the relative Percent Difference (RPD) between the members of duplicate pairs using the equation indicated below. Qualify the detected results as estimated (J) for any analyte whose RPD in a laboratory duplicate exceeds 20% for water samples or 35% for soil samples.

$$RPD = \frac{2(Value\ 1 - Value\ 2)}{Value\ 1 + Value\ 2} \times 100\%$$

Comments:	YC-040-2	YC-840-2	RPD (%)
Cr+6, mg/kg	<0.082	<0.082	0
	YC-042-2	YC-842-2	RPD (%)
Cr+6, mg/kg	<0.10	<0.11	0

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, California
Project Number: 002693.7008.01SO	TDD NO: 02-09-11-10-0001

7. ANALYTE QUANTITATION

Confirm that analyte quantitation was performed correctly using the following formulas:

Water samples:

ug/L = (Instrument printout concentration, mg/L)(1000 ug/mg)(final volume of extract, mL)
(Initial volume of extract, mL)

Soil samples:

mg/kg = (Instrument printout concentration, mg/L)(final volume of extract, mL)(0.001 L/mL)
(weight of sample extracted, g)(0.001 kg/g)(fraction solids)

Comments: Analyte quantitation was acceptable.
Sample YC-042-1
Hexavalent Chromium:
Y= ((1.2078) (0.004-0.0003) + (4.6619E-4)) (50mL/10.22 g) = 0.0241 mg/kg.
(0.0241 mg/kg) (100/52.6) = 0.0459 mg/kg.
Lab reported 0.046 mg/kg.

8. OVERALL ASSESSMENT OF DATA

On the basis of this review, the following determination has been made with regard to the overall data usability for the specified level.

__X__ **Acceptable**
_____ **Acceptable with Qualification**
_____ **Rejected**

Accepted data meet the minimum requirements for the following EPA data category:

_____ **ERS Screening**
_____ **Non-definitive with 10 % Conformation by Definitive Methodology**
_____ **Definitive, Comprehensive Statistical Error Determination was performed.**
__X__ **Definitive, Comprehensive Statistical Error Determination was not performed.**

Any qualifications to individual sample analysis results are detailed in the appropriate section above or appear under the comments section below. In cases where several QC criteria are out of specification, it may be appropriate to further qualify the data usability. The data reviewer must use professional judgment and express concerns and comments on the data validity for each specific data package.

Comments: Data as reported are valid.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, California
Project Number: 002693.7008.01SO	TDD NO: 02-09-11-10-0001

9. USABILITY OF DATA

A. These data are considered usable for the data use objectives stated in the *SAMPLING AND ANALYSIS PLAN YOSEMITE CREEK SEDIMENT WASTE CHARACTERIZATION STUDY, SAN FRANCISCO, CALIFORNIA, JANUARY 9, 2012 (SAP).*

The following data use objective was indicated in the *SAP:*

TO DOCUMENT THE CONCENTRAITON OF PCBS, ASBESTOS, AND METALS (CHROMIUM, LEAD, MERCURY, AND ZINC) IN SEDIMENT ATH THE SITE AND DETERMINE WHERE THESE CONCENTRAITONS EXCEED STATE AND FEDERAL WASTE DISPOSAL CRITERIA.

USING THE WASTE CHARACTRIZATION STUDY DATA AND DATA SETS FROM PREVIOUS INVESTIGAITONS, ESTIMATE THE VOLUME OF SEDIMENT CONTAINING CONCENTRATIONS OF ASBESTOS, PCBS, AND METALS (CHROMIUM, LEAD, MERCURY, AND ZINCE) THAT EXCEED STATE AND FEDERAL WASTE DISPOSAL CRITERIA.

THE DATA ARE USABLE FOR THE ABOVE OBJECTIVES.

B. These data meet quality objectives stated in the *SAP.*

AS INDICATED IN SECTION 3 OF THE SAP, THE INVESTIGATION WILL GENERATE DEFINITIVE DATA AND TABLE 3-1 OF THE SAP OUTLINES THE DATA QUALITY INDICATOR GOALS APPLICABLE TO THE DEFINITIVE DATA QUALITY LEVEL. THE DATA IN THIS PACKAGE MEET THESE REQUIREMENTS.

10. DOCUMENTATION OF LABORATORY CORRECTIVE ACTION

Problem: No problems requiring corrective action were found.

Resolution: Not required.

Attached are copies of all data summary sheets, with data qualifiers indicated, and a copy of the chain of custody for the samples.

Ecology and Environment, Inc.

Client Sample ID: YC-038-1

General Chemistry

Lot-Sample #...: G2B220468-001 Work Order #...: MQ17L Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 44

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.089	mg/kg	SW846 7196A	03/05-03/06/12	2069067
	Dilution Factor: 1			MDL.....: 0.018		
Percent Moisture	44.1	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
	Dilution Factor: 1			MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-038-2

General Chemistry

Lot-Sample #...: G2B220468-002 Work Order #...: MQ17N Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 41

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.085	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.017		
Percent Moisture	40.9	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-038-3

General Chemistry

Lot-Sample #...: G2B220468-003 Work Order #...: MQ17P Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 20

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.062	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.012		
Percent Moisture	19.8	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-038-3.6

General Chemistry

Lot-Sample #...: G2B220468-004 Work Order #...: MQ17Q Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 20

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.062	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.012		
Percent Moisture	20.0	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-040-1

General Chemistry

Lot-Sample #...: G2B220468-005 Work Order #...: MQ17R Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 55

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.11	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.022		
Percent Moisture	55.3	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-040-2

General Chemistry

Lot-Sample #...: G2B220468-006 Work Order #...: MQ17T Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 39

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.082	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.016		
Percent Moisture	39.3	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-040-3

General Chemistry

Lot-Sample #...: G2B220468-007 Work Order #...: MQ17V Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 19

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.062	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.012		
Percent Moisture	19.1	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-040-3.6

General Chemistry

Lot-Sample #...: G2B220468-008 Work Order #...: MQ17W Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 38

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.080	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.016		
Percent Moisture	37.6	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-840-2

General Chemistry

Lot-Sample #...: G2B220468-009 Work Order #...: MQ17X Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 39

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.082	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1		MDL.....: 0.016		
Percent Moisture	38.7	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-044-1

General Chemistry

Lot-Sample #...: G2B220468-011 Work Order #...: MQ171 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 52

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.021		
Percent Moisture	51.7	0.10	%	ASTM D 2216-90	02/27-02/28/12	2058164
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-044-2

General Chemistry

Lot-Sample #...: G2B220468-012 Work Order #...: MQ172 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 50

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.020		
Percent Moisture	50.1	0.10	%	ASTM D 2216-90	02/27-02/28/12	2058164
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-044-3

General Chemistry

Lot-Sample #...: G2B220468-013 Work Order #...: MQ173 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 57

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.12	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.023		
Percent Moisture	56.8	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-044-4

General Chemistry

Lot-Sample #...: G2B220468-014 Work Order #...: MQ174 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 52

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.021		
Percent Moisture	51.7	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-844-3

General Chemistry

Lot-Sample #...: G2B220468-015 Work Order #...: MQ175 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 54

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.11	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.022		
Percent Moisture	54.1	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-042-1

General Chemistry

Lot-Sample #...: G2B220468-017 Work Order #...: MQ177 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 47

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	0.046 B	0.095	mg/kg	SW846 7196A	03/14/12	2069068
	Dilution Factor: 1			MDL.....: 0.019		
Percent Moisture	47.4	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
	Dilution Factor: 1			MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-842-1

General Chemistry

Lot-Sample #...: G2B220468-018 Work Order #...: MQ178 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 47

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.095	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.019		
Percent Moisture	47.4	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-042-2

General Chemistry

Lot-Sample #...: G2B220468-019 Work Order #...: MQ179 Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 50

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.020		
Percent Moisture	50.0	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-042-3

General Chemistry

Lot-Sample #...: G2B220468-021 Work Order #...: MQ18C Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 55

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.11	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.022		
Percent Moisture	55.1	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-042-4

General Chemistry

Lot-Sample #...: G2B220468-022 Work Order #...: MQ18D Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 50

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.10	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.020		
Percent Moisture	50.4	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-041-1

General Chemistry

Lot-Sample #...: G2B220468-023 Work Order #...: MQ18E Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 46

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.093	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.019		
Percent Moisture	46.3	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

Ecology and Environment, Inc.

Client Sample ID: YC-041-2

General Chemistry

Lot-Sample #...: G2B220468-024 Work Order #...: MQ18F Matrix.....: SOLID
Date Sampled...: 02/21/12 Date Received..: 02/22/12
% Moisture.....: 45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.091	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1		MDL.....: 0.018		
Percent Moisture	45.1	0.10	%	ASTM D 2216-90	02/28-02/29/12	2059076
		Dilution Factor: 1		MDL.....: 0.10		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

4/20/12

METHOD BLANK REPORT

General Chemistry

Client Lot #...: G2B220468 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium		Work Order #: MRCDP1AA		MB Lot-Sample #:	G2C090000-067	
	ND	0.050	mg/kg	SW846 7196A	03/05-03/06/12	2069067
		Dilution Factor: 1				
Hexavalent Chromium		Work Order #: MRCKP1AA		MB Lot-Sample #:	G2C090000-068	
	ND	0.050	mg/kg	SW846 7196A	03/14/12	2069068
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

4/20/12

G2B220468

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

000891768

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Ecology + Environment	Brian Milton		203843
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 4
1940 Webster St Ste 100	510-893-6700		
City / State / Zip Code	Site Contact / Lab Contact	Analysis (Attach list if more space is needed)	
Oakland CA 94612			
Project Name and Location (State)	Carrier/Waybill Number		
Yosemite Creek EE/CA			
Contract/Purchase Order/Quote No.			
002693.7008.015006			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Cr VI 218.6	Asbestos PLM	Special Instructions/ Conditions of Receipt
YC-038-1	2/21/12	1048			X		X						X	X	
YC-038-2		1050											X	X	
YC-038-3		1106											X	X	
YC-038-3.6		1105											X	X	
YC-040-1		1130											X	X	
YC-040-2		1133											X	X	
YC-040-3		1155											X	X	
YC-040-3.6		1157											X	X	
YC-840-2		1136											X		
YC-840-3.6		1158												X	
YC-044-1		1257											X	X	
YC-044-2		1238											X	X	

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard TAT

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1		2/22/12	0942		2/22/12	0942
2		2-22-12	10:15		2/22/12	1015
3		2-22-12	1300		02/22/12	1300
		02/22/12	1335		2/22/12	1335

Comments

DISTRIBUTION: White - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

G2B220468

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes☐ No☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

000891768

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
EHE	Brian Milton		203844
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 2 of 4**
1940 Webster St Ste 100	510-893-6700		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
Oakland / CA / 94612			
Project Name and Location (State)	**Carrier/Waybill Number**		
Yosemite Creek EE/CA			
Contract/Purchase Order/Quote No.			
002693, 7008.815006			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	HCl	HNO3	H2SO4	NaOH	ZnAc/ NaOH	Analysis (Attach list if more space is needed): Cr VI 7196	Asbestos PLM	Special Instructions/ Conditions of Receipt
YC-044-3	2/21/12	1248			X		X						X	X	
YC-044-4		1258											X	X	
YC-844-3		1250											X		
YC-844-4		1300												X	
YC-042-1		1325											X	X	
YC-842-1		1326											X		
YC-042-2		1334											X	X	
YC-842-2		1335												X	
YC-042-3		1345											X	X	
YC-042-4		1358											X	X	
YC-041-1		1420											X	X	
YC-041-2	↓	1426			↓		↓						X	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard TAT

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1		02/22/12	0942		2-22-12	0942
2		2-22-12	10:15		2/22/12	1015
3		2-22-12	1300		02/22/12	1300
Comments		02/22/12	1335		2/22/12	1335

DISTRIBUTION: WHITE - Returned to Client with Report. CANARY - Stays with the Sample. PINK - Field Copy

CC 2/22/12 1020

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	**Location: San Francisco, CA**
TDD Number: TO2-09-11-10-0001	**Project Number: 002693.7008.01SO**

Laboratory: Region 9 Laboratory	**Lab Project No: 1203062, SDG 12088E**
Sampling Dates: 2/21/2012	**Sample Matrix: Sediment**
Analytical Method: STLC Metals by CA WET/6010B	**Data Reviewer: M. Song**

REVIEW AND APPROVAL:

Data Reviewer: Mindy Song — **Date:** 6/18/12
Technical QA Reviewer: Howard Edwards — **Date:** _____
Project Manager: Brian Milton — **Date:** _____

SAMPLE IDENTIFICATION:

Sample No.	Sample I.D.	Laboratory I.D.
1	YC-038-1	1203062-01
2	YC-038-2	1203062-02
3	YC-038-3	1203062-03
4	YC-038-3.6	1203062-04
5	YC-040-1	1203062-05
6	YC-840-1	1203062-06
7	YC-040-2	1203062-07
8	YC-040-3	1203062-08
9	YC-040-3.6	1203062-09
10	YC-044-1	1203062-10
11	YC-844-1	1203062-11
12	YC-044-2	1203062-12
13	YC-044-3	1203062-13
14	YC-044-4	1203062-14
15	YC-042-1	1203062-15
16	YC-042-2	1203062-16
17	YC-042-3	1203062-17
18	YC-042-4	1203062-18
19	YC-842-4	1203062-19
20	YC-041-1	1203062-20

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

Sample No.	Sample I.D.	Laboratory I.D.
21	YC-841-1	1203062-21
22	YC-041-2	1203062-22
23	YC-041-3	1203062-23
24	YC-041-4	1203062-24
25	YC-039-1	1203062-25
26	YC-039-2	1203062-26
27	YC-039-3	1203062-27
28	YC-039-3.3	1203062-28
29	YC-043-1	1203062-29
30	YC-043-2	1203062-30
31	YC-043-3	1203062-31
32	YC-043-4	1203062-32
33	YC-045-1	1203062-33
34	YC-045-2	1203062-34
35	YC-045-3	1203062-35
36	YC-045-4	1203062-36

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

DATA PACKAGE COMPLETENESS CHECKLIST:

Checklist Code:

- X Included: no problems
- * Included: problems noted in review
- O Not Included and/or Not Available
- NR Not Required
- RS Provided As Re-submission

Case Narrative:

- X Case Narrative present

Quality Control Summary Package:

- X Data Summary sheets
- X Initial and Continuing Calibration results
- NR CRDL Standard results
- X Preparation Blank and Calibration Blank results
- X ICP Interference Check Sample results
- X Matrix Spike recoveries
- X Matrix Duplicate results
- X Laboratory Control Sample recoveries
- NR Method of Standard Additions results
- NR ICP Serial Dilution results
- NR Instrument Detection Limits
- NR ICP Interelement Correction Factors
- NR ICP Linear Ranges
- X Preparation Log
- X Analysis Run Log

Raw QC Data Package Section

- X Chain-of-Custody Records
- X Instrument Printouts
- X Sample Preparation Notebook Pages
- X Logbook and Worksheet Pages
- X Percent Solids Determination

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	**Location: San Francisco, CA**
TDD Number: TO2-09-11-10-0001	**Project Number: 002693.7008.01SO**

DATA VALIDATION SUMMARY

The data were reviewed following procedures and limits specified in the EPA OSWER directive, *Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures* (EPA/540/G-90/004, OSWER Directive 9360.4-01, dated April 1990).

Indicate with a YES or NO whether each item is acceptable without qualification:

1	Holding Times	YES
2	Initial and Continuing Calibrations	YES
3	Laboratory Control Sample	YES
4	Matrix Spike	YES
5	Blanks and Background Samples	YES
6	Duplicate Analyses	NO
7	Interference Check Samples and Serial Dilution Analysis	YES
8	Post Digestion Spike and Standard Addition Analysis	N/A
9	Analyte Quantitation	YES
10	Overall Assessment of Data	YES
11	Usability of Data	NO

Comments: N/A: Not Applicable. No STLC Hg was analyzed for these samples.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

1. HOLDING TIMES

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable

Samples were extracted and analyzed within required holding times except as noted under Comments. In addition, no problems were identified with regard to sample preservation or custody unless specified. For those samples analyzed outside holding time requirements, the detected results have been qualified as estimated (J), and the nondetected results have been qualified either as estimated (UJ) or rejected (R) based on the reviewer's judgement.

All Sample Matrices:
Mercury: 28 days (from collection) for analysis.
Hexavalent chromium: 24 hours (from collection) for analysis.
All other metals: 180 days (from collection) for analysis.

Comments: All holding times were met.

2. INITIAL AND CONTINUING CALIBRATION VERIFICATION

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable

Unless flagged below, an initial calibration verification (ICV) and a calibration blank were analyzed at the beginning of the run, and a continuing calibration verification (CCV) and a calibration blank were analyzed after every ten samples, and at the end of the run. ICV and CCV recoveries were within a range of 80-120% for mercury and tin, and 90-110% for all other metals. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 65% or above 135% (for mercury and tin) or below 75% or above 125% (for all other metals), all associated data are rejected (R).

Comments: All recoveries of metals in initial and continuing calibration verifications were within the control limits.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

3. LABORATORY CONTROL SAMPLE

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Laboratory Control Samples Analyzed

Laboratory control sample recoveries are used for a qualitative indication of accuracy (bias) independent of matrix effects. LCS recovery limits should either be specified in the Sampling and Analysis Plan or can be established by the laboratory. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 30%, all associated nondetected results are rejected (R) and detected results are qualified as estimated (J).

Comments: Percent recoveries of LCS were within the control limits.

4. MATRIX SPIKE

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Matrix Spikes Analyzed

Matrix spike recoveries are used for a qualitative indication of accuracy (bias) due to matrix effects. Unless flagged below, one laboratory control sample was analyzed at a rate of one per batch or one per 20 samples. Recoveries were within a range of 75-125%. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 30%, all associated nondetected results are rejected (R) and detected results are qualified as estimated (J).

Comments: Samples YC-044-1 and YC-043-2 were used for MS/MSD analysis and the recoveries were within the control limits.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

5. BLANKS AND BACKGROUND SAMPLES

__X__ Acceptable
_____ Detection Limits Adjusted

The following blanks were analyzed:
__X__ Method (preparation) Blanks
_____ Field Blanks
_____ Calibration Blanks
_____ Rinsate Blanks
_____ Background Samples

Preparation (method) blanks were prepared for each batch of samples extracted. A preparation blank was analyzed after every continuing calibration standard, prior to sample analysis unless noted below. Any compound detected in the sample and also detected in any associated blank, must be qualified as non-detect (U) when the sample concentration is less than 5x the blank concentration.

Comments: No contamination was detected in the method blank.

6. DUPLICATE ANALYSES

_____ Acceptable
__X__ Acceptable with qualification
_____ Unacceptable
_____ No Duplicates Analyzed

Type of duplicates analyzed:
__X__ Field Duplicates
_____ Laboratory Duplicates

Calculate the relative Percent Difference (RPD) between the members of duplicate pairs using the equation indicated below. Qualify the detected results as estimated (J) for any analyte whose RPD in a laboratory duplicate exceeds 20% for water samples or 35% for soil samples.

$$RPD = \frac{2(Value\ 1 - Value\ 2)}{Value\ 1 + Value\ 2} \times 100\%$$

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

STLC Metals, mg/L	YC-040-1	YC-840-1	RPD (%)
Antimony	<0.20	<0.20	0
Arsenic	0.19	0.18	5
Barium	0.85	0.87	2
Beryllium	<0.010	<0.010	0
Cadmium	<0.050	<0.050	0
Chromium	0.52	0.54	4
Cobalt	0.16	0.17	6
Copper	0.57	0.58	2
Lead	2.7	2.7	0
Molybdenum	<0.50	<0.50	0
Nickel	0.30	0.31	3
Selenium	<0.20	<0.20	0
Silver	<0.10	<0.10	0
Thallium	<0.50	<0.50	0
Vanadium	0.72	0.72	0
Zinc	3.5	3.5	0

Comments: Sample YC-840-1 was a field duplicate of YC-040-1 and all RPDs were within the control limits. (<20%)

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

STLC Metals, mg/L	YC-044-1	YC-844-1	RPD (%)
Antimony	<0.20	<0.20	0
Arsenic	0.17	0.22	26*
Barium	0.77	0.72	7
Beryllium	0.005	<0.010	0
Cadmium	<0.050	<0.050	0
Chromium	0.52	0.48	8
Cobalt	0.19	0.19	0
Copper	0.68	0.69	1
Lead	2.1	1.9	10
Molybdenum	<0.50	<0.50	0
Nickel	0.36	0.33	9
Selenium	<0.20	0.19	not calculated
Silver	<0.10	<0.10	0
Thallium	<0.50	<0.50	0
Vanadium	0.74	0.69	7
Zinc	3.3	3.0	10

*: RPD>20%

Comments: Sample YC-844-1 was a field duplicate of YC-044-1 and all RPDs except arsenic were within the control limits. (<20%) The detected STLC As results in samples YC-044-1 and YC-844-1 were qualified as estimated (J).

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

STLC Metals, mg/L	YC-042-4	YC-842-4	RPD (%)
Antimony	<0.20	<0.20	0
Arsenic	0.24	0.25	4
Barium	2.1	1.9	10
Beryllium	0.005	0.005	0
Cadmium	0.054	0.056	4
Chromium	1.7	1.7	0
Cobalt	0.13	0.13	0
Copper	0.61	0.67	9
Lead	3.7	3.7	0
Molybdenum	<0.50	<0.50	0
Nickel	0.44	0.46	4
Selenium	<0.20	<0.20	0
Silver	<0.10	<0.10	0
Thallium	<0.50	<0.50	0
Vanadium	1.0	1.0	0
Zinc	8.2	8.2	0

Comments: Sample YC-842-4 was a field duplicate of YC-042-4 and all RPDs were within the control limits. (<20%)

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

STLC Metals, mg/L	YC-041-1	YC-841-1	RPD (%)
Antimony	0.10	<0.20	not calculated
Arsenic	0.16	0.21	27*
Barium	1.5	1.3	14
Beryllium	<0.010	<0.010	0
Cadmium	<0.050	<0.050	0
Chromium	0.56	0.54	4
Cobalt	0.18	0.18	0
Copper	1.2	1.3	8
Lead	5.0	4.9	2
Molybdenum	<0.50	<0.50	0
Nickel	0.46	0.44	4
Selenium	<0.20	0.13	not calculated
Silver	<0.10	<0.10	0
Thallium	<0.50	<0.50	0
Vanadium	0.81	0.78	4
Zinc	6.6	6.5	2

*: RPD>20%

Comments: Sample YC-841-1 was a field duplicate of YC-041-1 and all RPDs except As were within the control limits. (<20%) The detected STLC As results in samples YC-041-1 and YC-841-1 were qualified as estimated (J).

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

7. INTERFERENCE CHECK SAMPLES AND SERIAL DILUTION ANALYSIS

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ Not required

Interference Check Samples (ICS) - Unless flagged below, an ICS was analyzed at the beginning and end of each run and at least twice every eight hours. Recoveries were within a range of 80-120%. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J) if the concentrations of Al, Ca, Fe, or Mg are higher in the sample than in the ICS.

Serial Dilution Analysis - Unless flagged below, a serial dilution analysis was performed at a rate of one per 20 samples on a sample having analyte concentrations greater than 50 times the IDL. Percent differences were within a range of 0-10%. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J).

Comments: ICS recoveries were within the control limit.
Serial Dilution: Not analyzed

8. POST DIGESTION SPIKE AND STANDARD ADDITIONS

_____ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
__X__ Not required

Post-digestion spikes - If a furnace AA result was flagged by the laboratory with an E to indicate interference, and the associated post-digestion spike recovery was less than 10%, the associated results are rejected (R).

Method of Standard Additions - If the method of standard additions was required and the correlation coefficient was less than 0.995, the associated results were qualified as estimated (J).

Comments:

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

9. ANALYTE QUANTITATION

Confirm that analyte quantitation was performed correctly using the following formulas:

Water samples:

ug/L = (Instrument printout concentration, mg/L)(1000 ug/mg)(final volume of extract, mL)
(Initial volume of extract, mL)

Soil samples:

mg/kg = (Instrument printout concentration, mg/L)(final volume of extract, mL)(0.001 L/mL)
(weight of sample extracted, g)(0.001 kg/g)(fraction solids)

Comments: Analyte quantitation is acceptable.
Sample YC-040-3.6
STLC Pb: (1.804 mg/L) (50 mL/5 mL) = 18.04 mg/L.
Lab reported 18 mg/L.

Sample YC-042-2
STLC Pb: (0.9010 mg/L) (50 mL/5 mL) = 9.01 mg/L.
Lab reported 9.0 mg/L.

10. OVERALL ASSESSMENT OF DATA

On the basis of this review, the following determination has been made with regard to the overall data usability for the specified level.

_____ **Acceptable**
__X__ **Acceptable with Qualification**
_____ **Rejected**

Accepted data meet the minimum requirements for the following EPA data category:

_____ **ERS Screening**
_____ **Non-definitive with 10 % Conformation by Definitive Methodology**
_____ **Definitive, Comprehensive Statistical Error Determination was performed.**
__X__ **Definitive, Comprehensive Statistical Error Determination was not performed.**

Any qualifications to individual sample analysis results are detailed in the appropriate section above or appear under the comments section below. In cases where several QC criteria are out of specification, it may be appropriate to further qualify the data usability. The data reviewer must use professional judgment and express concerns and comments on the data validity for each specific data package.

Comments: Data as reported are valid.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

11. USABILITY OF DATA

A. These data are considered usable for the data use objectives stated in the *SAMPLING AND ANALYSIS PLAN YOSEMITE CREEK SEDIMENT WASTE CHARACTERIZATION STUDY, SAN FRANCISCO, CALIFORNIA, JANUARY 9, 2012 (SAP).*

The following data use objective was indicated in the *SAP:*

TO DOCUMENT THE CONCENTRAITON OF PCBS, ASBESTOS, AND METALS (CHROMIUM, LEAD, MERCURY, AND ZINC) IN SEDIMENT ATH THE SITE AND DETERMINE WHERE THESE CONCENTRAITONS EXCEED STATE AND FEDERAL WASTE DISPOSAL CRITERIA.

USING THE WASTE CHARACTRIZATION STUDY DATA AND DATA SETS FROM PREVIOUS INVESTIGAITONS, ESTIMATE THE VOLUME OF SEDIMENT CONTAINING CONCENTRATIONS OF ASBESTOS, PCBS, AND METALS (CHROMIUM, LEAD, MERCURY, AND ZINCE) THAT EXCEED STATE AND FEDERAL WASTE DISPOSAL CRITERIA.

THE DATA ARE USABLE FOR THE ABOVE OBJECTIVES.

B. These data meet quality objectives stated in the *SAP.*

AS INDICATED IN SECTION 3 OF THE SAP, THE INVESTIGATION WILL GENERATE DEFINITIVE DATA AND TABLE 3-1 OF THE SAP OUTLINES THE DATA QUALITY INDICATOR GOALS APPLICABLE TO THE DEFINITIVE DATA QUALITY LEVEL. THE DATA IN THIS PACKAGE MEET THESE REQUIREMENTS.

12. DOCUMENTATION OF LABORATORY CORRECTIVE ACTION

Problem: No problems requiring corrective action were found.

Resolution: Not required.

Attached are copies of all data summary sheets, with data qualifiers indicated, and a copy of the chain of custody for the samples.

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12088E
Project Number: R12S41	75 Hawthorne Street	Reported: 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-01									**Sediment - Sampled: 02/21/12 10:48**
Sample ID: YC-038-1									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-038-1									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.22		0.20	"	"	"	"	6010C/SOP503
Barium		1.5		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.052		0.050	"	"	"	"	6010C/SOP503
Chromium		0.89		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.16	Cl, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.76		0.40	"	"	"	"	6010C/SOP503
Lead		8.6		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.40	Cl, J	0.50	"	"	"	"	6010C/SOP503
Selenium		0.27		0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.83		0.20	"	"	"	"	6010C/SOP503
Zinc		9.1		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-02									**Sediment - Sampled: 02/21/12 10:50**
Sample ID: YC-038-2									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-038-2									**Metals by EPA 6000/7000 Series Methods**
Antimony		0.20		0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.11	Cl, J	0.20	"	"	"	"	6010C/SOP503
Barium		2.7		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	Cl, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.14		0.050	"	"	"	"	6010C/SOP503
Chromium		7.1		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.22		0.20	"	"	"	"	6010C/SOP503
Copper		0.38	Cl, J	0.40	"	"	"	"	6010C/SOP503
Lead		25		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.39	Cl, J	0.50	"	"	"	"	6010C/SOP503
Selenium		0.13	Cl, J	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.1		0.20	"	"	"	"	6010C/SOP503
Zinc		17		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-03									**Sediment - Sampled: 02/21/12 11:00**

6/18/12

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12088E
Project Number: R12S41	75 Hawthorne Street	Reported: 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-03									**Sediment - Sampled: 02/21/12 11:00**
Sample ID: YC-038-3									California WET Extraction (Title 22)
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-038-3									Metals by EPA 6000/7000 Series Methods
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.12	Cl, J	0.20	"	"	"	"	6010C/SOP503
Barium		0.86		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		0.45		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.13	Cl, J	0.20	"	"	"	"	6010C/SOP503
Copper		ND	U	0.40	"	"	"	"	6010C/SOP503
Lead		0.76		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.27	Cl, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.61		0.20	"	"	"	"	6010C/SOP503
Zinc		1.4		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-04									**Sediment - Sampled: 02/21/12 11:05**
Sample ID: YC-038-3.6									California WET Extraction (Title 22)
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-038-3.6									Metals by EPA 6000/7000 Series Methods
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.18	Cl, J	0.20	"	"	"	"	6010C/SOP503
Barium		0.75		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		0.33		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.17	Cl, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.25	Cl, J	0.40	"	"	"	"	6010C/SOP503
Lead		0.40		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.30	Cl, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.67		0.20	"	"	"	"	6010C/SOP503
Zinc		1.2		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-05									**Sediment - Sampled: 02/21/12 11:30**

6/18/12

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12088B
Project Number: R12S41	75 Hawthorne Street	Reported: 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Sample ID: YC-040-1									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-040-1									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.19	Cl, J	0.20	"	"	"	"	6010C/SOP503
Barium		0.85		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		0.52		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.16	Cl, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.57		0.40	"	"	"	"	6010C/SOP503
Lead		2.7		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.30	Cl, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.72		0.20	"	"	"	"	6010C/SOP503
Zinc		3.5		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-06									**Sediment - Sampled: 02/21/12 11:32**
Sample ID: YC-840-1									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-840-1									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.18	Cl, J	0.20	"	"	"	"	6010C/SOP503
Barium		0.87		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		0.54		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.17	Cl, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.58		0.40	"	"	"	"	6010C/SOP503
Lead		2.7		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.31	Cl, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.72		0.20	"	"	"	"	6010C/SOP503
Zinc		3.5		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-07									**Sediment - Sampled: 02/21/12 11:33**

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12088E
Project Number: R12S41	75 Hawthorne Street	Reported: 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-07									**Sediment - Sampled: 02/21/12 11:33**
Sample ID: YC-040-2									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-040-2									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.17	CI, J	0.20	"	"	"	"	6010C/SOP503
Barium		1.2		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.025	CI, J	0.050	"	"	"	"	6010C/SOP503
Chromium		0.71		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.17	CI, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.84		0.40	"	"	"	"	6010C/SOP503
Lead		3.9		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.70		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.70		0.20	"	"	"	"	6010C/SOP503
Zinc		5.9		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-08									**Sediment - Sampled: 02/21/12 11:55**
Sample ID: YC-040-3									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-040-3									**Metals by EPA 6000/7000 Series Methods**
Antimony		0.34		0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.10	CI, J	0.20	"	"	"	"	6010C/SOP503
Barium		2.7		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.073		0.050	"	"	"	"	6010C/SOP503
Chromium		2.8		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.24		0.20	"	"	"	"	6010C/SOP503
Copper		2.5		0.40	"	"	"	"	6010C/SOP503
Lead		18		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		1.3		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.9		0.20	"	"	"	"	6010C/SOP503
Zinc		18		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-09									**Sediment - Sampled: 02/21/12 11:57**

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager:	Craig Cooper	**Navy and Army Section**	**SDG:** 12088B
Project Number:	R12S41	**75 Hawthorne Street**	**Reported:** 05/03/12 15:14
Project:	Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-09							**Sediment - Sampled: 02/21/12 11:57**		
Sample ID: YC-040-3.6									California WET Extraction (Title 22)
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-040-3.6									Metals by EPA 6000/7000 Series Methods
Antimony		0.33		0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		ND	U	0.20	"	"	"	"	6010C/SOP503
Barium		2.6		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.071		0.050	"	"	"	"	6010C/SOP503
Chromium		2.7		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.24		0.20	"	"	"	"	6010C/SOP503
Copper		2.4		0.40	"	"	"	"	6010C/SOP503
Lead		18		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		1.3		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.9		0.20	"	"	"	"	6010C/SOP503
Zinc		18		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-10							**Sediment - Sampled: 02/21/12 12:57**		
Sample ID: YC-044-1									California WET Extraction (Title 22)
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-044-1									Metals by EPA 6000/7000 Series Methods
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.17	C1, J	0.20	"	"	"	"	6010C/SOP503
Barium		0.77		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	C1, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		0.52		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.19	C1, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.68		0.40	"	"	"	"	6010C/SOP503
Lead		2.1		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.36	C1, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.74		0.20	"	"	"	"	6010C/SOP503
Zinc		3.3		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-11							**Sediment - Sampled: 02/21/12 12:58**		

6/18/12

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12088E
Project Number: R12S41	75 Hawthorne Street	Reported: 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-11									**Sediment - Sampled: 02/21/12 12:58**
Sample ID: YC-044-1									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-044-1									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.22	J	0.20	"	"	"	"	6010C/SOP503
Barium		0.72		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		0.48		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.19	CI, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.69		0.40	"	"	"	"	6010C/SOP503
Lead		1.9		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.33	CI, J	0.50	"	"	"	"	6010C/SOP503
Selenium		0.19	CI, J	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.69		0.20	"	"	"	"	6010C/SOP503
Zinc		3.0		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-12									**Sediment - Sampled: 02/21/12 12:38**
Sample ID: YC-044-2									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-044-2									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.23		0.20	"	"	"	"	6010C/SOP503
Barium		1.1		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	CI, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.040	CI, J	0.050	"	"	"	"	6010C/SOP503
Chromium		1.1		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.19	CI, J	0.20	"	"	"	"	6010C/SOP503
Copper		1.1		0.40	"	"	"	"	6010C/SOP503
Lead		4.5		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.52		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.99		0.20	"	"	"	"	6010C/SOP503
Zinc		6.9		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-13									**Sediment - Sampled: 02/21/12 12:48**

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12088E
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-13									**Sediment - Sampled: 02/21/12 12:48**
Sample ID: YC-044-3									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-044-3									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.21		0.20	"	"	"	"	6010C/SOP503
Barium		2.0		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.006	C1, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.087		0.050	"	"	"	"	6010C/SOP503
Chromium		2.7		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.14	C1, J	0.20	"	"	"	"	6010C/SOP503
Copper		1.1		0.40	"	"	"	"	6010C/SOP503
Lead		8.3		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.60		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.2		0.20	"	"	"	"	6010C/SOP503
Zinc		15		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-14									**Sediment - Sampled: 02/21/12 12:58**
Sample ID: YC-044-4									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-044-4									**Metals by EPA 6000/7000 Series Methods**
Antimony		0.12	C1, J	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.31		0.20	"	"	"	"	6010C/SOP503
Barium		2.9		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.079		0.050	"	"	"	"	6010C/SOP503
Chromium		2.1		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.20		0.20	"	"	"	"	6010C/SOP503
Copper		0.84		0.40	"	"	"	"	6010C/SOP503
Lead		9.7		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.60		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.2		0.20	"	"	"	"	6010C/SOP503
Zinc		11		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-15									**Sediment - Sampled: 02/21/12 13:25**

United States Environmental Protection Agency
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Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12088E
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-15									**Sediment - Sampled: 02/21/12 13:25**
Sample ID: YC-042-1									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-042-1									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.22		0.20	"	"	"	"	6010C/SOP503
Barium		1.4		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.042	Cl, J	0.050	"	"	"	"	6010C/SOP503
Chromium		0.93		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.19	Cl, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.95		0.40	"	"	"	"	6010C/SOP503
Lead		5.5		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.48	Cl, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.90		0.20	"	"	"	"	6010C/SOP503
Zinc		8.1		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-16									**Sediment - Sampled: 02/21/12 13:34**
Sample ID: YC-042-2									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-042-2									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.14	Cl, J	0.20	"	"	"	"	6010C/SOP503
Barium		2.2		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.006	Cl, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.074		0.050	"	"	"	"	6010C/SOP503
Chromium		2.3		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.15	Cl, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.87		0.40	"	"	"	"	6010C/SOP503
Lead		9.0		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.52		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.2		0.20	"	"	"	"	6010C/SOP503
Zinc		12		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-17									**Sediment - Sampled: 02/21/12 13:45**

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12088E
Project Number: R12S41	75 Hawthorne Street	Reported: 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-17									**Sediment - Sampled: 02/21/12 13:45**
Sample ID: YC-042-3									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-042-3									**Metals by EPA 6000/7000 Series Methods**
Antimony		0.11	CI, J	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.27		0.20	"	"	"	"	6010C/SOP503
Barium		2.6		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.006	CI, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.074		0.050	"	"	"	"	6010C/SOP503
Chromium		4.1		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.17	CI, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.74		0.40	"	"	"	"	6010C/SOP503
Lead		10		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.62		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.2		0.20	"	"	"	"	6010C/SOP503
Zinc		12		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-18									**Sediment - Sampled: 02/21/12 13:58**
Sample ID: YC-042-4									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-042-4									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.24		0.20	"	"	"	"	6010C/SOP503
Barium		2.1		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	CI, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.054		0.050	"	"	"	"	6010C/SOP503
Chromium		1.7		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.13	CI, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.61		0.40	"	"	"	"	6010C/SOP503
Lead		3.7		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.44	CI, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.0		0.20	"	"	"	"	6010C/SOP503
Zinc		8.2		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-19									**Sediment - Sampled: 02/21/12 14:00**

6/18/12

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12088E
Project Number: R12841	75 Hawthorne Street	Reported: 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalyte / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-19									**Sediment - Sampled: 02/21/12 14:00**
Sample ID: YC-842-4									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-842-4									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.25		0.20	"	"	"	"	6010C/SOP503
Barium		1.9		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	Ci, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.056		0.050	"	"	"	"	6010C/SOP503
Chromium		1.7		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.13	Ci, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.67		0.40	"	"	"	"	6010C/SOP503
Lead		3.7		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.46	Ci, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.0		0.20	"	"	"	"	6010C/SOP503
Zinc		8.2		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-20									**Sediment - Sampled: 02/21/12 14:20**
Sample ID: YC-841-1									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0049	04/13/12	04/15/12	Title 22/SOP250
Sample ID: YC-841-1									**Metals by EPA 6000/7000 Series Methods**
Antimony		0.10	Ci, J	0.20	mg/L	B2D0082	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.16	Ci, J	0.20	"	"	"	"	6010C/SOP503
Barium		1.5		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		0.56		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.18	Ci, J	0.20	"	"	"	"	6010C/SOP503
Copper		1.2		0.40	"	"	"	"	6010C/SOP503
Lead		5.0		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.46	Ci, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.81		0.20	"	"	"	"	6010C/SOP503
Zinc		6.6		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-21									**Sediment - Sampled: 02/21/12 14:21**

United States Environmental Protection Agency
Region 9 Laboratory

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Project Manager: Craig Cooper	Navy and Army Section	SDG: 12088E
Project Number: R12S41	75 Hawthorne Street	Reported: 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-21									**Sediment - Sampled: 02/21/12 14:21**
Sample ID: YC-841-1									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-841-1									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0083	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.21	J	0.20	"	"	"	"	6010C/SOP503
Barium		1.3		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		0.54		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.18	C1, J	0.20	"	"	"	"	6010C/SOP503
Copper		1.3		0.40	"	"	"	"	6010C/SOP503
Lead		4.9		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.44	C1, J	0.50	"	"	"	"	6010C/SOP503
Selenium		0.13	C1, J	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.78		0.20	"	"	"	"	6010C/SOP503
Zinc		6.5		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-22									**Sediment - Sampled: 02/21/12 14:26**
Sample ID: YC-841-2									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-841-2									**Metals by EPA 6000/7000 Series Methods**
Antimony		0.22		0.20	mg/L	B2D0083	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.23		0.20	"	"	"	"	6010C/SOP503
Barium		1.9		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	C1, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.095		0.050	"	"	"	"	6010C/SOP503
Chromium		1.7		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.17	C1, J	0.20	"	"	"	"	6010C/SOP503
Copper		2.5		0.40	"	"	"	"	6010C/SOP503
Lead		15		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.65		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.2		0.20	"	"	"	"	6010C/SOP503
Zinc		19		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-23									**Sediment - Sampled: 02/21/12 14:29**

United States Environmental Protection Agency
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Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12088E
Project Number: R12S41	75 Hawthorne Street	**Reported:** 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-23									**Sediment - Sampled: 02/21/12 14:29**
Sample ID: YC-041-3									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-041-3									**Metals by EPA 6000/7000 Series Methods**
Antimony		0.73		0.20	mg/L	B2D0083	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.23		0.20	"	"	"	"	6010C/SOP503
Barium		6.5		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.006	C1, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.15		0.050	"	"	"	"	6010C/SOP503
Chromium		2.2		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.23		0.20	"	"	"	"	6010C/SOP503
Copper		0.75		0.40	"	"	"	"	6010C/SOP503
Lead		91		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.95		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.3		0.20	"	"	"	"	6010C/SOP503
Zinc		43		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-24									**Sediment - Sampled: 02/21/12 14:45**
Sample ID: YC-041-4									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-041-4									**Metals by EPA 6000/7000 Series Methods**
Antimony		0.21		0.20	mg/L	B2D0083	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.17	C1, J	0.20	"	"	"	"	6010C/SOP503
Barium		2.8		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.006	C1, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.085		0.050	"	"	"	"	6010C/SOP503
Chromium		7.4		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.18	C1, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.39	C1, J	0.40	"	"	"	"	6010C/SOP503
Lead		21		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.62		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.2		0.20	"	"	"	"	6010C/SOP503
Zinc		17		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-25									**Sediment - Sampled: 02/21/12 15:00**

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12088E
Project Number: R12S41	75 Hawthorne Street	Reported: 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-25									**Sediment - Sampled: 02/21/12 15:00**
Sample ID: YC-039-1									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-039-1									**Metals by EPA 6000/7000 Series Methods**
Antimony		0.13	Cl, J	0.20	mg/L	B2D0083	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.17	Cl, J	0.20	"	"	"	"	6010C/SOP503
Barium		2.3		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.006	Cl, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.092		0.050	"	"	"	"	6010C/SOP503
Chromium		2.1		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.15	Cl, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.73		0.40	"	"	"	"	6010C/SOP503
Lead		19		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.61		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.3		0.20	"	"	"	"	6010C/SOP503
Zinc		16		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-26									**Sediment - Sampled: 02/21/12 15:02**
Sample ID: YC-039-2									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-039-2									**Metals by EPA 6000/7000 Series Methods**
Antimony		0.14	Cl, J	0.20	mg/L	B2D0083	04/19/12	05/01/12	6010C/SOP503
Arsenic		ND	U	0.20	"	"	"	"	6010C/SOP503
Barium		3.6		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	Cl, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.086		0.050	"	"	"	"	6010C/SOP503
Chromium		5.5		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.19	Cl, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.46		0.40	"	"	"	"	6010C/SOP503
Lead		15		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.59		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.1		0.20	"	"	"	"	6010C/SOP503
Zinc		12		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-27									**Sediment - Sampled: 02/21/12 15:15**

6/18/12

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Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12088E
Project Number: R12S41	75 Hawthorne Street	**Reported:** 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-27									**Sediment - Sampled: 02/21/12 15:15**
Sample ID: YC-039-3									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-039-3									**Metals by EPA 6000/7000 Series Methods**
Antimony		0.19	C1, J	0.20	mg/L	B2D0083	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.26		0.20	"	"	"	"	6010C/SOP503
Barium		3.3		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	C1, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.067		0.050	"	"	"	"	6010C/SOP503
Chromium		1.9		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.22		0.20	"	"	"	"	6010C/SOP503
Copper		0.26	C1, J	0.40	"	"	"	"	6010C/SOP503
Lead		18		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.73		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.3		0.20	"	"	"	"	6010C/SOP503
Zinc		18		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-28									**Sediment - Sampled: 02/21/12 15:12**
Sample ID: YC-039-3.3									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-039-3.3									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0083	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.20		0.20	"	"	"	"	6010C/SOP503
Barium		1.6		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.027	C1, J	0.050	"	"	"	"	6010C/SOP503
Chromium		0.58		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.21		0.20	"	"	"	"	6010C/SOP503
Copper		0.21	C1, J	0.40	"	"	"	"	6010C/SOP503
Lead		3.1		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.39	C1, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.76		0.20	"	"	"	"	6010C/SOP503
Zinc		4.1		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-29									**Sediment - Sampled: 02/21/12 15:32**

6/18/12

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	SDG: 12088E
Project Number: R12S41	75 Hawthorne Street	Reported: 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-29									**Sediment - Sampled: 02/21/12 15:32**
Sample ID: YC-043-1									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-043-1									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0083	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.18	C1, J	0.20	"	"	"	"	6010C/SOP503
Barium		0.76		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		0.52		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.19	C1, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.56		0.40	"	"	"	"	6010C/SOP503
Lead		2.1		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.36	C1, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.74		0.20	"	"	"	"	6010C/SOP503
Zinc		3.2		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-30									**Sediment - Sampled: 02/21/12 15:33**
Sample ID: YC-043-2									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-043-2									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0083	04/19/12	05/01/12	6010C/SOP503
Arsenic		0.18	C1, J	0.20	"	"	"	"	6010C/SOP503
Barium		2.0	J, Q5	0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.050		0.050	"	"	"	"	6010C/SOP503
Chromium		1.8		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.16	C1, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.82		0.40	"	"	"	"	6010C/SOP503
Lead		5.6		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.42	C1, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.94		0.20	"	"	"	"	6010C/SOP503
Zinc		11	J, Q5	0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-31									**Sediment - Sampled: 02/21/12 15:43**

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United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12088B
Project Number: R12S41	75 Hawthorne Street	**Reported:** 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Sample ID: YC-043-3									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-043-3									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0083	04/19/12	05/02/12	6010C/SOP503
Arsenic		0.28		0.20	"	"	"	"	6010C/SOP503
Barium		1.8		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	CI, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.056		0.050	"	"	"	"	6010C/SOP503
Chromium		2.2		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.17	CI, J	0.20	"	"	"	"	6010C/SOP503
Copper		1.0		0.40	"	"	"	"	6010C/SOP503
Lead		5.1		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.57		0.50	"	"	"	"	6010C/SOP503
Selenium		0.15	CI, J	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.2		0.20	"	"	"	"	6010C/SOP503
Zinc		8.4		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-32									**Sediment - Sampled: 02/21/12 15:44**
Sample ID: YC-043-4									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-043-4									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0083	04/19/12	05/02/12	6010C/SOP503
Arsenic		0.22		0.20	"	"	"	"	6010C/SOP503
Barium		0.92		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.035	CI, J	0.050	"	"	"	"	6010C/SOP503
Chromium		0.99		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.18	CI, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.64		0.40	"	"	"	"	6010C/SOP503
Lead		1.3		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.47	CI, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.89		0.20	"	"	"	"	6010C/SOP503
Zinc		3.1		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-33									**Sediment - Sampled: 02/21/12 16:00**
Sample ID: YC-045-1									**California WET Extraction (Title 22)**

5/18/12

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12088E
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-33									**Sediment - Sampled: 02/21/12 16:00**
Sample ID: YC-045-1									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-045-1									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0083	04/19/12	05/02/12	6010C/SOP503
Arsenic		0.19	C1, J	0.20	"	"	"	"	6010C/SOP503
Barium		0.60		0.50	"	"	"	"	6010C/SOP503
Beryllium		ND	U	0.010	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		0.41		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.16	C1, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.45		0.40	"	"	"	"	6010C/SOP503
Lead		1.3		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.30	C1, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.66		0.20	"	"	"	"	6010C/SOP503
Zinc		2.0		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-34									**Sediment - Sampled: 02/21/12 16:02**
Sample ID: YC-045-2									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-045-2									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0083	04/19/12	05/02/12	6010C/SOP503
Arsenic		0.20		0.20	"	"	"	"	6010C/SOP503
Barium		0.96		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	C1, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.027	C1, J	0.050	"	"	"	"	6010C/SOP503
Chromium		0.94		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.18	C1, J	0.20	"	"	"	"	6010C/SOP503
Copper		0.89		0.40	"	"	"	"	6010C/SOP503
Lead		3.4		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.46	C1, J	0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.86		0.20	"	"	"	"	6010C/SOP503
Zinc		4.7		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-35									**Sediment - Sampled: 02/21/12 16:12**

6/18/12

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12088E
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1203062-35									**Sediment - Sampled: 02/21/12 16:12**
Sample ID: YC-045-3									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-045-3									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0083	04/19/12	05/02/12	6010C/SOP503
Arsenic		0.31		0.20	"	"	"	"	6010C/SOP503
Barium		1.6		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	C1, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.068		0.050	"	"	"	"	6010C/SOP503
Chromium		2.0		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.20		0.20	"	"	"	"	6010C/SOP503
Copper		1.3		0.40	"	"	"	"	6010C/SOP503
Lead		6.5		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.60		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		1.1		0.20	"	"	"	"	6010C/SOP503
Zinc		9.4		0.80	"	"	"	"	6010C/SOP503
Lab ID: 1203062-36									**Sediment - Sampled: 02/21/12 16:14**
Sample ID: YC-045-4									**California WET Extraction (Title 22)**
California WET Extraction		Performed		1	N/A	B2D0067	04/16/12	04/18/12	Title 22/SOP250
Sample ID: YC-045-4									**Metals by EPA 6000/7000 Series Methods**
Antimony		ND	U	0.20	mg/L	B2D0083	04/19/12	05/02/12	6010C/SOP503
Arsenic		0.24		0.20	"	"	"	"	6010C/SOP503
Barium		1.1		0.50	"	"	"	"	6010C/SOP503
Beryllium		0.005	C1, J	0.010	"	"	"	"	6010C/SOP503
Cadmium		0.042	C1, J	0.050	"	"	"	"	6010C/SOP503
Chromium		1.2		0.10	"	"	"	"	6010C/SOP503
Cobalt		0.21		0.20	"	"	"	"	6010C/SOP503
Copper		0.71		0.40	"	"	"	"	6010C/SOP503
Lead		2.1		0.30	"	"	"	"	6010C/SOP503
Molybdenum		ND	U	0.50	"	"	"	"	6010C/SOP503
Nickel		0.51		0.50	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Thallium		ND	U	0.50	"	"	"	"	6010C/SOP503
Vanadium		0.96		0.20	"	"	"	"	6010C/SOP503
Zinc		3.9		0.80	"	"	"	"	6010C/SOP503

United States Environmental Protection Agency
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Project Manager: Craig Cooper	**Navy and Army Section**	**SDG:** 12088E
Project Number: R12S41	**75 Hawthorne Street**	**Reported:** 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	**San Francisco CA, 94105**	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2D0049 - Cal WET test - Cal WET Extraction										**Prepared: 04/13/12 Analyzed: 04/15/12**
										California WET Extraction (Title 22) - Quality Control
Blank (B2D0049-BLK1)										
California WET Extraction	Performed		1	N/A						
Duplicate (B2D0049-DUP1)		**Source: 1203062-10**								
California WET Extraction	Performed		1	N/A		Performed				200
Batch B2D0067 - Cal WET test - Cal WET Extraction										**Prepared: 04/16/12 Analyzed: 04/18/12**
										California WET Extraction (Title 22) - Quality Control
Blank (B2D0067-BLK1)										
California WET Extraction	Performed		1	N/A						
Duplicate (B2D0067-DUP1)		**Source: 1203061-30**								
California WET Extraction	Performed		1	N/A		Performed				200
Batch B2D0082 - Leachate Digest - Metals, STLC, ICP										**Prepared: 04/19/12 Analyzed: 05/01/12**
										Metals by EPA 6000/7000 Series Methods - Quality Control
Blank (B2D0082-BLK1)										
Antimony	ND	U	0.2	mg/L						
Arsenic	ND	U	0.2	"						
Barium	ND	U	0.5	"						
Beryllium	ND	U	0.01	"						
Cadmium	ND	U	0.05	"						
Chromium	ND	U	0.1	"						
Cobalt	ND	U	0.2	"						
Copper	ND	U	0.4	"						
Lead	ND	U	0.3	"						
Molybdenum	ND	U	0.5	"						
Nickel	ND	U	0.5	"						
Selenium	ND	U	0.2	"						
Silver	ND	U	0.1	"						
Thallium	ND	U	0.5	"						
Vanadium	ND	U	0.2	"						
Zinc	ND	U	0.8	"						
LCS (B2D0082-BS1)										
Antimony	21.6		0.2	mg/L	20.0		108	80-120		200
Arsenic	88.6		0.2	"	80.0		111	80-120		200
Barium	85.2		0.5	"	80.0		107	80-120		200
Beryllium	2.06		0.01	"	2.00		103	80-120		200
Cadmium	2.07		0.05	"	2.00		103	80-120		200
Chromium	8.23		0.1	"	8.00		103	80-120		200
Cobalt	20.3		0.2	"	20.0		101	80-120		200
Copper	9.81		0.4	"	10.0		98	80-120		200
Lead	20.1		0.3	"	20.0		100	80-120		200
Molybdenum	5.11		0.5	"	5.00		102	80-120		200
Nickel	20.2		0.5	"	20.0		101	80-120		200
Selenium	89.5		0.2	"	80.0		112	80-120		200

6/18/12

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Project Manager: Craig Cooper	Navy and Army Section	SDG: 12088E
Project Number: R12S41	75 Hawthorne Street	Reported: 05/03/12 15:14
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2D0082 - Leachate Digest - Metals, STLC, ICP								Prepared: 04/19/12 Analyzed: 05/01/12		
								Metals by EPA 6000/7000 Series Methods - Quality Control		
Matrix Spike Dup (B2D0082-MSD1)		Source: 1203062-10								
Barium	84.7		0.5	"	80.0	0.768	105	75-125	1	20
Beryllium	2.13		0.01	"	2.00	ND	106	75-125	5	20
Cadmium	2.06		0.05	"	2.00	ND	103	75-125	1	20
Chromium	8.57		0.1	"	8.00	0.523	101	75-125	1	20
Cobalt	20.2		0.2	"	20.0	0.187	100	75-125	3	20
Copper	10.8		0.4	"	10.0	0.676	101	75-125	0.5	20
Lead	22		0.3	"	20.0	2.08	100	75-125	1	20
Molybdenum	5		0.5	"	5.00	ND	100	75-125	2	20
Nickel	21		0.5	"	20.0	0.363	103	75-125	1	20
Selenium	87.3		0.2	"	80.0	ND	109	75-125	1	20
Silver	2.09		0.1	"	2.00	ND	104	75-125	1	20
Thallium	78.4		0.5	"	80.0	ND	98	75-125	0.9	20
Vanadium	23		0.2	"	20.0	0.742	111	75-125	1	20
Zinc	25.2		0.8	"	20.0	3.26	110	75-125	0.1	20
Batch B2D0083 - Leachate Digest - Metals, STLC, ICP								Prepared: 04/19/12 Analyzed: 05/01/12		
								Metals by EPA 6000/7000 Series Methods - Quality Control		
Blank (B2D0083-BLK1)										
Antimony	ND	U	0.2	mg/L						
Arsenic	ND	U	0.2	"						
Barium	ND	U	0.5	"						
Beryllium	ND	U	0.01	"						
Cadmium	ND	U	0.05	"						
Chromium	ND	U	0.1	"						
Cobalt	ND	U	0.2	"						
Copper	ND	U	0.4	"						
Lead	ND	U	0.3	"						
Molybdenum	ND	U	0.5	"						
Nickel	ND	U	0.5	"						
Selenium	ND	U	0.2	"						
Silver	ND	U	0.1	"						
Thallium	ND	U	0.5	"						
Vanadium	ND	U	0.2	"						
Zinc	ND	U	0.8	"						
LCS (B2D0083-BS1)										
Antimony	21.6		0.2	mg/L	20.0		108	80-120		200
Arsenic	88.6		0.2	"	80.0		111	80-120		200
Barium	84.8		0.5	"	80.0		106	80-120		200
Beryllium	2.1		0.01	"	2.00		105	80-120		200
Cadmium	2.05		0.05	"	2.00		102	80-120		200
Chromium	8.21		0.1	"	8.00		103	80-120		200
Cobalt	19.9		0.2	"	20.0		100	80-120		200

6/18/12

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

Page 1 of 3

PROJ. NO.: R12541
PROJECT NAME: Yosemite Creek EE CA
SAMPLERS: (Signature)

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471)				REMARKS
2/21/12	1048	Sediment		X	YC-038-1	2	X	X				Additional analyses (TCLP, STLC)
	1050				YC-038-2	2	X	X				may be required; please hold
	1100				YC-038-3	2	X	X				all extra volume.
	1102				YC-838-3	1	X					
	1105				YC-038-3.6	2	X	X				Please report results to:
	1130				YC-040-1	2	X	X				Brian Milton
	1132				YC-840-1	1		X				bmilton@ene.com
	1133				YC-040-2	2	X	X				510-893-6700
	1155				YC-040-3	2	X	X				
	1157				YC-040-3.6	2	X	X				
	1257				YC-044-1	2	X	X				
	1258				YC-844-1	1		X				
	1238				YC-044-2	2	X	X				
	1240				YC-844-2	1	X					
	1248	V		V	YC-044-3	2	X	X				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	2/22/12	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received for Laboratory by: (Signature)	Date / Time	Temp. / Seals Intact (Y/N)
	2/22/12 1315	9° NO SEALS

Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Conditions / Remarks
HAND DEL.

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2491

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

PROJ. NO. R12S41 | PROJECT NAME Yosemite Creek EE CA

SAMPLERS: (Signature)

Page 2 of 3

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471)				REMARKS
2/21/12	1258	Sediment		X	YC-044-4	2	X	X				Additional analyses (TCLP, STLC)
	1325				YC-042-1	2	X	X				may be required. Please hold
	1334				YC-042-2	2	X	X				all extra volume.
	1345				YC-042-3	2	X	X				
	1348				YC-842-3	1	X					Please report results to
	1358				YC-042-4	2	X	X				Brian Milton
	1400				YC-842-4	1		X				bmilton@ene.com
	1420				YC-041-1	2	X	X				510-893-6700
	1421				YC-841-1	1		X				
	1426				YC-041-2	2	X	X				
	1428				YC-841-2	1	X					
	1429				YC-041-3	2	X	X				
	1445				YC-041-4	2	X	X				
	1500				YC-039-1	2	X	X				
	1502				YC-039-2	2	X	X				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	2/22/12				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received for Laboratory by: (Signature)	Date / Time	Temp.	Seals Intact (Y/N)	Conditions / Remarks	
	2/22/12 13:25	9°C	N/A	HOLD DEL.	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2492

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

PROJ. NO.: R12541
PROJECT NAME: Yosemite Creek EE/CA
SAMPLERS: (Signature)

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471)					REMARKS
2/21/12	1515	Sediment		X	YC-039-3	2	X	X					Additional analyses (TCLP, STLC)
	1512				YC-039-3,3		X	X					may be required; please hold
	1532				YC-043-1		X	X					all extra volume.
	1533				YC-043-2		X	X					
	1543				YC-043-3		X	X					Please report results to
	1544				YC-043-4		X	X					Brian Milton
	1600				YC-045-1		X	X					bmilton@ene.com
	1602				YC-045-2		X	X					510-893-6700
	1612				YC-045-3		X	X					
	1619				YC-045-4		X	X					
	1630	Water			YC-022112-RB	2	X	X					WATER SAMPLE FOR METALS REC'D @ pH < 2 BY LAB

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	2/22/12				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received for Laboratory by: (Signature)	Date / Time	Temp.	Seals Intact (Y/N)	Conditions / Remarks	
	2/22/12 1325	9°C	NO SEALS	HOLD DEL.	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2493

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	**Location: San Francisco, CA**
TDD Number: TO2-09-11-10-0001	**Project Number: 002693.7008.01SO**

Laboratory: Region 9 Laboratory	**Lab Project No: 1205033, SDG 12131D**
Sampling Dates: 2/21/2012	**Sample Matrix: Sediment**
Analytical Method: TCLP Metals *(1311/6010B)*	**Data Reviewer: M. Song**

REVIEW AND APPROVAL:

Data Reviewer: Mindy Song **Date:** 6/18/12
Technical QA Reviewer: Howard Edwards **Date:** _____
Project Manager: Brian Milton **Date:** _____

SAMPLE IDENTIFICATION:

Sample No.	Sample I.D.	Laboratory I.D.
1	YC-038-1	1205033-01
2	YC-038-2	1205033-02
3	YC-838-3	1205033-03
4	YC-040-1	1205033-04
5	YC-840-1	1205033-05
6	YC-040-2	1205033-06
7	YC-040-3	1205033-07
8	YC-040-3.6	1205033-08
9	YC-044-1	1205033-09
10	YC-844-1	1205033-10
11	YC-044-2	1205033-11
12	YC-844-2	1205033-12
13	YC-044-3	1205033-13
14	YC-044-4	1205033-14
15	YC-042-1	1205033-15
16	YC-042-2	1205033-16
17	YC-042-3	1205033-17
18	YC-842-3	1205033-18
19	YC-042-4	1205033-19
20	YC-842-4	1205033-20

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

Sample No.	Sample I.D.	Laboratory I.D.
21	YC-041-1	1205033-21
22	YC-841-1	1205033-22
23	YC-041-2	1205033-23
24	YC-841-2	1205033-24
25	YC-041-3	1205033-25
26	YC-041-4	1205033-26
27	YC-039-1	1205033-27
28	YC-039-2	1205033-28
29	YC-039-3	1205033-29
30	YC-043-1	1205033-30
31	YC-043-2	1205033-31
32	YC-043-3	1205033-32
33	YC-043-4	1205033-33
34	YC-045-1	1205033-34
35	YC-045-2	1205033-35
36	YC-045-3	1205033-36
37	YC-045-4	1205033-37

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

DATA PACKAGE COMPLETENESS CHECKLIST:

Checklist Code:

- X Included: no problems
- * Included: problems noted in review
- O Not Included and/or Not Available
- NR Not Required
- RS Provided As Re-submission

Case Narrative:

- X Case Narrative present

Quality Control Summary Package:

- X Data Summary sheets
- X Initial and Continuing Calibration results
- NR CRDL Standard results
- X Preparation Blank and Calibration Blank results
- X ICP Interference Check Sample results
- X Matrix Spike recoveries
- X Matrix Duplicate results
- X Laboratory Control Sample recoveries
- NR Method of Standard Additions results
- NR ICP Serial Dilution results
- NR Instrument Detection Limits
- NR ICP Interelement Correction Factors
- NR ICP Linear Ranges
- X Preparation Log
- X Analysis Run Log

Raw QC Data Package Section

- X Chain-of-Custody Records
- X Instrument Printouts
- X Sample Preparation Notebook Pages
- X Logbook and Worksheet Pages
- X Percent Solids Determination

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

DATA VALIDATION SUMMARY

The data were reviewed following procedures and limits specified in the EPA OSWER directive, *Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures* (EPA/540/G-90/004, OSWER Directive 9360.4-01, dated April 1990).

Indicate with a YES or NO whether each item is acceptable without qualification:

1	Holding Times	YES
2	Initial and Continuing Calibrations	YES
3	Laboratory Control Sample	YES
4	Matrix Spike	YES
5	Blanks and Background Samples	YES
6	Duplicate Analyses	YES
7	Interference Check Samples and Serial Dilution Analysis	YES
8	Post Digestion Spike and Standard Addition Analysis	N/A
9	Analyte Quantitation	YES
10	Overall Assessment of Data	YES
11	Usability of Data	YES

Comments: N/A: Not Applicable. No TCLP Hg was analyzed for these samples.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

1. HOLDING TIMES

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable

Samples were extracted and analyzed within required holding times except as noted under Comments. In addition, no problems were identified with regard to sample preservation or custody unless specified. For those samples analyzed outside holding time requirements, the detected results have been qualified as estimated (J), and the nondetected results have been qualified either as estimated (UJ) or rejected (R) based on the reviewer's judgement.

All Sample Matrices:
Mercury: 28 days (from collection) for analysis.
Hexavalent chromium: 24 hours (from collection) for analysis.
All other metals: 180 days (from collection) for analysis.

Comments: All holding times were met.

2. INITIAL AND CONTINUING CALIBRATION VERIFICATION

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable

Unless flagged below, an initial calibration verification (ICV) and a calibration blank were analyzed at the beginning of the run, and a continuing calibration verification (CCV) and a calibration blank were analyzed after every ten samples, and at the end of the run. ICV and CCV recoveries were within a range of 80-120% for mercury and tin, and 90-110% for all other metals. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 65% or above 135% (for mercury and tin) or below 75% or above 125% (for all other metals), all associated data are rejected (R).

Comments: All recoveries of metals in initial and continuing calibration verifications were within the control limits.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

3. LABORATORY CONTROL SAMPLE

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Laboratory Control Samples Analyzed

Laboratory control sample recoveries are used for a qualitative indication of accuracy (bias) independent of matrix effects. LCS recovery limits should either be specified in the Sampling and Analysis Plan or can be established by the laboratory. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 30%, all associated nondetected results are rejected (R) and detected results are qualified as estimated (J).

Comments: Percent recoveries of LCS were within the control limits.

4. MATRIX SPIKE

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Matrix Spikes Analyzed

Matrix spike recoveries are used for a qualitative indication of accuracy (bias) due to matrix effects. Unless flagged below, one laboratory control sample was analyzed at a rate of one per batch or one per 20 samples. Recoveries were within a range of 75-125%. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J). In cases where the recovery was below 30%, all associated nondetected results are rejected (R) and detected results are qualified as estimated (J).

Comments: Samples YC-042-1 and YC-842-4 were used for MS/MSD analysis and the recoveries were within the control limits.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

5. BLANKS AND BACKGROUND SAMPLES

__X__ Acceptable
_____ Detection Limits Adjusted

The following blanks were analyzed:
__X__ Method (preparation) Blanks
_____ Field Blanks
_____ Calibration Blanks
_____ Rinsate Blanks
_____ Background Samples

Preparation (method) blanks were prepared for each batch of samples extracted. A preparation blank was analyzed after every continuing calibration standard, prior to sample analysis unless noted below. Any compound detected in the sample and also detected in any associated blank, must be qualified as non-detect (U) when the sample concentration is less than 5x the blank concentration.

Comments: No contamination was detected in the method blank at reporting limit levels.

6. DUPLICATE ANALYSES

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ No Duplicates Analyzed

Type of duplicates analyzed:
__X__ Field Duplicates
_____ Laboratory Duplicates

Calculate the relative Percent Difference (RPD) between the members of duplicate pairs using the equation indicated below. Qualify the detected results as estimated (J) for any analyte whose RPD in a laboratory duplicate exceeds 20% for water samples or 35% for soil samples.

$$RPD = \frac{2(Value\ 1 - Value\ 2)}{Value\ 1 + Value\ 2} \times 100\%$$

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

Analyte (mg/L), TCLP	YC-040-1	YC-840-1	RPD (%)
Arsenic	<0.20	<0.20	0
Barium	<0.50	<0.50	0
Cadmium	<0.050	<0.050	0
Chromium	<0.10	<0.10	0
Lead	<0.30	<0.30	0
Selenium	<0.20	<0.20	0
Silver	<0.10	<0.10	0

Comments: Sample YC-840-1 was a field duplicate of YC-040-1 and all RPDs were within the control limits. (<20%)

Analyte (mg/L), TCLP	YC-044-1	YC-844-1	RPD (%)
Arsenic	<0.20	<0.20	0
Barium	<0.50	<0.50	0
Cadmium	<0.050	<0.050	0
Chromium	<0.10	<0.10	0
Lead	<0.30	<0.30	0
Selenium	<0.20	<0.20	0
Silver	<0.10	<0.10	0

Comments: Sample YC-844-1 was a field duplicate of YC-044-1 and all RPDs were within the control limits. (<20%)

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

Analyte (mg/L), TCLP	YC-044-2	YC-844-2	RPD (%)
Arsenic	<0.20	<0.20	0
Barium	<0.50	<0.50	0
Cadmium	<0.050	<0.050	0
Chromium	<0.10	<0.10	0
Lead	0.21	0.24	13
Selenium	<0.20	<0.20	0
Silver	<0.10	<0.10	0

Comments: Sample YC-844-2 was a field duplicate of YC-044-2 and all RPDs were within the control limits. (<20%)

Analyte (mg/L), TCLP	YC-042-4	YC-842-4	RPD (%)
Arsenic	<0.20	<0.20	0
Barium	<0.50	<0.50	0
Cadmium	<0.050	<0.050	0
Chromium	<0.10	<0.10	0
Lead	<0.30	<0.30	0
Selenium	<0.20	<0.20	0
Silver	<0.10	<0.10	0

Comments: Sample YC-842-4 was a field duplicate of YC-042-4 and all RPDs were within the control limits. (<20%)

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

Analyte (mg/L), TCLP	YC-041-1	YC-841-1	RPD (%)
Arsenic	<0.20	<0.20	0
Barium	<0.50	<0.50	0
Cadmium	<0.050	<0.050	0
Chromium	<0.10	<0.10	0
Lead	0.18	0.18	0
Selenium	<0.20	<0.20	0
Silver	<0.10	<0.10	0

Comments: Sample YC-841-1 was a field duplicate of YC-041-1 and all RPDs were within the control limits. (<20%)

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

7. INTERFERENCE CHECK SAMPLES AND SERIAL DILUTION ANALYSIS

__X__ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
_____ Not required

Interference Check Samples (ICS) - Unless flagged below, an ICS was analyzed at the beginning and end of each run and at least twice every eight hours. Recoveries were within a range of 80-120%. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J) if the concentrations of Al, Ca, Fe, or Mg are higher in the sample than in the ICS.

Serial Dilution Analysis - Unless flagged below, a serial dilution analysis was performed at a rate of one per 20 samples on a sample having analyte concentrations greater than 50 times the IDL. Percent differences were within a range of 0-10%. For analytes which exceeded these control limits, associated detected results are qualified as estimated (J).

Comments: ICS recoveries were within the control limit.
Serial Dilution: Not analyzed

8. POST DIGESTION SPIKE AND STANDARD ADDITIONS

_____ Acceptable
_____ Acceptable with qualification
_____ Unacceptable
__X__ Not required

Post-digestion spikes - If a furnace AA result was flagged by the laboratory with an E to indicate interference, and the associated post-digestion spike recovery was less than 10%, the associated results are rejected (R).

Method of Standard Additions - If the method of standard additions was required and the correlation coefficient was less than 0.995, the associated results were qualified as estimated (J).

Comments:

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

9. ANALYTE QUANTITATION

Confirm that analyte quantitation was performed correctly using the following formulas:

Water samples:

ug/L = (Instrument printout concentration, mg/L)(1000 ug/mg)(final volume of extract, mL)
(Initial volume of extract, mL)

Soil samples:

mg/kg = (Instrument printout concentration, mg/L)(final volume of extract, mL)(0.001 L/mL)
(weight of sample extracted, g)(0.001 kg/g)(fraction solids)

Comments: Analyte quantitation is acceptable.

Sample YC-041-3
TCLP Ba: (0.06209 mg/L (50 mL/5 mL) = 0.6209 mg/L
Lab reported 0.62 mg/L.
TCLP Pb: (0.1915 mg/L) (50 mL/5 mL) = 1.915 mg/L.
Lab reported 1.9 mg/L.

Sample YC-045-3
TCLP Pb: (0.03550 mg/L) (50 mL/5 mL) = 0.355 mg/L.
Lab reported 0.35 mg/L.

10. OVERALL ASSESSMENT OF DATA

On the basis of this review, the following determination has been made with regard to the overall data usability for the specified level.

__X__ **Acceptable**
_____ **Acceptable with Qualification**
_____ **Rejected**

Accepted data meet the minimum requirements for the following EPA data category:

_____ **ERS Screening**
_____ **Non-definitive with 10 % Conformation by Definitive Methodology**
_____ **Definitive, Comprehensive Statistical Error Determination was performed.**
__X__ **Definitive, Comprehensive Statistical Error Determination was not performed.**

Any qualifications to individual sample analysis results are detailed in the appropriate section above or appear under the comments section below. In cases where several QC criteria are out of specification, it may be appropriate to further qualify the data usability. The data reviewer must use professional judgment and express concerns and comments on the data validity for each specific data package.

Comments: Data as reported are valid.

ANALYTICAL DATA REVIEW SUMMARY

Tier 2 Validation

Site Name: Yosemite Creek, EE/CA	Location: San Francisco, CA
TDD Number: TO2-09-11-10-0001	Project Number: 002693.7008.01SO

11. USABILITY OF DATA

A. These data are considered usable for the data use objectives stated in the *SAMPLING AND ANALYSIS PLAN YOSEMITE CREEK SEDIMENT WASTE CHARACTERIZATION STUDY, SAN FRANCISCO, CALIFORNIA, JANUARY 9, 2012 (SAP).*

The following data use objective was indicated in the *SAP:*

TO DOCUMENT THE CONCENTRAITON OF PCBs, ASBESTOS, AND METALS (CHROMIUM, LEAD, MERCURY, AND ZINC) IN SEDIMENT ATH THE SITE AND DETERMINE WHERE THESE CONCENTRAITONS EXCEED STATE AND FEDERAL WASTE DISPOSAL CRITERIA.

USING THE WASTE CHARACTRIZATION STUDY DATA AND DATA SETS FROM PREVIOUS INVESTIGAITONS, ESTIMATE THE VOLUME OF SEDIMENT CONTAINING CONCENTRATIONS OF ASBESTOS, PCBS, AND METALS (CHROMIUM, LEAD, MERCURY, AND ZINCE) THAT EXCEED STATE AND FEDERAL WASTE DISPOSAL CRITERIA.

THE DATA ARE USABLE FOR THE ABOVE OBJECTIVES.

B. These data meet quality objectives stated in the *SAP.*

AS INDICATED IN SECTION 3 OF THE SAP, THE INVESTIGATION WILL GENERATE DEFINITIVE DATA AND TABLE 3-1 OF THE SAP OUTLINES THE DATA QUALITY INDICATOR GOALS APPLICABLE TO THE DEFINITIVE DATA QUALITY LEVEL. THE DATA IN THIS PACKAGE MEET THESE REQUIREMENTS.

12. DOCUMENTATION OF LABORATORY CORRECTIVE ACTION

Problem: No problems requiring corrective action were found.

Resolution: Not required.

Attached are copies of all data summary sheets, with data qualifiers indicated, and a copy of the chain of custody for the samples.

United States Environmental Protection Agency
Region 9 Laboratory
1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12131D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 06/13/12 09:59
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1205033-01									**Sediment - Sampled: 02/21/12 10:48**
Sample ID: YC-038-1									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-038-1									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.68		0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-02									**Sediment - Sampled: 02/21/12 10:50**
Sample ID: YC-038-2									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-038-2									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		0.31	Cl, J	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		1.5		0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-03									**Sediment - Sampled: 02/21/12 11:02**
Sample ID: YC-038-3									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-038-3									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-04									**Sediment - Sampled: 02/21/12 11:30**
Sample ID: YC-040-1									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-040-1									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503

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Project Number: R12S41	75 Hawthorne Street	**Reported:** 06/13/12 09:59
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1205033-04									**Sediment - Sampled: 02/21/12 11:30**
Sample ID: YC-040-1									**Metals by EPA 6000/7000 Series Methods**
Cadmium		ND	U	0.050	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-05									**Sediment - Sampled: 02/21/12 11:32**
Sample ID: YC-840-1									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-840-1									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-06									**Sediment - Sampled: 02/21/12 11:33**
Sample ID: YC-040-2									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-040-2									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.18	CI, J	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-07									**Sediment - Sampled: 02/21/12 11:55**
Sample ID: YC-040-3									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-040-3									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		0.37	CI, J	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.68		0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503

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Project Number: R12S41	75 Hawthorne Street	**Reported:** 06/13/12 09:59
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1205033-07									**Sediment - Sampled: 02/21/12 11:55**
Sample ID: YC-040-3									**Metals by EPA 6000/7000 Series Methods**
Silver		ND	U	0.10	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Lab ID: 1205033-08									**Sediment - Sampled: 02/21/12 11:57**
Sample ID: YC-040-3.6									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-040-3.6									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		0.35	CI, J	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-09									**Sediment - Sampled: 02/21/12 12:57**
Sample ID: YC-044-1									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-044-1									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-10									**Sediment - Sampled: 02/21/12 12:58**
Sample ID: YC-844-1									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-844-1									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-11									**Sediment - Sampled: 02/21/12 12:38**
Sample ID: YC-044-2									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250

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Project Number: R12S41	75 Hawthorne Street	**Reported:** 06/13/12 09:59
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1205033-11									**Sediment - Sampled: 02/21/12 12:38**
Sample ID: YC-044-2									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.21	C1, J	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-12									**Sediment - Sampled: 02/21/12 12:40**
Sample ID: YC-844-2									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-844-2									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.24	C1, J	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-13									**Sediment - Sampled: 02/21/12 12:48**
Sample ID: YC-044-3									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-044-3									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-14									**Sediment - Sampled: 02/21/12 12:58**
Sample ID: YC-044-4									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-044-4									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		0.33	C1, J	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503

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Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1205033-14									**Sediment - Sampled: 02/21/12 12:58**
Sample ID: YC-044-4									**Metals by EPA 6000/7000 Series Methods**
Lead		ND	U	0.30	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-15									**Sediment - Sampled: 02/21/12 13:25**
Sample ID: YC-042-1									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-042-1									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.24	Cl, Q5, J	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-16									**Sediment - Sampled: 02/21/12 13:34**
Sample ID: YC-042-2									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-042-2									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.20	Cl, J	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-17									**Sediment - Sampled: 02/21/12 13:45**
Sample ID: YC-042-3									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-042-3									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		0.26	Cl, J	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-18									**Sediment - Sampled: 02/21/12 13:48**

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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1205033-18									**Sediment - Sampled: 02/21/12 13:48**
Sample ID: YC-842-3									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-842-3									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		0.26	C1, J	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-19									**Sediment - Sampled: 02/21/12 13:58**
Sample ID: YC-042-4									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-042-4									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-20									**Sediment - Sampled: 02/21/12 14:00**
Sample ID: YC-842-4									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-842-4									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0016	06/06/12	06/07/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-21									**Sediment - Sampled: 02/21/12 14:20**
Sample ID: YC-041-1									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-041-1									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0032	06/11/12	06/12/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503

United States Environmental Protection Agency
Region 9 Laboratory
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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12131D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 06/13/12 09:59
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1205033-21									**Sediment - Sampled: 02/21/12 14:20**
Sample ID: YC-041-1									**Metals by EPA 6000/7000 Series Methods**
Cadmium		ND	U	0.050	mg/L	B2F0032	06/11/12	06/12/12	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.18	CI, J	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-22									**Sediment - Sampled: 02/21/12 14:21**
Sample ID: YC-841-1									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0010	06/05/12	06/06/12	1311/SOP250
Sample ID: YC-841-1									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0032	06/11/12	06/12/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.18	CI, J	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-23									**Sediment - Sampled: 02/21/12 14:26**
Sample ID: YC-041-2									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-041-2									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		1.0		0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-24									**Sediment - Sampled: 02/21/12 14:28**
Sample ID: YC-841-2									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-841-2									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.90		0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503

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Project Number: R12S41	75 Hawthorne Street	**Reported:** 06/13/12 09:59
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1205033-24									**Sediment - Sampled: 02/21/12 14:28**
Sample ID: YC-841-2									**Metals by EPA 6000/7000 Series Methods**
Silver		ND	U	0.10	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Lab ID: 1205033-25									**Sediment - Sampled: 02/21/12 14:29**
Sample ID: YC-041-3									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-041-3									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		0.62		0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		1.9		0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-26									**Sediment - Sampled: 02/21/12 14:45**
Sample ID: YC-041-4									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-041-4									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		0.25	Cl, J	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-27									**Sediment - Sampled: 02/21/12 15:00**
Sample ID: YC-039-1									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-039-1									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-28									**Sediment - Sampled: 02/21/12 15:02**
Sample ID: YC-039-2									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250

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Project Number: R12S41	75 Hawthorne Street	**Reported:** 06/13/12 09:59
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1205033-28									**Sediment - Sampled: 02/21/12 15:02**
Sample ID: YC-039-2									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-29									**Sediment - Sampled: 02/21/12 15:15**
Sample ID: YC-039-3									**TCLP Extraction by EPA 1311**
TCLP Extraction	Performed				N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-039-3									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-30									**Sediment - Sampled: 02/21/12 15:32**
Sample ID: YC-043-1									**TCLP Extraction by EPA 1311**
TCLP Extraction	Performed				N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-043-1									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-31									**Sediment - Sampled: 02/21/12 15:33**
Sample ID: YC-043-2									**TCLP Extraction by EPA 1311**
TCLP Extraction	Performed				N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-043-2									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503

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Project Number: R12S41	75 Hawthorne Street	**Reported:** 06/13/12 09:59
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1205033-31									**Sediment - Sampled: 02/21/12 15:33**
Sample ID: YC-043-2									**Metals by EPA 6000/7000 Series Methods**
Lead		0.32		0.30	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-32									**Sediment - Sampled: 02/21/12 15:43**
Sample ID: YC-043-3									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-043-3									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.28	CI, J	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-33									**Sediment - Sampled: 02/21/12 15:44**
Sample ID: YC-043-4									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-043-4									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-34									**Sediment - Sampled: 02/21/12 16:00**
Sample ID: YC-045-1									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-045-1									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-35									**Sediment - Sampled: 02/21/12 16:02**

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Project Number: R12S41	75 Hawthorne Street	**Reported:** 06/13/12 09:59
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1205033-35									**Sediment - Sampled: 02/21/12 16:02**
Sample ID: YC-045-2									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-045-2									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.16	Cl, J	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-36									**Sediment - Sampled: 02/21/12 16:12**
Sample ID: YC-045-3									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-045-3									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		0.35		0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503
Lab ID: 1205033-37									**Sediment - Sampled: 02/21/12 16:14**
Sample ID: YC-045-4									**TCLP Extraction by EPA 1311**
TCLP Extraction		Performed			N/A	B2F0014	06/06/12	06/07/12	1311/SOP250
Sample ID: YC-045-4									**Metals by EPA 6000/7000 Series Methods**
Arsenic		ND	U	0.20	mg/L	B2F0019	06/07/12	06/08/12	6010C/SOP503
Barium		ND	U	0.50	"	"	"	"	6010C/SOP503
Cadmium		ND	U	0.050	"	"	"	"	6010C/SOP503
Chromium		ND	U	0.10	"	"	"	"	6010C/SOP503
Lead		ND	U	0.30	"	"	"	"	6010C/SOP503
Selenium		ND	U	0.20	"	"	"	"	6010C/SOP503
Silver		ND	U	0.10	"	"	"	"	6010C/SOP503

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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2F0016 - Leachate Digest - Metals, TCLP, ICP									**Prepared: 06/06/12 Analyzed: 06/07/12**	
									Metals by EPA 6000/7000 Series Methods - Quality Control	
Blank (B2F0016-BLK1)										
Arsenic	ND	U	0.2	mg/L						
Barium	ND	U	0.5	"						
Cadmium	ND	U	0.05	"						
Chromium	ND	U	0.1	"						
Lead	ND	U	0.3	"						
Selenium	ND	U	0.2	"						
Silver	ND	U	0.1	"						
Blank (B2F0016-BLK2)										
Arsenic	ND	U	0.2	mg/L						
Barium	ND	U	0.5	"						
Cadmium	ND	U	0.05	"						
Chromium	ND	U	0.1	"						
Lead	ND	U	0.3	"						
Selenium	ND	U	0.2	"						
Silver	ND	U	0.1	"						
LCS (B2F0016-BS1)										
Arsenic	20.3		0.2	mg/L	20.0		102	80-120		200
Barium	19.6		0.5	"	20.0		98	80-120		200
Cadmium	0.484		0.05	"	0.500		97	80-120		200
Chromium	1.96		0.1	"	2.00		98	80-120		200
Lead	4.77		0.3	"	5.00		95	80-120		200
Selenium	19.9		0.2	"	20.0		99	80-120		200
Silver	0.47		0.1	"	0.500		94	80-120		200
LCS (B2F0016-BS2)										
Arsenic	20.2		0.2	mg/L	20.0		101	80-120		200
Barium	19.5		0.5	"	20.0		98	80-120		200
Cadmium	0.482		0.05	"	0.500		96	80-120		200
Chromium	1.97		0.1	"	2.00		98	80-120		200
Lead	4.74		0.3	"	5.00		95	80-120		200
Selenium	19.9		0.2	"	20.0		99	80-120		200
Silver	0.473		0.1	"	0.500		95	80-120		200
Duplicate (B2F0016-DUP1)		**Source: 1205033-15**								
Arsenic	ND	U	0.2	mg/L		ND				20
Barium	0.255	CI, J	0.5	"		ND				20
Cadmium	ND	U	0.05	"		ND				20
Chromium	ND	U	0.1	"		ND				20
Lead	0.449		0.3	"		0.244			59	20
Selenium	ND	U	0.2	"		ND				20
Silver	ND	U	0.1	"		ND				20
Matrix Spike (B2F0016-MS1)		**Source: 1205033-15**								
Arsenic	20.3		0.2	mg/L	20.0	ND	102	75-125		20

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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2F0016 - Leachate Digest - Metals, TCLP, ICP								**Prepared: 06/06/12 Analyzed: 06/07/12**		
								Metals by EPA 6000/7000 Series Methods - Quality Control		
Matrix Spike (B2F0016-MS1)		**Source: 1205033-15**								
Barium	19.7		0.5	"	20.0	ND	99	75-125		20
Cadmium	0.487		0.05	"	0.500	ND	97	75-125		20
Chromium	1.97		0.1	"	2.00	ND	98	75-125		20
Lead	4.91		0.3	"	5.00	0.244	93	75-125		20
Selenium	19.8		0.2	"	20.0	ND	99	75-125		20
Silver	0.471		0.1	"	0.500	ND	94	75-125		20
Matrix Spike (B2F0016-MS2)		**Source: 1205033-20**								
Arsenic	20.2		0.2	mg/L	20.0	ND	101	75-125		20
Barium	19.3		0.5	"	20.0	ND	96	75-125		20
Cadmium	0.478		0.05	"	0.500	ND	96	75-125		20
Chromium	1.97		0.1	"	2.00	ND	98	75-125		20
Lead	4.74		0.3	"	5.00	ND	95	75-125		20
Selenium	20		0.2	"	20.0	ND	100	75-125		20
Silver	0.469		0.1	"	0.500	ND	94	75-125		20
Matrix Spike Dup (B2F0016-MSD1)		**Source: 1205033-15**								
Arsenic	20.2		0.2	mg/L	20.0	ND	101	75-125	0.3	20
Barium	19.6		0.5	"	20.0	ND	98	75-125	0.9	20
Cadmium	0.485		0.05	"	0.500	ND	97	75-125	0.4	20
Chromium	1.95		0.1	"	2.00	ND	98	75-125	0.6	20
Lead	4.88		0.3	"	5.00	0.244	93	75-125	0.5	20
Selenium	19.8		0.2	"	20.0	ND	99	75-125	0.02	20
Silver	0.468		0.1	"	0.500	ND	94	75-125	0.8	20
Matrix Spike Dup (B2F0016-MSD2)		**Source: 1205033-20**								
Arsenic	20.3		0.2	mg/L	20.0	ND	102	75-125	0.6	20
Barium	19.5		0.5	"	20.0	ND	97	75-125	1	20
Cadmium	0.478		0.05	"	0.500	ND	96	75-125	0.08	20
Chromium	1.95		0.1	"	2.00	ND	98	75-125	0.7	20
Lead	4.76		0.3	"	5.00	ND	95	75-125	0.4	20
Selenium	20.2		0.2	"	20.0	ND	101	75-125	0.7	20
Silver	0.468		0.1	"	0.500	ND	94	75-125	0.01	20
Batch B2F0019 - Leachate Digest - Metals, TCLP, ICP								**Prepared: 06/07/12 Analyzed: 06/08/12**		
								Metals by EPA 6000/7000 Series Methods - Quality Control		
Blank (B2F0019-BLK1)										
Arsenic	ND	U	0.2	mg/L						
Barium	ND	U	0.5	"						
Cadmium	ND	U	0.05	"						
Chromium	ND	U	0.1	"						
Lead	ND	U	0.3	"						
Selenium	ND	U	0.2	"						
Silver	ND	U	0.1	"						
LCS (B2F0019-BS1)										

6/18/12

United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Craig Cooper	Navy and Army Section	**SDG:** 12131D
Project Number: R12S41	75 Hawthorne Street	**Reported:** 06/13/12 09:59
Project: Yosemite Creek January 2012 Sampling	San Francisco CA, 94105	

Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B2F0019 - Leachate Digest - Metals, TCLP, ICP								**Prepared: 06/07/12 Analyzed: 06/08/12**		
								Metals by EPA 6000/7000 Series Methods - Quality Control		
LCS (B2F0019-BS1)										
Arsenic	20.7		0.2	mg/L	20.0		104	80-120		200
Barium	19.9		0.5	"	20.0		100	80-120		200
Cadmium	0.499		0.05	"	0.500		100	80-120		200
Chromium	2.01		0.1	"	2.00		101	80-120		200
Lead	4.81		0.3	"	5.00		96	80-120		200
Selenium	20.7		0.2	"	20.0		104	80-120		200
Silver	0.489		0.1	"	0.500		98	80-120		200
Duplicate (B2F0019-DUP1)		**Source: 1205033-30**								
Arsenic	ND	U	0.2	mg/L		ND				20
Barium	ND	U	0.5	"		ND				20
Cadmium	ND	U	0.05	"		ND				20
Chromium	ND	U	0.1	"		ND				20
Lead	ND	U	0.3	"		ND				20
Selenium	ND	U	0.2	"		ND				20
Silver	ND	U	0.1	"		ND				20
Matrix Spike (B2F0019-MS1)		**Source: 1205033-30**								
Arsenic	20.4		0.2	mg/L	20.0	ND	102	75-125		20
Barium	19.8		0.5	"	20.0	ND	99	75-125		20
Cadmium	0.495		0.05	"	0.500	ND	99	75-125		20
Chromium	1.98		0.1	"	2.00	ND	99	75-125		20
Lead	4.79		0.3	"	5.00	ND	96	75-125		20
Selenium	20.4		0.2	"	20.0	ND	102	75-125		20
Silver	0.485		0.1	"	0.500	ND	97	75-125		20
Matrix Spike Dup (B2F0019-MSD1)		**Source: 1205033-30**								
Arsenic	20.6		0.2	mg/L	20.0	ND	103	75-125	1	20
Barium	19.8		0.5	"	20.0	ND	99	75-125	0.05	20
Cadmium	0.496		0.05	"	0.500	ND	99	75-125	0.2	20
Chromium	1.98		0.1	"	2.00	ND	99	75-125	0.0002	20
Lead	4.83		0.3	"	5.00	ND	97	75-125	0.9	20
Selenium	20.6		0.2	"	20.0	ND	103	75-125	1	20
Silver	0.484		0.1	"	0.500	ND	97	75-125	0.2	20
Batch B2F0032 - Leachate Digest - Metals, TCLP, ICP								**Prepared: 06/11/12 Analyzed: 06/12/12**		
								Metals by EPA 6000/7000 Series Methods - Quality Control		
Blank (B2F0032-BLK1)										
Arsenic	ND	U	0.2	mg/L						
Barium	ND	U	0.5	"						
Cadmium	ND	U	0.05	"						
Chromium	ND	U	0.1	"						
Lead	ND	U	0.3	"						
Selenium	ND	U	0.2	"						
Silver	ND	U	0.1	"						

6/18/12

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

Page 1 of 3

PROJ. NO.: R12541
PROJECT NAME: Yosemite Creek EE CA
SAMPLERS: (Signature)

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471)					REMARKS
2/21/12	1048	Solid		X	YC-038-1	2	X	X					Additional analyses (TCLP, STLC) may be required; please hold all extra volume.
	1050				YC-038-2	2	X	X					
	1100				YC-038-3	2	X	X					
	1102				YC-838-3	1	X						
	1105				YC-038-3.6	2	X	X					Please report results to Brian Milton bmilton@ene.com 510-893-6700
	1130				YC-040-1	2	X	X					
	1132				YC-840-1	1		X					
	1133				YC-040-2	2	X	X					
	1155				YC-040-3	2	X	X					
	1157				YC-040-3.6	2	X	X					
	1257				YC-044-1	2	X	X					
	1258				YC-844-1	1		X					
	1238				YC-044-2	2	X	X					
	1240				YC-844-2	1	X						
↓	1248	↓		↓	YC-044-3	2	X	X					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	2/22/12				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received for Laboratory by: (Signature)	Date / Time	Temp.	Seals Intact (Y/N)	Conditions / Remarks	
	2/22/12 1317	5.9°	NO SEALS	HOLD DEL.	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2491

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

PROJ. NO. R12S41 | PROJECT NAME Yosemite Creek EE CA

SAMPLERS: (Signature)

Page 2 of 3

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471A)				REMARKS
2/21/12	1258	Sediment		X	YC-044-4	2	X	X				Additional analyses (TCLP, STLC)
	1325				YC-042-1	2	X	X				may be required. Please hold
	1334				YC-042-2	2	X	X				all extra volume.
	1345				YC-042-3	2	X	X				
	1348				YC-842-3	1	X					Please report results to
	1358				YC-042-4	2	X	X				Brian Milton
	1400				YC-842-4	1		X				bmilton@erg.com
	1420				YC-041-1	2	X	X				510-893-6700
	1421				YC-841-1	1		X				
	1426				YC-041-2	2	X	X				
	1428				YC-841-2	1	X					
	1429				YC-041-3	2	X	X				
	1445				YC-041-4	2	X	X				
	1500				YC-039-1	2	X	X				
	1502				YC-039-2	2	X	X				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	2/22/12				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Received for Laboratory by: (Signature)	Date / Time	Temp.	Seals Intact (Y/N)	Conditions / Remarks	
	2/22/12 13:20	9°C	no SEALS	HOLD DEL.	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2492

ENVIRONMENTAL PROTECTION AGENCY
Region 9 Laboratory

CHAIN OF CUSTODY RECORD

1337 S. 46th St., Bldg. 201
Richmond, CA 94804-4698

Page 3 of 3

PROJ. NO.	PROJECT NAME
R12541	Yosemite Creek EE/CA

SAMPLERS: (Signature)

DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	PCBs (8082)	Metals (6010/7471)				REMARKS
2/21/12	1515	Sediment		X	YC-039-3	2	X	X				Additional analyses (TCLP, STLC)
	1512				YC-039-3,3		X	X				may be required; please hold
	1532				YC-043-1		X	X				all extra volume.
	1533				YC-043-2		X	X				
	1543				YC-043-3		X	X				Please report results to
	1544				YC-043-4		X	X				Brian Milton
	1600				YC-045-1		X	X				bmilton@ene.com
	1602				YC-045-2		X	X				510-893-6700
	1612				YC-045-3		X	X				
	1614				YC-045-4		X	X				
	1630	Water			YC-022112-RB	2	X	X				WATER SAMPLE FOR METALS PRES'D @ pH < 2 ...

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	2/22/12				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Received for Laboratory by: (Signature)	Date / Time	Temp.	Seals Intact (Y/N)	Conditions / Remarks
Josh Bonga	2/22/12 13:25	9°C	no seals	HOLD DEL.

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

9-2493

EMLab P&K

Report for:

Ms. Karen Sellers
TestAmerica-West Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Regarding: Project: G2B220468; Ecology and Environment Yosemite Creek EE/CA
EML ID: 891768

Approved by:

Dates of Analysis:
Asbestos-EPA Method 600/R-93/116: 02-27-2012

Technical Manager
Miguel Ines

Service SOPs: Asbestos-EPA Method 600/R-93/116 (EPA-600/M4-82-020 (SOP 01264))

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	21
Total Samples Analysed:	21
Total Samples with Layer Asbestos Content > 1%:	0

Location: YC-038-1 Lab ID-Version‡: 3963482-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-038-2 Lab ID-Version‡: 3963483-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-038-3 Lab ID-Version‡: 3963484-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-038-3.6 Lab ID-Version‡: 3963485-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment
Yosemite
Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-040-1 Lab ID-Version‡: 3963486-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-040-2 Lab ID-Version‡: 3963487-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-040-3 Lab ID-Version‡: 3963488-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-040-3.6 Lab ID-Version‡: 3963489-1

Sample Layers	Asbestos Content
Brown Soil	< 1% Chrysotile
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-840-2 Lab ID-Version‡: 3963490-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
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EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite
Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-044-1 Lab ID-Version‡: 3963491-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-044-2 Lab ID-Version‡: 3963492-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-044-3 Lab ID-Version‡: 3963493-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-044-4 Lab ID-Version‡: 3963494-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-844-4 Lab ID-Version‡: 3963495-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-840-3.6 Lab ID-Version‡: 3963496-1

Sample Layers	Asbestos Content
Brown Soil	< 1% Chrysotile
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-042-2 Lab ID-Version‡: 3963497-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-842-2 Lab ID-Version‡: 3963498-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-042-3 Lab ID-Version‡: 3963499-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-042-4 Lab ID-Version‡: 3963500-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220468; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-041-1 Lab ID-Version‡: 3963501-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-041-2 Lab ID-Version‡: 3963502-1

Sample Layers	Asbestos Content
Brown Soil	< 1% Chrysotile
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Report for:

Ms. Karen Sellers
TestAmerica-West Sacramento
880 Riverside Parkway
West Sacramento, CA 95605

Regarding: Project: G2B220465; Ecology and Environment Yosemite Creek EE/CA
EML ID: 892429

Approved by:

Dates of Analysis:
Asbestos-EPA Method 600/R-93/116: 02-27-2012

Technical Manager
Miguel Ines

Service SOPs: Asbestos-EPA Method 600/R-93/116 (EPA-600/M4-82-020 (SOP 01264))

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220465; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Total Samples Submitted:	14
Total Samples Analysed:	14
Total Samples with Layer Asbestos Content > 1%:	0

Location: YC-041-3 Lab ID-Version‡: 3963503-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-041-4 Lab ID-Version‡: 3963504-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-841-4 Lab ID-Version‡: 3963505-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-039-1 Lab ID-Version‡: 3963506-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
(866) 465-6653 Fax (858) 569-5806 www.emlab.com

Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220465; Ecology and Environment Yosemite Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-039-2 Lab ID-Version‡: 3963507-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-039-3 Lab ID-Version‡: 3963508-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-043-1 Lab ID-Version‡: 3963509-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-043-2 Lab ID-Version‡: 3963510-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-043-3 Lab ID-Version‡: 3963511-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
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EMLab P&K
3585 Cadillac Ave, Suite A, Costa Mesa, CA 92626
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Client: TestAmerica-West Sacramento
C/O: Ms. Karen Sellers
Re: G2B220465; Ecology and Environment
Yosemite
Creek EE/CA

Date of Sampling: 02-21-2012
Date of Receipt: 02-22-2012
Date of Report: 02-27-2012

ASBESTOS PLM REPORT: EPA-600/M4-82-020 & EPA METHOD 600/R-93-116

Location: YC-043-4 Lab ID-Version‡: 3963512-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-1 Lab ID-Version‡: 3963513-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-2 Lab ID-Version‡: 3963514-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-3 Lab ID-Version‡: 3963515-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

Location: YC-045-4 Lab ID-Version‡: 3963516-1

Sample Layers	Asbestos Content
Brown Soil	ND
Composite Non-Asbestos Fibrous Content:	< 1% Cellulose
Sample Composite Homogeneity:	Good

All samples were received in acceptable condition unless otherwise noted. EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

E Confidence Interval Statistics for Selected Waste Characterization Data (PCBs as Aroclors, Total Lead, and Soluble Lead by STLC)

General Statistics

Data File					Variable:	Total Aroclors	
Raw Statistics				Normal Distribution Test			
Number of Valid Samples			25	Shapiro-Wilk Test Statisitic			0.770773
Number of Unique Samples			25	Shapiro-Wilk 5% Critical Value			0.918
Minimum			0	Data not normal at 5% significance level			
Maximum			46000				
Mean			11208.8	95% UCL (Assuming Normal Distribution)			
Median			6000	Student's-t UCL			15575.41
Standard Deviation			12761.28				
Variance			1.6E+008				
Coefficient of Variation			1.138505				
Skewness			1.561231				
Gamma Statistics Not Available							
Lognormal Statistics Not Available							
				95% Non-parametric UCLs			
				CLT UCL			15406.89
				Adj-CLT UCL (Adjusted for skewness)			16258.42
				Mod-t UCL (Adjusted for skewness)			15708.23
				Jackknife UCL			15575.41
				Standard Bootstrap UCL			15383.09
				Bootstrap-t UCL			16861.3
RECOMMENDATION				Hall's Bootstrap UCL			15916.56
Data are Non-parametric (0.05)				Percentile Bootstrap UCL			15280.4
				BCA Bootstrap UCL			16576
Use 95% Chebyshev (Mean, Sd) UCL				95% Chebyshev (Mean, Sd) UCL			22333.82
				97.5% Chebyshev (Mean, Sd) UCL			27147.63
				99% Chebyshev (Mean, Sd) UCL			36603.42

General Statistics

Data File					Variable:	TTLC Pb		
Raw Statistics				Normal Distribution Test				
Number of Valid Samples			26	Shapiro-Wilk Test Statisitic				0.544199
Number of Unique Samples			22	Shapiro-Wilk 5% Critical Value				0.92
Minimum			0	Data not normal at 5% significance level				
Maximum			2800					
Mean			400.3462	95% UCL (Assuming Normal Distribution)				
Median			285	Student's-t UCL				577.0946
Standard Deviation			527.6169					
Variance			278379.6					
Coefficient of Variation			1.317902					
Skewness			4.022161					
Gamma Statistics Not Available								
Lognormal Statistics Not Available								
				95% Non-parametric UCLs				
				CLT UCL				570.546
				Adj-CLT UCL (Adjusted for skewness)				657.7598
				Mod-t UCL (Adjusted for skewness)				590.6982
				Jackknife UCL				577.0946
				Standard Bootstrap UCL				563.3467
				Bootstrap-t UCL				816.2453
RECOMMENDATION				Hall's Bootstrap UCL				1252.264
Data are Non-parametric (0.05)				Percentile Bootstrap UCL				586.9231
				BCA Bootstrap UCL				670.9231
Use 95% Chebyshev (Mean, Sd) UCL				95% Chebyshev (Mean, Sd) UCL				851.3797
				97.5% Chebyshev (Mean, Sd) UCL				1046.542
				99% Chebyshev (Mean, Sd) UCL				1429.901

General Statistics

Data File					Variable:	STLC-Lead (mg/L)		
Raw Statistics				Normal Distribution Test				
Number of Valid Samples			26	Shapiro-Wilk Test Statisitic				0.558441
Number of Unique Samples			23	Shapiro-Wilk 5% Critical Value				0.92
Minimum			0	Data not normal at 5% significance level				
Maximum			91					
Mean			12.71769	95% UCL (Assuming Normal Distribution)				
Median			8.45	Student's-t UCL				18.54192
Standard Deviation			17.38606					
Variance			302.275					
Coefficient of Variation			1.367076					
Skewness			3.897713					
Gamma Statistics Not Available								
Lognormal Statistics Not Available								
				95% Non-parametric UCLs				
				CLT UCL				18.32613
				Adj-CLT UCL (Adjusted for skewness)				21.11108
				Mod-t UCL (Adjusted for skewness)				18.97631
				Jackknife UCL				18.54192
				Standard Bootstrap UCL				18.41647
				Bootstrap-t UCL				25.24794
RECOMMENDATION				Hall's Bootstrap UCL				40.67378
Data are Non-parametric (0.05)				Percentile Bootstrap UCL				18.88846
				BCA Bootstrap UCL				22.06
Use 95% Chebyshev (Mean, Sd) UCL				95% Chebyshev (Mean, Sd) UCL				27.58017
				97.5% Chebyshev (Mean, Sd) UCL				34.01118
				99% Chebyshev (Mean, Sd) UCL				46.64364

F

Waste Disposal Manifests

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAC002694217	1	800-424-9300	009943956 JJK

GENERATOR

5. Generator's Name and Mailing Address
US EPA REGION 9
75 HAWTHORNE STREET
SAN FRANCISCO, CA 94105
Generator's Phone: 415-947-4148

Generator's Site Address (if different than mailing address)
1150 CARROLL AVE
SAN FRANCISCO CA 94124

6. Transporter 1 Company Name: ENVIRONMENTAL LOGISTICS, INC
U.S. EPA ID Number: CAR000217513

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
FILTER RECYCLING SERVICES, INC
180 WEST MONTE AVENUE
RIALTO, CA 92316 USA
Facility's Phone: 800-698-4377
U.S. EPA ID Number: CAD982444481

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. NON RCRA HAZARDOUS WASTE SOLID (DEBRIS,TRASH,PPE)	2	DM	400	P	352		
	2. NON RCRA HAZARDOUS WASTE SOLID (SOIL BORINGS)	6	DM	7,000	P	352		
	3. NON RCRA HAZARDOUS WASTE LIQUID (DECON RINSATE)	8	DM	440	G	133		
	4.							

14. Special Handling Instructions and Additional Information
9B1) DEBRIS,TRASH,PPE #
9B2) SOIL BORINGS #
9B3) DECON RINSATE #
WEAR PROPER PPE
EMERGENCY RESPONSE CHEMTREC 1-800-424-9300 CCN668232
INV# 13961-N

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: [illegible] for USEPA Region 9
Signature:
Month: 05 Day: 23 Year: 12

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: [illegible]
Signature:
Month: Day: Year: 12

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name
Signature
Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

ENVIRONMENTAL LOGISTICS

"PROTECTING HUMAN HEALTH AND THE ENVIRONMENT"
www.environmentallogistics.org

P.O. Box 806
Colton, CA 92324-0806
Toll Free: 888.641.3940
Phone: 909.546.1354 · Fax: 909.546.1546

DATE	INVOICE NUMBER
9-27-12	13961N
CUSTOMER NUMBER	

CUSTOMER NAME	PHONE NO.	BILL TO	PHONE NO.
US EPA/CANDLESTICK POINT STATE PARK	415-947-4148	ECOLOGY & ENVIRONMENTAL INC	510.893.6700
ADDRESS		BILLING ADDRESS	
1150 CARROLL AVE		1940 WEBSTER ST, # 100	
CITY / STATE / ZIP		CITY / STATE / ZIP	
SAN FRANCISCO, CA 94124		OAKLAND, CA 94612	

SALES REP.	SITE CONTACT	C.O.D.	ON ACCOUNT	PURCHASE ORDER NO.	BILLING CONTACT	REQUESTED BY
CW	KATE VILLARS		XXX			KATE VILLAR

QUANTITY	MATERIAL DESCRIPTION	MANIFEST NO.	UNIT PRICE	TOTAL PRICE
	ONSITE 10:00 AM			
	AGREEMENT # EP-55-08-01			
	P/U 8 X 55 DECON RINSATE *TO FRS*	009943956JJK		
	P/U 6 X 55 SOIL BORINGS *TO FRS*	" "		
	P/U 2 X 55 TRASH/DEBRIS/PPE *TO FRS*	" "		

A 15% Environmental / Energy & Securities charge applies to all invoice totals.

FACILITY NAME	**Environmental Logistics**	DRIVER START TIME:		
ADDRESS	**140 West Monte Avenue**	TIME LEFT YARD:		
	Bloomington, CA 92316	JOB START TIME:		
EPA ID NUMBER	**CAR000172460**	JOB END TIME:		
EPA ID NUMBER	**CAR000172478**	DRIVER END TIME:		
DRIVER'S SIGNATURE				

It is the generator's responsibility to correctly identify chemical composition.
If material is rejected by disposal site, generator agrees to pay all testing, disposal & transportation charges.
Invoice is subject to a 1.5% interest rate on past due amount.
Your signature below acknowledges that you have read the state required notifications on the back of this document.

RECEIVED BY:		PRINT NAME	
			SUB TOTAL
			TOTAL