Yosemite Creek Sediment Removal Assessment Report Final

May 2011
Contract No.: EP-S5-08-01
TDD No.: TO2-09-08-12-0002
Job No.: 002693.2024.01RA

Prepared for:

U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California

Prepared by:

ECOLOGY AND ENVIRONMENT, INC.
1940 Webster Street, Suite 100
Oakland, California 94612

©2011 Ecology and Environment, Inc.

Table of Contents

Section **Page**

1 Introduction 1-1
1.1 Site Location 1-1
1.2 Site Description 1-4
1.3 Site History 1-4

2 Setting and Previous Investigation 2-1
2.1 Geology, Hydrology and Hydrogeology 2-1
2.2 Stormwater and Sewer System Drainage 2-1
2.3 Previous Investigations and Regulatory Involvement 2-2
2.4 Adjacent Site Investigations and Regulatory Involvement 2-4

3 Sampling Plan and Fieldwork Activities 3-1
3.1 Sediment Sampling 3-9
3.2 Laboratory Analysis 3-10
3.3 Radiation Screening 3-10
3.4 Investigation Derived Waste 3-10
3.5 Deviations from the SAP 3-11

4 Results and Interpretations 4-1
4.1 Sediment Sample Analytical Results 4-1
4.1.1 PCBs as Aroclors 4-1
4.1.2 PCB Congeners 4-2
4.1.3 Pesticides 4-3
4.1.4 Metals 4-4
4.1.5 TPH 4-5

5 Quality Assurance/Quality Control (QA/QC) 5-1
5.1 Analytical Data Usability Report 5-1
5.2 QA/QC Samples 5-1
5.2.1 Duplicate Samples 5-1
5.2.2 Rinse Blanks 5-1

6 Summary, Conclusions, and Recommendations 6-1

Table of Contents (cont.)

Section		Page
7	References	7-1
A	Photodocumentation	A-1
B	Analytical Results Tables	B-1
C	Laboratory Analytical Reports	7-1
D	Data Validation Summary Reports	7-1

List of Tables

Table **Page**

Table 2-1 Summary of Surface Results from 2004 Battelle Investigation 2-3

Table 2-2 Summary of Subsurface Metals Results from 2004 Battelle Investigation (mg/kg) 2-3

Table 2-3 Summary of Subsurface Pesticide and PCB Results from 2004 Battelle Investigation (µg/kg) 2-4

Table 3-1 Sample Collection Summary 3-3

Table 4-1 Summary of PCB Aroclors Detected Above Action Levels 4-2

Table 4-2 Summary of PCB Congeners Detected Above Action Levels 4-3

Table 4-3 Summary of Metals Detected Above Action Levels 4-4

Table 4-4 Summary of TPH Detected Above Action Levels 4-6

List of Figures

Figure		Page
Figure 1	Site Vicinity Map	1-2
Figure 2	Site Location Map	1-3
Figure 3	Sample Location Map	3-2
Figure 4	Aroclor 1254 Contour Profile	4-7
Figure 5	Aroclor 1260 Contour Profile	4-8
Figure 6	PCB Congeners Contour Profile	4-9
Figure 7	Chromium Contour Profile	4-10
Figure 8	Lead Contour Profile	4-11
Figure 9	Mercury Contour Profile	4-12
Figure 10	Zinc Contour Profile	4-13
Figure 11	TPHd Contour Profile	4-14
Figure 12	TPHmo Contour Profile	4-15

List of Abbreviations and Acronyms

APPL	Agriculture and Priority Pollutants Laboratories
bgs	below ground surface
COPC	contaminant of potential concern
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
E & E	Ecology and Environment, Inc.
ERM	effects range median
ESL	environmental screening level
HLA	Harding Lawson Associates
IDW	investigation derived waste
MDL	method reporting limit
mg/kg	milligrams per kilogram (same as part per million [mg/kg])
mL	milliliters
NOAA	National Oceanic and Atmospheric Administration
PCBs	Polychlorinated Biphenyls
PQL	practical quantitation limit
QA/QC	quality assurance/quality control
RSLs	Regional Screening Levels
SAP	Sampling and Analysis Plan
SFPUC	San Francisco Public Utilities Commission

List of Abbreviations and Acronyms (cont.)

SFRWQCB	San Francisco Bay Regional Water Quality Control Board
SQuiRTs	Screening Quick Reference Tables
START	Superfund Technical Assessment and Response Team
TPH	Total Petroleum Hydrocarbons
µg/kg	micrograms per kilogram (same as parts per billion [µg/kg])
µg/L	micrograms per liter (same as parts per billion [µg/kg])
USEPA	United States Environmental Protection Agency
VOA	volatile organic analysis

1 Introduction

The United States Environmental Protection Agency (USEPA) directed Ecology and Environment, Inc.'s (E & E) Superfund Technical Assessment and Response Team (START) to conduct a USEPA funded removal assessment at 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 stormwater system overflows and stormwater runoff and leads to the South Basin of the San Francisco Bay. The removal assessment was conducted in June and July 2009 and focused on evaluating the concentrations of polychlorinated biphenyls (PCBs); metals including chromium, lead, mercury, and zinc; total petroleum hydrocarbons (TPH); and the pesticides chlordane, dieldrin, and dichlorodiphenyltrichloroethane (DDT) in Yosemite Creek surface and subsurface sediments.

Field work described in this Removal Assessment Report was conducted in accordance with the *Sampling and Analysis Plan, Yosemite Creek Sediment Removal Assessment, January 2009,* prepared by E & E (SAP).

The removal assessment results for PCBs, metals, and pesticides were compared to the National Oceanic and Atmospheric Administration (NOAA) effects range median (ERM) levels for marine sediment (Buchman 2008, *Screening Quick Reference Tables* [SQuiRTs]), and the TPH concentrations were compared to San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs), in order to determine what actions, if any, are required for Yosemite Creek. 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" North Latitude, 122° 23' 07" West Longitude. The site is located northwest of and adjacent to the Hunters Point Shipyard Superfund site and is situated within the Yosemite Basin.

TDD Number: 09-08-12-0002 Project Number: 002693.2024.01RA
R:\START 3 Yosemite Creek\GIS\Projects\Sediment_removal_assess\Fig01-site_vicinity_92.mxd 1/06/09 - GIS

Source: U.S. Census TIGER

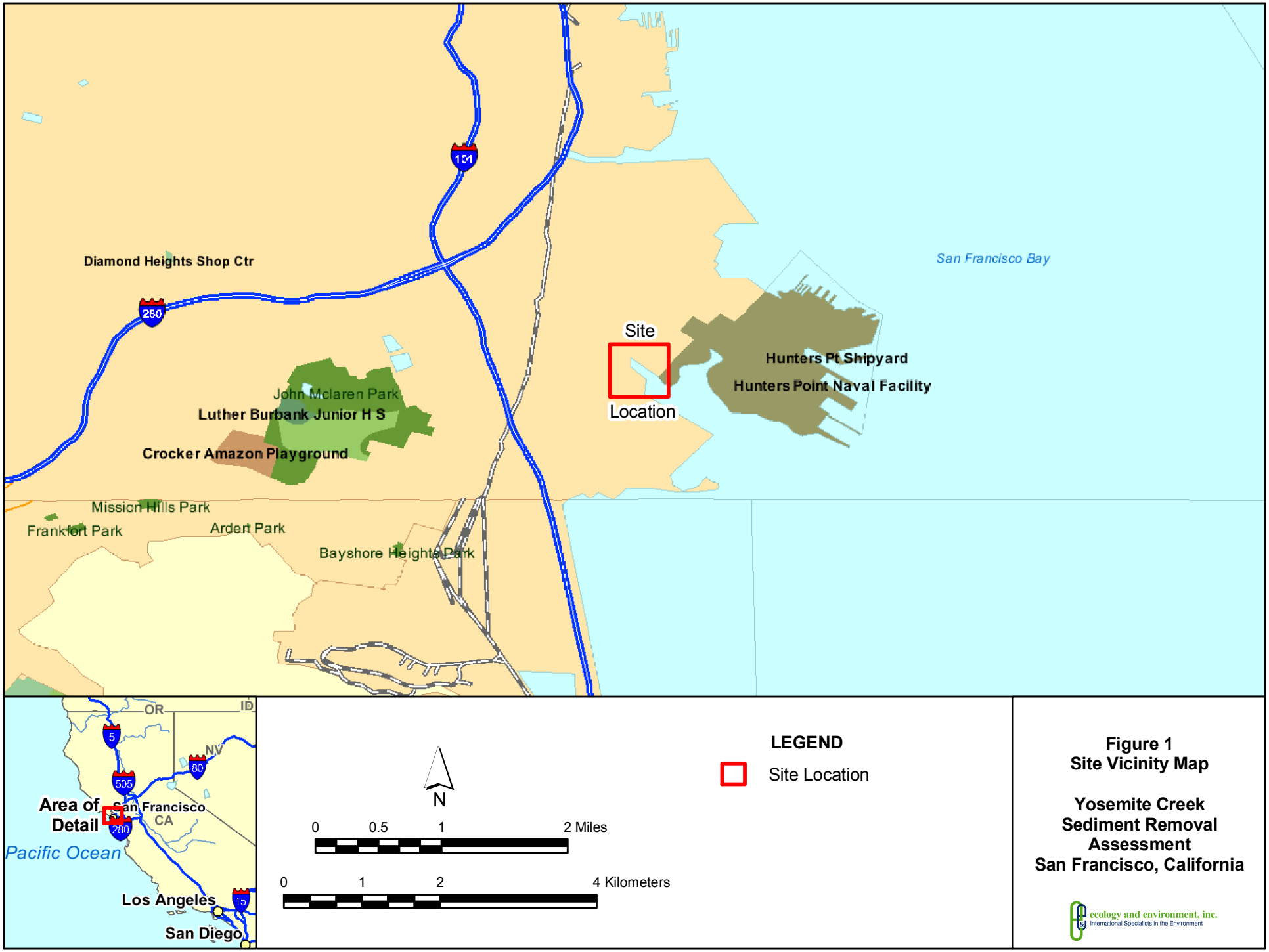


Figure 1
Site Vicinity Map

Yosemite Creek
Sediment Removal
Assessment
San Francisco, California

ecology and environment, inc.
International Specialists in the Environment

TDD Number: 09-08-12-0002 Project Number: 002693.2024.01RA
R:\START 3 Yosemite Creek\GIS\Projects\Sediment_removal_assess\Fig02-site_location_92.mxd 1/07/09 - GIS

Source: Aerial photo DigitalGlobe Image date 2007-04-01 - Inlet: U.S. Census TIGER

N

0 250 500 1,000 Feet

0 75 150 300 Meters

LEGEND

Site Boundary

Figure 2
Site Location Map

Yosemite Creek
Sediment Removal
Assessment
San Francisco, California

ecology and environment, inc.

1.2 Site Description

The site is approximately 1,600 feet long and 200 feet wide, with an area of 320,000 square feet, and it is located within the Yosemite Creek drainage basin, which encompasses approximately 1,500 acres in southeastern San Francisco, California (Battelle 2004). The site historically received sewage and stormwater overflows and stormwater runoff. Discharges of treated sewage and stormwater historically flowed to the southeast into the South Basin of the San Francisco Bay. At low tide, the sediments over a majority of the site are exposed. The investigation area for this assessment is presented on Figure 2.

1.3 Site History

Before 1900, the area around the site consisted primarily of wetlands, marshland, or land submerged below mean tide level. Between 1940 and 1970, much of the surrounding area underwent development. The area surrounding the site was characterized by mixed residential, commercial, and industrial use beginning in the 1950s. Previous investigations have shown site sediments to be impacted with PCBs; metals including chromium, lead, mercury, and zinc; TPH; and the pesticides total chlordane, dieldrin, and total DDT (Battelle 2004).

Additional information on site history is available in the following reports. See Section 7, References, for complete citations.

- *Sediment Investigation at Yosemite Creek*, prepared by Battelle in May 2004.
- *Sediment Investigation at Yosemite Creek, Fall 1998*, prepared by Little, Arthur D. in May 1999.

2 Setting and Previous Investigation

A discussion of the site geologic, hydrogeologic, and ecologic settings and a summary of previous investigation results are provided below.

2.1 Geology, Hydrology and Hydrogeology

Based on information presented in the Battelle report (Battelle 2004) and documents from the nearby Bay Area Drum site, the geology beneath the site likely consists of artificial fill, younger bay mud, bay side sand, and/or Franciscan formation rock (sandstone, graywacke, shale, and chert) (Harding Lawson Associates [HLA] 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 likely flows towards the site and discharges into the South Basin in a general southeasterly direction (HLA 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 three square miles and is bounded by McLaren Park to the west and the Hunters Point neighborhood and San Francisco Bay to the east. Natural wetlands restoration along Yosemite Creek is in the final stages of planning and permitting by the California State Parks Foundation (SFPUC 2008).

2.2 Stormwater 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 approximately 1991, SFPUC's combined sewer system operated with three overflow structures (outfalls 40, 41, and 42) that discharged to the site during wet weather events, 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 approximately 1991, SFPUC completed construction of overflow retention and storage basins for its combined sewer system. This upgrade has 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 South Basin area of the San Francisco Bay, in which the site is located, 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 conducted soil, groundwater, and sediment sampling for proposed wetlands creation areas in a 35-acre area that includes 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 NOAA ERM guidelines (Battelle 2004).

As a part of ongoing Comprehensive Environmental Response, Compensation, and Liability Act remedial activities at Hunters Point Shipyard (see Figure 1), a remedial investigation and feasibility study was performed in 1996 by PRC Environmental Management, Inc. under the direction of the Navy at Parcel F, the portion of Hunters Point Shipyard that includes the South Basin shoreline and adjacent sediments. Sediment sample results from the South Basin and from the site indicated elevated levels of mercury, PCBs, total DDT, and total chlordane. This investigation was conducted to evaluate contamination of the South Basin by the Navy but also addressed 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 SFRWQCB 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 the collection of surface and subsurface sediment samples up to four feet below ground surface (bgs), as well as bioassays and determination of bioaccumulation in clam tissue. The investigation and its results are discussed in the 2004 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 exceed their ERMs: lead, mercury, nickel, zinc, total PCBs, total DDT, total chlordane, and dieldrin. The maximum concentrations reported in surface sediments were: chromium at 202 milligrams per kilogram (mg/kg), mercury at 1.21 mg/kg, nickel at 152 mg/kg, lead at 197 mg/kg, zinc at 316 mg/kg, PCBs at 1317 micrograms per kilogram (µg/kg), total DDT at 142 µg/kg, total chlordane at 88 µg/kg, and dieldrin at 110 µg/kg. A total of 32 surface locations have been sampled by the SFPUC and the Navy in the vicinity of the site. Table 2-1 summarizes the maximum, minimum, and mean surface sediment concentrations of COPCs from the 2004 Battelle investigation.

Table 2-1 Summary of Surface Results from 2004 Battelle Investigation

COPC	Maximum	Minimum	Mean	ERM
Chromium	202 mg/kg	70 mg/kg	Not Calculated	370 mg/kg
Lead	197 mg/kg	69.3 mg/kg	130 mg/kg	218 mg/kg
Mercury	1.21 mg/kg	0.35 mg/kg	0.59 mg/kg	0.71 mg/kg
Zinc	316 mg/kg	164 mg/kg	221 mg/kg	410 mg/kg
Total Chlordane	88.1 µg/kg	10.3 µg/kg	36.2 µg/kg	6 µg/kg
Dieldrin	110.0 µg/kg	0.1 µg/kg	22.1 µg/kg	8 µg/kg
Total DDT	142.1 µg/kg	4.5 µg/kg	58.7 µg/kg	46.1 µg/kg
Total PCBs	1,317.3 µg/kg	85.0 µg/kg	473.6 µg/kg	180 µg/kg

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 mg/kg, lead at 811 mg/kg, mercury at 1.49 mg/kg, zinc at 830 mg/kg, dieldrin at 370 µg/kg, total chlordane at 208 µg/kg, total DDT at 1,430 µg/kg, and total PCBs at 2,356 µg/kg. These COPC concentrations exceeded their respective ERMs, with the exception of chromium, and generally appeared to decrease with depth. A summary of subsurface sample results from the 2004 Battelle investigation is presented in Tables 2-2 and 2-3.

Table 2-2 Summary of Subsurface Metals Results from 2004 Battelle Investigation (mg/kg)

COPC	Chromium		Lead		Mercury		Zinc	
Depth	Mean	Maxi-mum	Mean	Maxi-mum	Mean	Maxi-mum	Mean	Maxi-mum
0-1 ft	194.8	368	293.4	811.0	0.66	1.49	371.4	830.0
1-2 ft	139.4	234	266.4	636.0	0.55	0.98	333.8	678.0
2-3 ft	88.1	116.9	61.2	169.3	0.25	0.63	117.3	230.4
3-4 ft	82.9	101.5	8.8	8.8	0.06	0.07	73.4	84.0
ERM	370		218		0.71		410	

Table 2-3 Summary of Subsurface Pesticide and PCB Results from 2004 Battelle Investigation (µg/kg)

COPC	Dieldrin		Total Chlordane		Total DDT		Total PCBs	
Depth	Mean	Maxi-mum	Mean	Maxi-mum	Mean	Maxi-mum	Mean	Maxi-mum
0-1 ft	119	370	72.6	208	377.9	1,430	888	2,356
1-2 ft	78.4	120	40.6	68.8	131.9	235	529	857
2-3 ft	6.8	20.0	3.6	10.4	119.2	356	358	1,053
3-4 ft	<0.4	<0.4	<0.3	<0.4	1.2	2.2	13	23
ERM	8		6		46.1		180	

2.4 Adjacent Site Investigations and Regulatory Involvement

In addition to studies in the South Basin area, environmental investigations have occurred at the former Bay Area Drum facility.

The Bay Area Drum site is a former drum recycling and reconditioning facility located north of the site at 1212 Thomas Avenue in San Francisco, California (see Figure 2). The site is an approximately 30,000 to 35,000 square foot lot that includes a building and a former outdoor drum storage yard. From the 1940s until 1987, the Bay Area Drum site was used for drum reconditioning and recycling operations, which included receiving, cleaning, reconditioning, repainting, and selling used metal drums. Improper drum storage, disposal of drum contents and drum rinsate solutions, and drum washing procedures reportedly resulted in spillage of various chemicals, including petroleum hydrocarbons, various organic solvents, and PCBs (Harding Lawson Associates 1999; Battelle 2004). Soil and groundwater investigations at the site indicated elevated concentrations of PCBs, pesticides, metals, volatile organic compounds, and semivolatile organic compounds. Remediation of soil and groundwater at the site was completed in July 2003 under the direction of the California Department of Toxic Substances Control. The sewer and stormwater system draining the Bay Area Drum site and its vicinity emptied into Yosemite Creek (Battelle 2004).

3 Sampling Plan and Fieldwork Activities

A site-specific Sampling and Analysis Plan (SAP) was completed prior to 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 to:

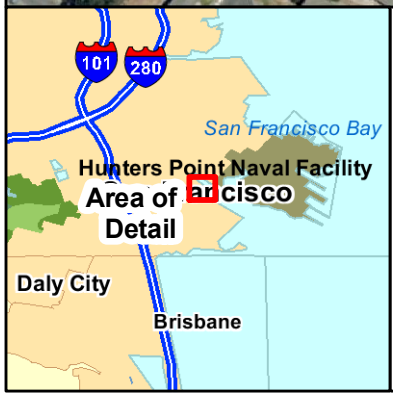
- Document the concentrations of PCBs, metals (chromium, lead, mercury, and zinc), TPH, and pesticides (chlordane, dieldrin, and DDT) in surface and subsurface sediment at the site and determine where these concentrations exceed site action levels.
- Estimate the volume of sediment containing concentrations of PCBs, metals (chromium, lead, mercury, and zinc), TPH, and pesticides (chlordane, dieldrin, and total DDT) that exceed the site action levels.

START employed a combination of systematic random and judgmental sampling to provide adequate coverage across the 1,600 feet long and 200 feet wide Yosemite Creek channel. Some sample locations were adjusted in the field based on accessibility, field conditions, and professional judgment. As described in the SAP, 28 random sample locations (sample locations YC-001 through YC-028) were plotted in a grid/transect-based formation, and an additional 8 judgmental locations were selected by USEPA for sampling (sample locations YC-029 through YC-036). A total of 191 samples, including duplicates, were collected from 36 sample locations during the sediment removal assessment. Sample locations are presented in 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.

TDD Number: 09-08-12-0002 Project Number: 002693.2024.01RA
R:\START 3 Yosemite Creek\GIS\Projects\Sediment_removal_assess\Fig03-prop_sampling_92.mxd 1/07/09 - GIS

Source: Aerial photo DigitalGlobe Image date 2007-04-01 - Inlet: U.S. Census TIGER



N

0 150 300 600 Feet

0 50 100 200 Meters

LEGEND

Sample location

Figure 3
Sampling Location Map

Yosemite Creek
Sediment Removal
Assessment
San Francisco, California

ecology and environment, inc.
International Specialists in the Environment

Table 3-1 Sample Collection Summary
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Sediment Sample Location	Sample ID	Date Sampled	Depth (ft)	Comment
YC-001	YC-001-1	7/1/2009	0-1	
	YC-001-2	7/1/2009	1-2	MS/MSD
	YC-001-3	7/1/2009	2-3	
	YC-001-4	7/1/2009	3-4	
YC-002	YC-002-1	7/1/2009	0-1	
	YC-002-2	7/1/2009	1-2	
	YC-002-3	7/1/2009	2-3	
	YC-802-3	7/1/2009	2-3	DUP
	YC-002-4	7/1/2009	3-4	
	YC-002-5	7/1/2009	4-5	
YC-003	YC-003-1	6/29/2009	0-1	
	YC-003-2	6/29/2009	1-2	
	YC-803-2	6/29/2009	1-2	DUP
	YC-003-3	6/29/2009	2-3	
	YC-003-4	6/29/2009	3-4	
	YC-003-5	6/29/2009	4-5	
YC-004	YC-004-1	7/2/2009	0-1	
	YC-004-2	7/2/2009	1-2	
	YC-004-3	7/2/2009	2-3	
YC-005	YC-005-1	7/7/2009	0-1	
	YC-005-2	7/7/2009	1-2	
	YC-805-2	7/7/2009	1-2	DUP
	YC-005-3	7/7/2009	2-3	
	YC-005-4	7/7/2009	3-4	
	YC-005-5	7/7/2009	4-5	
YC-006	YC-006-1	6/24/2009	0-1	
	YC-006-2	6/24/2009	1-2	
	YC-006-3	6/24/2009	2-3	
	YC-006-4	6/24/2009	3-4	
	YC-006-5	6/24/2009	4-5	

Table 3-1 Sample Collection Summary
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Sediment Sample Location	Sample ID	Date Sampled	Depth (ft)	Comment
YC-007	YC-007-1	7/7/2009	0-1	
	YC-007-2	7/7/2009	1-2	
	YC-007-3	7/7/2009	2-3	
	YC-807-3	7/7/2009	2-3	DUP
	YC-007-4	7/7/2009	3-4	
	YC-007-5	7/7/2009	4-5	
YC-008	YC-008-1	7/2/2009	0-1	
	YC-008-2	7/2/2009	1-2	
	YC-008-3	7/2/2009	2-3	
	YC-008-4	7/2/2009	3-4	
	YC-008-5	7/2/2009	4-5	
YC-009	YC-009-1	6/25/2009	0-1	
	YC-009-2	6/25/2009	1-2	MS/MSD
	YC-009-3	6/25/2009	2-3	
	YC-009-4	6/25/2009	3-4	
	YC-009-5	6/25/2009	4-5	
YC-010	YC-010-1	7/9/2009	0-1	
	YC-010-2	7/9/2009	1-2	
	YC-010-3	7/9/2009	2-3	
	YC-810-3	7/9/2009	2-3	DUP
	YC-010-4	7/9/2009	3-4	
YC-011	YC-011-1	6/25/2009	0-1	
	YC-011-2	6/25/2009	1-2	
	YC-811-2	6/25/2009	1-2	DUP
	YC-011-3	6/25/2009	2-3	
	YC-011-4	6/25/2009	3-4	
	YC-011-5	6/25/2009	4-5	
YC-012	YC-012-1	6/25/2009	0-1	
	YC-012-2	6/25/2009	1-2	
	YC-012-3	6/25/2009	2-3	
	YC-012-4	6/25/2009	3-4	MS/MSD
	YC-012-5	6/25/2009	4-5	

Table 3-1 Sample Collection Summary
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Sediment Sample Location	Sample ID	Date Sampled	Depth (ft)	Comment
YC-013	YC-013-1	6/24/2009	0-1	
	YC-013-2	6/24/2009	1-2	
	YC-013-3	6/24/2009	2-3	
	YC-013-4	6/24/2009	3-4	
	YC-813-4	6/24/2009	3-4	DUP
	YC-013-5	6/24/2009	4-5	
YC-014	YC-014-1	6/25/2009	0-1	
	YC-014-2	6/25/2009	1-2	
	YC-014-3	6/25/2009	2-3	
	YC-014-4	6/25/2009	3-4	
	YC-814-4	6/25/2009	3-4	DUP
	YC-014-5	6/25/2009	4-5	
YC-015	YC-015-1	7/7/2009	0-1	
	YC-015-2	7/7/2009	1-2	
	YC-015-3	7/7/2009	2-3	
	YC-015-4	7/7/2009	3-4	MS/MSD
	YC-015-5	7/7/2009	4-5	
YC-016	YC-016-1	7/1/2009	0-1	
	YC-016-2	7/1/2009	1-2	
	YC-016-3	7/1/2009	2-3	
YC-017	YC-017-1	6/23/2009	0-1	
	YC-817-1	6/23/2009	0-1	DUP
	YC-017-2	6/23/2009	1-2	
	YC-017-3	6/23/2009	2-3	
	YC-017-4	6/23/2009	3-4	
	YC-017-5	6/23/2009	4-5	
YC-018	YC-018-1	6/23/2009	0-1	
	YC-018-2	6/23/2009	1-2	
	YC-018-3	6/23/2009	2-3	
	YC-018-4	6/23/2009	3-4	
	YC-818-4	6/23/2009	3-4	DUP
	YC-018-5	6/23/2009	4-5	

Table 3-1 Sample Collection Summary
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Sediment Sample Location	Sample ID	Date Sampled	Depth (ft)	Comment
YC-019	YC-019-1	6/22/2009	0-1	
	YC-019-2	6/22/2009	1-2	
	YC-019-3	6/22/2009	2-3	
	YC-019-4	6/22/2009	3-4	
	YC-019-5	6/22/2009	4-5	
YC-020	YC-020-1	6/22/2009	0-1	
	YC-820-1	6/22/2009	0-1	DUP
	YC-020-2	6/22/2009	1-2	
	YC-020-3	6/22/2009	2-3	
	YC-020-4	6/22/2009	3-4	
	YC-020-5	6/22/2009	4-5	
YC-021	YC-021-1	6/22/2009	0-1	MS/MSD
	YC-021-2	6/22/2009	1-2	
	YC-021-3	6/22/2009	2-3	
	YC-021-4	6/22/2009	3-4	
	YC-021-5	6/22/2009	4-5	
YC-022	YC-022-1	6/22/2009	0-1	
	YC-022-2	6/22/2009	1-2	
	YC-022-3	6/22/2009	2-3	
	YC-022-4	6/22/2009	3-4	
	YC-022-5	6/22/2009	4-5	
YC-023	YC-023-1	6/18/2009	0-1	MS/MSD
	YC-023-2	6/18/2009	1-2	
	YC-023-3	6/18/2009	2-3	
	YC-023-4	6/18/2009	3-4	
	YC-023-5	6/18/2009	4-5	
	YC-823-5	6/18/2009	4-5	DUP
YC-024	YC-024-1	6/22/2009	0-1	
	YC-024-2	6/22/2009	1-2	
	YC-024-3	6/22/2009	2-3	
	YC-824-3	6/22/2009	2-3	DUP
	YC-024-4	6/22/2009	3-4	
	YC-024-5	6/22/2009	4-5	MS/MSD

Table 3-1 Sample Collection Summary
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Sediment Sample Location	Sample ID	Date Sampled	Depth (ft)	Comment
YC-025	YC-025-1	6/18/2009	0-1	
	YC-025-2	6/18/2009	1-2	
	YC-025-3	6/18/2009	2-3	
	YC-825-3	6/18/2009	2-3	DUP
	YC-025-4	6/18/2009	3-4	
	YC-025-5	6/18/2009	4-5	
YC-026	YC-026-1	6/18/2009	0-1	
	YC-026-2	6/18/2009	1-2	
	YC-026-3	6/18/2009	2-3	
	YC-026-4	6/18/2009	3-4	
	YC-026-5	6/18/2009	4-5	
YC-027	YC-027-1	6/18/2009	0-1	
	YC-027-2	6/18/2009	1-2	
	YC-027-3	6/18/2009	2-3	
	YC-027-4	6/18/2009	3-4	
	YC-027-5	6/18/2009	4-5	
YC-028	YC-028-1	6/17/2009	0-1	
	YC-028-2	6/17/2009	1-2	
	YC-028-3	6/17/2009	2-3	
	YC-028-4	6/17/2009	3-4	
	YC-028-5	6/17/2009	4-5	
YC-029	YC-029-1	7/6/2009	0-1	
	YC-029-2	7/6/2009	1-2	
	YC-029-3	7/6/2009	2-3	
	YC-829-3	7/6/2009	2-3	DUP
	YC-029-4	7/6/2009	3-4	
	YC-029-5	7/6/2009	4-5	
YC-030	YC-030-1	7/6/2009	0-1	MS/MSD
	YC-030-2	7/6/2009	1-2	
	YC-030-3	7/6/2009	2-3	
	YC-030-4	7/6/2009	3-4	
	YC-030-5	7/6/2009	4-5	

Table 3-1 Sample Collection Summary
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Sediment Sample Location	Sample ID	Date Sampled	Depth (ft)	Comment
YC-031	YC-031-1	7/7/2009	0-1	
	YC-031-2	7/7/2009	1-2	
	YC-031-3	7/7/2009	2-3	
	YC-831-3	7/7/2009	2-3	DUP
	YC-031-4	7/7/2009	3-4	
	YC-031-5	7/7/2009	4-5	
YC-032	YC-032-1	7/7/2009	0-1	
	YC-032-2	7/7/2009	1-2	
	YC-032-3	7/7/2009	2-3	
	YC-032-4	7/7/2009	3-4	
	YC-032-5	7/7/2009	4-5	
YC-033	YC-033-1	7/8/2009	0-1	
	YC-833-1	7/8/2009	0-1	DUP
	YC-033-2	7/8/2009	1-2	
	YC-033-3	7/8/2009	2-3	
	YC-033-4	7/8/2009	3-4	
	YC-033-5	7/8/2009	4-5	
YC-034	YC-034-1	7/8/2009	0-1	MS/MSD
	YC-034-2	7/8/2009	1-2	
	YC-034-3	7/8/2009	2-3	
	YC-034-4	7/8/2009	3-4	
	YC-034-5	7/8/2009	4-5	
YC-035	YC-035-1	7/8/2009	0-1	
	YC-035-2	7/8/2009	1-2	
	YC-035-3	7/8/2009	2-3	
	YC-035-4	7/8/2009	3-4	
	YC-035-5	7/8/2009	4-5	
YC-036	YC-036-1	7/9/2009	0-1	
	YC-036-2	7/9/2009	1-2	
	YC-036-3	7/9/2009	2-3	
	YC-836-3	7/9/2009	2-3	DUP
	YC-036-4	7/9/2009	3-4	

Notes:
DUP = Duplicate sample
MS/MSD = Matrix Spike/Matrix Spike Duplicate

3.1 Sediment Sampling

START collected a total of 191 sediment samples from 36 sampling locations at Yosemite Creek from June 17 to July 9, 2009. Personnel present during the removal assessment included: USEPA On-Scene Coordinators Bret Moxley, Steve Calanog, and Chris Reiner; STARTs Sara Dwight, Michael Friedman, and Adam Ellis, and U.S. Coast Guard Pacific Strike Team members Aaron Riutta, Kyle Hallingstad, Dave Varelo, Chris Snyder, Justin Gerg, and Clay Kielsmierer.

Since the Yosemite Creek site is a tidally influenced area and is exposed during low tide and completely submerged during high tide, most sample locations were accessed by a USEPA-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 precleaned acrylic or aluminum sampling cores.

Some sample locations were accessible during low tide and samples were collected using the vibracore and plywood walkways and/or by manually pushing a hollow sampling core tube into the sediment and retrieving it.

After collection of a 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. Generally, five samples per location (0–1 feet bgs, 1–2 feet bgs, 2–3 feet bgs, 3–4 feet bgs, and 4–5 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 5-foot core. If refusal or recovery issues continued, samples were collected to the furthest depth achievable.

For each 1-foot interval, samples to be analyzed for purgeable hydrocarbons (TPH as gasoline) were collected first from the undisturbed sample using Lock N' Load™ handle and soil syringe system sampling technology. Three 5-gram aliquots per sample were collected and placed into pre-preserved 40 milliliter (mL) volatile organic analysis (VOA) vials containing methanol and sodium bisulfate. The remaining sample was then homogenized in a stainless steel bowl and placed into two 8-ounce glass sample jars using stainless steel sampling scoops. All samples were placed in coolers and chilled with ice to 4° 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 sent to Agriculture and Priority Pollutants Laboratories (APPL), Inc. in Clovis, California, for the following analyses:

- California Assessment Manual (CAM 17) Metals, including Chromium, Lead, and Zinc (EPA Method 6010B)
- Mercury (EPA Method 7471A)
- Pesticides and PCBs (EPA Methods 8081A/8082)
- PCB Congeners - (EPA Method 8082)
- Purgeable Hydrocarbons (TPH as Gasoline – EPA Method 8015B)
- Fuel Fingerprinting (Extractable Hydrocarbons - EPA Method 8015B)

3.3 Radiation Screening

Due to the proximity of the Yosemite Creek site to Hunters Point Shipyard Superfund site, which has documented radiation contamination, sediment sampling cores were screened for gamma radiation using a Ludlum 192 meter prior to 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, etc.)
- Disposable sampling equipment
- Used personal protective equipment

At the conclusion of field activities, three 55-gallon drums containing decontamination rinse water, one 55-gallon drum containing soil cuttings, and two cubic yard tri-wall boxes containing trash, used personal protective equipment, acetate soil sampling liners, and soil residues had been collected.

One sample from the soil drum and one composited sample from the three water drums were collected by START on July 9, 2009 for waste profiling purposes. These samples were sent to APPL 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, and oil/grease by EPA Method SM5520Bm.) The soil drum

sample was also analyzed for Resource Conservation and Recovery Act metals by the Toxicity Characteristic Leaching Procedure by EPA Method 1311/6010B/7471A. The two cubic yard tri-wall boxes will be disposed of based on the analytical results of the soil sample. Dillard Environmental Services of Byron, California has been contracted to profile the waste and transport it to an appropriate disposal facility. At the time this report was issued, IDW disposal activities had not been completed.

3.5 Deviations from the SAP

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

Section 3.5, Schedule of Sampling Activities: The SAP stated that sampling would occur at low tide, when the site was not submerged by water. Based on site conditions, the majority of sampling was done by boat at high tide, although some locations were accessed at low tide.

Section 4.2, Sample Depths: Each sampling location was to be sampled to a depth of 5 feet bgs according to the SAP. However, subsurface obstructions were present in Yosemite Creek and refusal was occasionally encountered. If refusal was met at a sampling location, at least three additional attempts were made to obtain a full 5-foot core. If refusal or recovery issues continued, samples were collected to the furthest depth achievable. The following locations were not advanced to the full 5 foot depth:

- YC-001 – total depth of 4 feet bgs
- YC-004 – total depth of 3 feet bgs
- YC-010 – total depth of 4 feet bgs
- YC-016 – total depth of 3 feet bgs
- YC-036 – total depth of 4 feet bgs

Section 5.1, Laboratory Analysis: The SAP specified that one rinsate blank per day would be collected to evaluate decontamination procedures at the site. Due to budget restrictions and fieldwork taking longer than expected, rinsate blanks were not collected every day. Ten rinsate blank samples were collected to represent the 13 days in which samples were collected.

Section 6.2.1, Collection Procedure for Sediment Sampling: The vibracore sediment sampling procedures outlined in the SAP called for the use of an outer casing and an inner liner made of butyrate or Teflon®. The vibracore used at Yosemite Creek did not have an outer casing; instead, acrylic tubes were attached to the vibracore and driven into the sediment.

Section 7.0, Disposal of Investigation-Derived Waste: Investigation derived waste (IDW) disposal discussed in the SAP consisted of disposing of used PPE and disposable sampling equipment in a municipal dumpster, and leaving decontamination fluids onsite to evaporate. Instead, all IDW generated during site activities was contained and will be profiled and sent to a licensed disposal facility. Details on IDW are discussed in Section 3.4.

4 Results and Interpretations

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

4.1 Sediment Sample Analytical Results

A total of 191 soil samples were collected at 36 locations from target depths ranging from one to five feet bgs and analyzed for PCBs as aroclors, pesticides, metals, TPH, and PCB Congeners as specified in Section 3.3. Analytical results are presented in Appendix B. Detected compounds are discussed in more detail below. Complete analytical data packages are presented in Appendix C.

Figures 4 through 12 were developed using ArcGIS Spatial Analyst software to provide a 3-dimensional view of the sediment analytical results at Yosemite Creek. The ArcGIS Spatial Analyst software used a Spline interpolation method to develop contamination contours. According to McCoy and Johnston, 2001, "Spline estimates values using a mathematical function that minimizes overall surface curvature, resulting in a relatively smooth surface that passes exactly through the points."

4.1.1 PCBs as Aroclors

PCBs were reported at concentrations exceeding the ERM value of 180 µg/kg for total PCBs at all sample locations within Yosemite Creek. Analytical results for PCBs are summarized in Appendix B, Table B1. Aroclor-1254 and Aroclor-1260 were the only two PCB aroclors detected above laboratory method detection limits (MDLs) in the Yosemite Creek samples, and both aroclors were detected above site action levels, as summarized in the following table (Table 4-1).

Concentrations of Aroclor-1254 exceeded the ERM value of 180 µg/kg in almost all samples collected from surface to three feet bgs (Figure 4). Overall, Aroclor-1254 concentrations tended to decrease with increasing depth, although samples from many boring locations exhibited an increase in concentrations from the 0 – 1 foot bgs interval to either the 1 – 2 feet bgs or 2 – 3 feet bgs intervals before decreasing in concentration at 3 feet bgs or deeper. Only a few borings had samples with maximum concentrations present at 4 or 5 feet bgs as opposed to shallower depths. The majority of the samples collected from 4 – 5 feet bgs did not contain Aroclor-1254 at concentrations exceeding the ERM value; but

concentrations exceeding the ERM value were present near the downstream entrance to the Bay as well as in the upper half of the site.

Table 4-1 Summary of PCB Aroclors Detected Above Action Levels

PCB Compounds Detected Above Action Levels (ERM)	ERM (µg/kg)	No. Samples Analyzed for PCBs by EPA Method 8082	No. Samples with PCB Compound Detected Above ERM	Maximum Detected PCB Compound Concentration (µg/kg)	Sample with Maximum Detected PCB Concentration	Depth of Sample with Maximum Detected PCB Concentration
Aroclor-1254	180	191	137	130,000 J	YC-015-2	1-2 feet bgs
Aroclor-1260			22	26,000	YC-011-3	2-3 feet bgs

Notes:
PCB = Polychlorinated Biphenyl
ERM = Effects Range Median Levels
µg/kg = micrograms per kilogram
No. = Number
J = Data validation qualifier indicating the concentration is estimated.

The maximum Aroclor-1260 concentrations were generally detected in samples collected from 2 – 3 feet bgs, and in many borings Aroclor-1260 concentrations increased from below the ERM value in shallower samples to above it in deeper ones (Figure 5). However, all Aroclor-1260 concentrations were below the ERM value in the samples from 4 – 5 feet bgs, and only a few downstream samples contained Aroclor-1260 concentrations above the ERM value in the 3 – 4 feet bgs interval.

While vertical definition was achieved for Aroclor-1260, the analytical results indicate that Aroclor-1254 may be present at concentrations exceeding the ERM value at depths greater than 5 feet bgs. Additionally, PCB concentrations exceeding the ERM value appear likely to extend laterally farther into the San Francisco Bay. Contamination boundaries outside of the tidally-influenced Yosemite Creek site were not defined under the scope of the current assessment.

4.1.2 PCB Congeners

Sediment samples were analyzed for the NOAA PCB Congeners of Interest and World Health Organization Toxic Congeners (USEPA 2005). Analytical results for PCB congeners are summarized in Appendix B, Table B2. Total PCB Congeners were calculated using the sum of detected concentrations of PCB Congeners in each sample. Non-detect congener concentrations were not included in the total PCB congener concentration. The total PCB congener concentrations detected above site action levels are summarized in Table 4-2.

The maximum total PCB congener concentration was reported in sample YC-015-2, which also contained the maximum total Aroclor-1254 concentration. In general, total PCB congener concentrations in Yosemite Creek exceeded the ERM from 0 - 3 feet bgs. Some ERM exceedances were found in the 3 – 4 foot interval,

but by 4 - 5 feet, most samples did not contain total PCB congener concentrations above the ERM (Figure 6).

Table 4-2 Summary of PCB Congeners Detected Above Action Levels

Total PCB Congeners Detected Above Action Levels (ERM)	ERM (µg/kg)	No. Samples Analyzed for PCB Congeners by EPA Method 8082	No. Samples with Total PCB Congeners Detected Above ERM	Maximum Detected Total PCB Congeners Concentration (µg/kg)	Sample with Maximum Detected PCB Congeners Concentration	Depth of Sample with Maximum Detected Total PCB Congeners Concentration
Total PCBs	180	191	98	34,368 J	YC-015-2	1-2 feet bgs

Notes:
PCB = Polychlorinated Biphenyl
ERM = Effects Range Median Levels
µg/kg = micrograms per kilogram
No. = Number
J = Data validation qualifier indicating the concentration is estimated.

Total PCB congener concentrations exceeding the ERM value appear likely to extend laterally farther into the San Francisco Bay. Contamination boundaries outside of the tidally-influenced Yosemite Creek site were not defined as this was out of the scope of the current assessment.

4.1.3 Pesticides

No pesticides were detected at concentrations above ERMs in any sample; however, the laboratory MDLs were elevated above the ERMs in many cases. Analytical results for pesticides of concern (dieldrin, total DDT, and total chlordane) are summarized in Appendix B, Table B3. Total DDT includes 4,4-DDT, 4,4-dichlorodiphenyldichloroethylene (DDE) and 4,4-dichlorodiphenyldichloroethane (DDD), while total chlordane includes alpha-chlordane and gamma chlordane. Complete pesticide analytical results, including pesticides that were not targeted for this investigation, are presented in Appendix C.

Some organochlorine pesticides have similar chromatographic properties as PCBs and elute within the retention time of Aroclor-1254. In samples where Aroclor-1254 was present at significant concentrations (generally above the site action level of 180 µg/kg), it was not possible for the analytical laboratory to conclusively determine whether these organochlorine pesticides were also present at lower concentrations using EPA Methods 8081A/8082. Therefore, samples with elevated levels of Aroclor-1254 were diluted, which increased the MDLs of all the analytes, including the pesticides of concern (dieldrin, total DDT, and total chlordane). These pesticide results were reported as less than the MDL since the pesticide had been either masked and/or diluted. Only concentrations of organochlorine pesticides with peaks that have higher concentrations than the

Aroclor-1254 can be detected in these cases. Additional pesticide analysis using EPA Method 8270 single ion monitoring (SIM) to evaluate whether pesticides of concern may be isolated and identified in the presence of Arochlor-1254 and other contaminants in Yosemite Creek sediments was inconclusive.

A review of the Yosemite Creek PCB as aroclors and pesticide data shows that, with two exceptions, samples with MDLs for dieldrin, total DDT, and/or chlordane that exceed their respective ERMs also contained Aroclor-1254 concentrations that exceeded the PCB site action level. Therefore, despite the inability to determine whether ERM exceedances for pesticides have occurred at these locations, it is known that concentrations of PCBs as aroclors in these sample locations did exceed ERMs and may require removal. The two exceptions, samples YC-031-4 and YC-035-5, contained Aroclor-1254 concentrations of 160 µg/kg (estimated value) and 170 µg/kg (estimated value), respectively. These concentrations are just below the ERM of 180 µg/kg. The dieldrin MDLs in these samples were elevated above the ERM value for dieldrin of 8 µg/kg, to 31.0 µg/kg and 33.0 µg/kg, respectively.

4.1.4 Metals

The target metals of concern, chromium, lead, mercury, and zinc, were all detected at concentrations above their respective ERM values. Analytical results for target metals are summarized in Appendix B, Table B4. Complete metals analytical results, including metals that were not targeted for this investigation, are presented in Appendix C. The following table summarizes the analytical results for the metals of concern detected above site action levels (Table 4-3).

Table 4-3 Summary of Metals Detected Above Action Levels

Metal Detected Above Action Levels (ERM)	ERM (mg/kg)	No. Samples Analyzed for Metals by EPA Method 6010B/7471A	No. Samples with Metal Detected Above ERM	Maximum Detected Metal Concentration (mg/kg)	Sample with Maximum Detected Metal Concentration	Depth of Sample with Maximum Detected Metal Concentration
Chromium	370	191	6	796 J	YC-002-2	1-2 feet bgs
Lead	218		90	1,210 J	YC-026-1	0-1 foot bgs
Mercury	0.71		43	1.70 J	YC-015-2	1-2 feet bgs
Zinc	410		54	1,490 J	YC-011-3	2-3 feet bgs

Notes:
ERM = Effects Range Median Levels
No. = Number
mg/kg = micrograms per kilogram
J = Data validation qualifier indicating the concentration is estimated.

Overall, chromium concentrations above the ERM value were laterally and vertically defined, with only a couple perimeter boring locations where samples exhibited chromium concentrations above the ERM value at 2 or 3 feet bgs (Figure 7). The samples with lead concentrations above the ERM value were primarily in the upper 3 feet bgs, although a few boring locations had samples

with lead concentrations above the ERM value at 4 or 5 feet bgs (Figure 8). Laterally, the analytical results indicate that lead concentrations above the ERM value appear likely to extend farther than the sampling boundaries in both the upstream (northwestern portion of Yosemite Creek) and downstream entrance to the Bay at the shallower depths. Mercury and zinc concentrations above their respective ERM values were also generally restricted to the upper 2 to 3 feet bgs, with only a few boring locations where mercury or zinc concentrations were above the ERM values at 4 or 5 feet bgs (Figures 9 and 10, respectively). At the shallower depths, neither mercury nor zinc was completely laterally defined in either the upstream area or downstream entrance to the Bay. Contamination boundaries outside of the tidally-influenced Yosemite Creek site were not defined as this was out of the scope of the current assessment.

4.1.5 TPH

The Yosemite Creek sediment samples were analyzed for both purgeable hydrocarbons (TPH-gas) and extractable hydrocarbons. The fuel fingerprinting for extractable hydrocarbons evaluated concentrations of the following types of fuels: Bunker C, diesel (C10-C28), fuel oil 4 & 5, hydraulic fluid, Jet fuel A, JP4, JP5, JP8, kerosene, mineral spirits, and motor oil (C18-C30). Due to the quantitation standard used by the laboratory, the carbon chain ranges quantitated for TPH-diesel and TPH-motor oil contain some overlap, but the concentrations for each compound still allow a qualitative comparison between lighter end and heavier end hydrocarbon distribution. Only TPH in the gas, diesel, and motor oil ranges were detected in concentrations above laboratory MDLs. Analytical results for TPH are summarized in Appendix B, Table B5.

No ERM value has been designated for TPH compounds. Therefore, TPH concentrations have been compared to the SFRWQCB ESLs for protection of groundwater to determine action levels for clean-up. The ESLs for TPH-gas and TPH-diesel are 180 mg/kg, and the ESL for TPH-motor oil is 2,500 mg/kg. The concentrations for TPH-diesel and TPH-motor oil detected above site action levels are summarized in Table 4-4.

No TPH-gas concentrations were detected above the ESL of 180 mg/kg. TPH-diesel concentrations detected above the site action level were generally found in the upper 2 to 3 feet of the sediment column, with only a few boring locations where TPH-diesel concentrations were detected above the site action level in the 3 – 4 and 4 – 5 feet bgs samples (Figure 11). The locations where TPH-diesel concentrations exceeded the site action level appeared to be more prevalent in the upstream to midstream areas, although the lateral extent of TPH-diesel concentrations above the site action level was not fully delineated either upstream or at the downstream entrance to the Bay.

Table 4-4 Summary of TPH Detected Above Action Levels

TPH Detected Above Action Levels (ESLs)	ESL (mg/kg)	No. Samples Analyzed for TPH by EPA Method 8015	No. Samples with TPH Detected Above ESL	Maximum Detected TPH Concentration (mg/kg)	Sample with Maximum Detected TPH Concentration	Depth of Sample with Maximum Detected TPH Concentration
TPH-diesel (C10-C28)	180	191	52	5,900 J	YC-011-3	2-3 feet bgs
TPH-motor oil (C18-C30)	2,500		11	9,100 J	YC-005-2	1-2 feet bgs

Notes:
TPH = Total Petroleum Hydrocarbons
ESL = California Regional Water Quality Control Board Environmental Screening Level
mg/kg = milligrams per kilogram
No. = Number
ug/kg – micrograms per kilogram
J = Data validation qualifier indicating the concentration is estimated.

TPH-motor oil concentrations that exceeded the site action level were almost entirely limited to the upper 2 feet of the sediment column, with one exception in a 2 – 3 feet bgs sample at the mouth of the Bay (Figure 12). None of the 3 – 4 or 4 – 5 feet bgs samples contained TPH-motor oil concentrations above the site action level. Lateral definition of TPH-motor oil concentrations above the site action level was generally achieved, with only a few exceptions at 2 and 3 feet bgs. The horizontal extent of the TPH concentrations above the ESL value is likely to be somewhat constrained by the surrounding development.

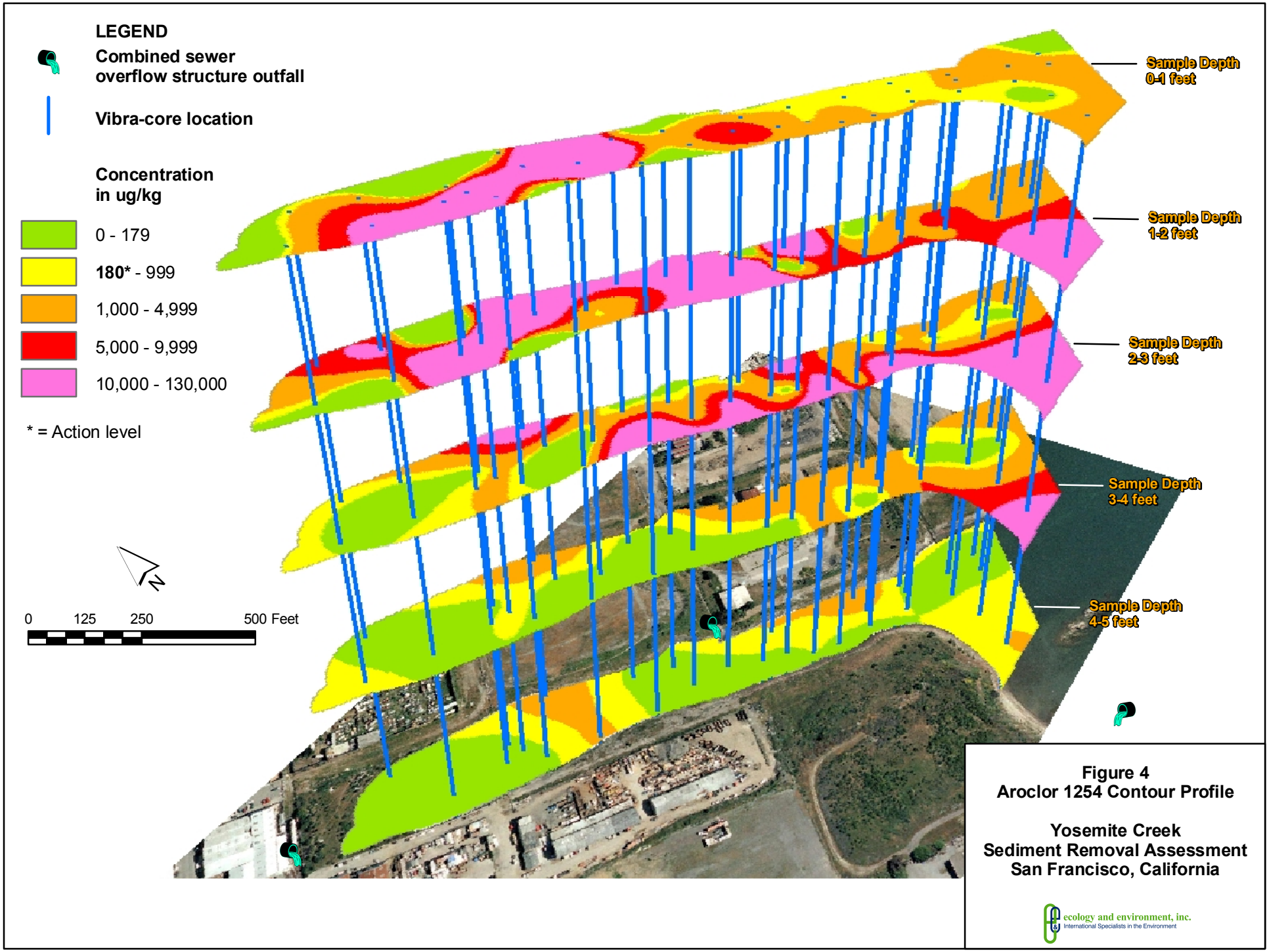


Figure 4
Aroclor 1254 Contour Profile

Yosemite Creek
Sediment Removal Assessment
San Francisco, California

ecology and environment, inc.
International Specialists in the Environment

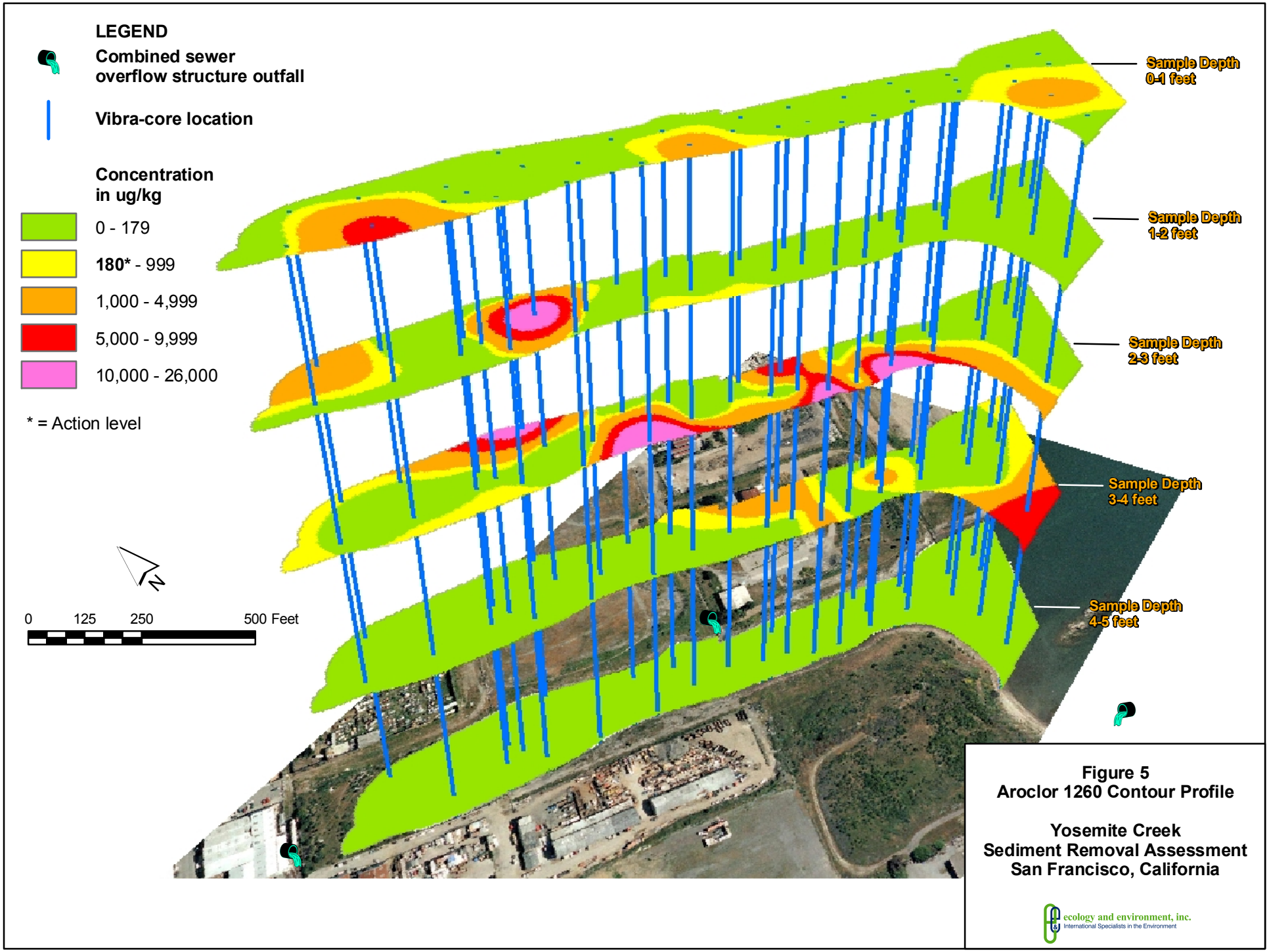


Figure 5
Aroclor 1260 Contour Profile

Yosemite Creek
Sediment Removal Assessment
San Francisco, California

ecology and environment, inc.
International Specialists in the Environment

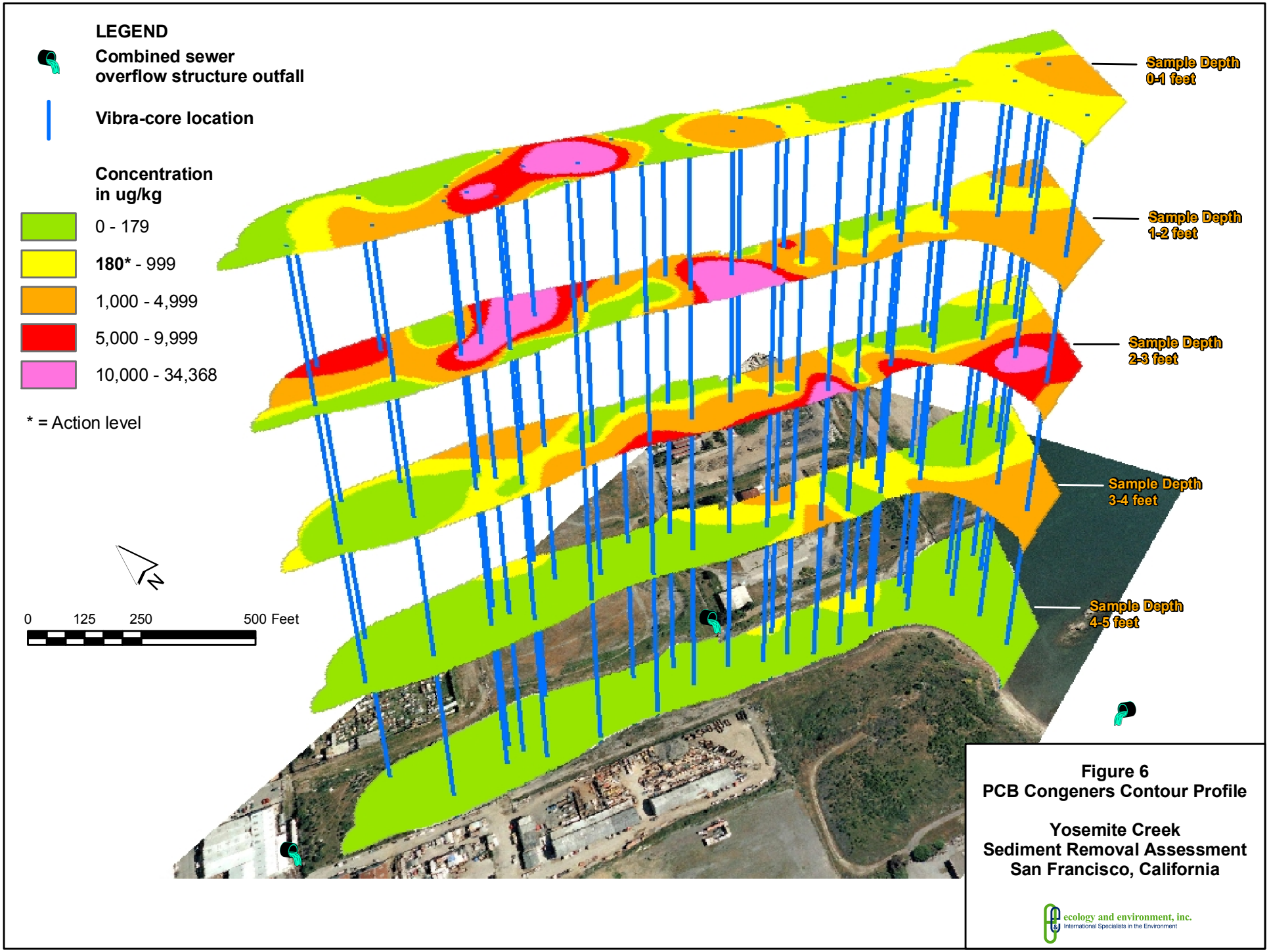


Figure 6
PCB Congeners Contour Profile

Yosemite Creek
Sediment Removal Assessment
San Francisco, California

ecology and environment, inc.
International Specialists in the Environment

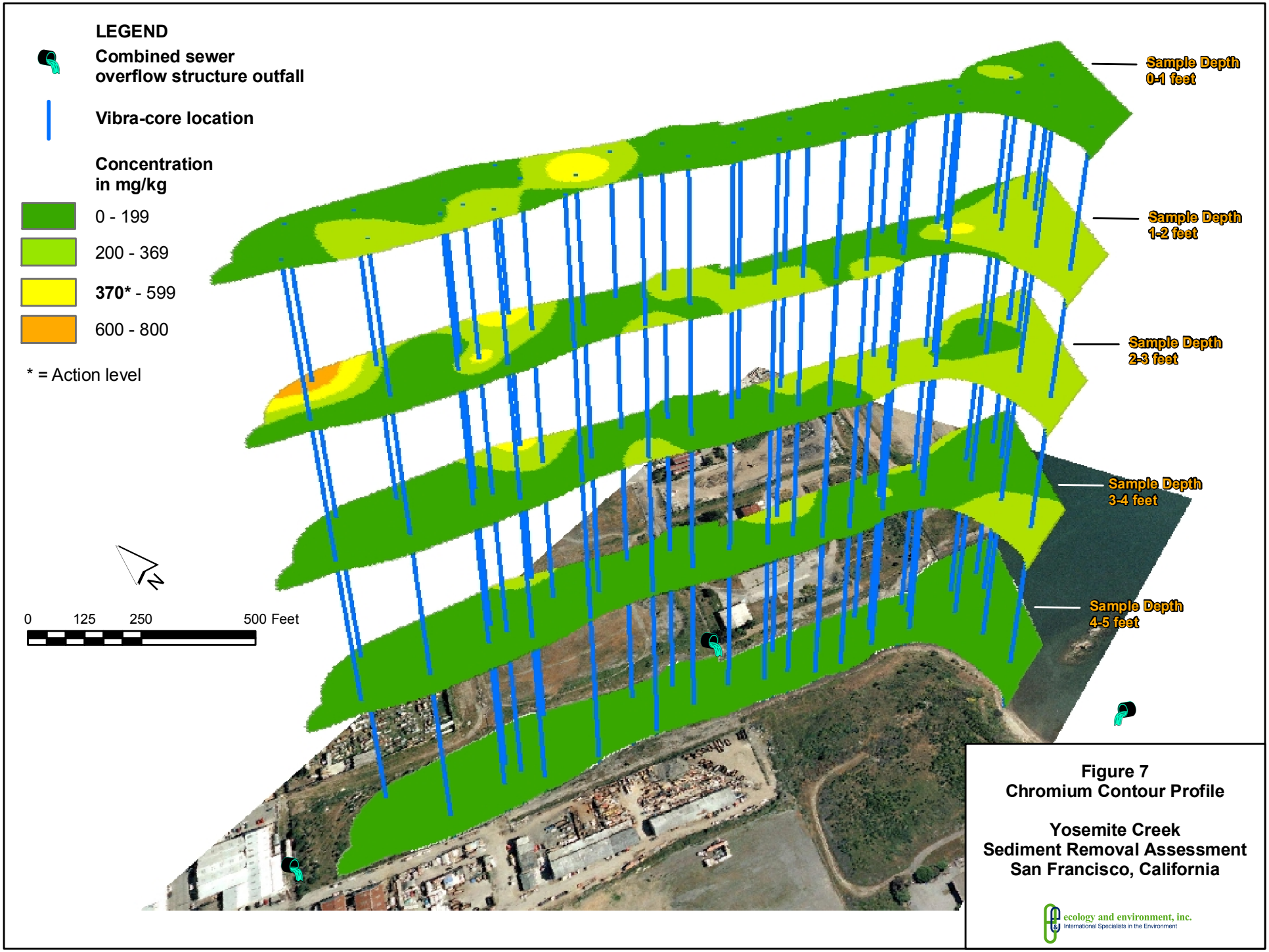


Figure 7
Chromium Contour Profile

Yosemite Creek
Sediment Removal Assessment
San Francisco, California

ecology and environment, inc.
International Specialists in the Environment

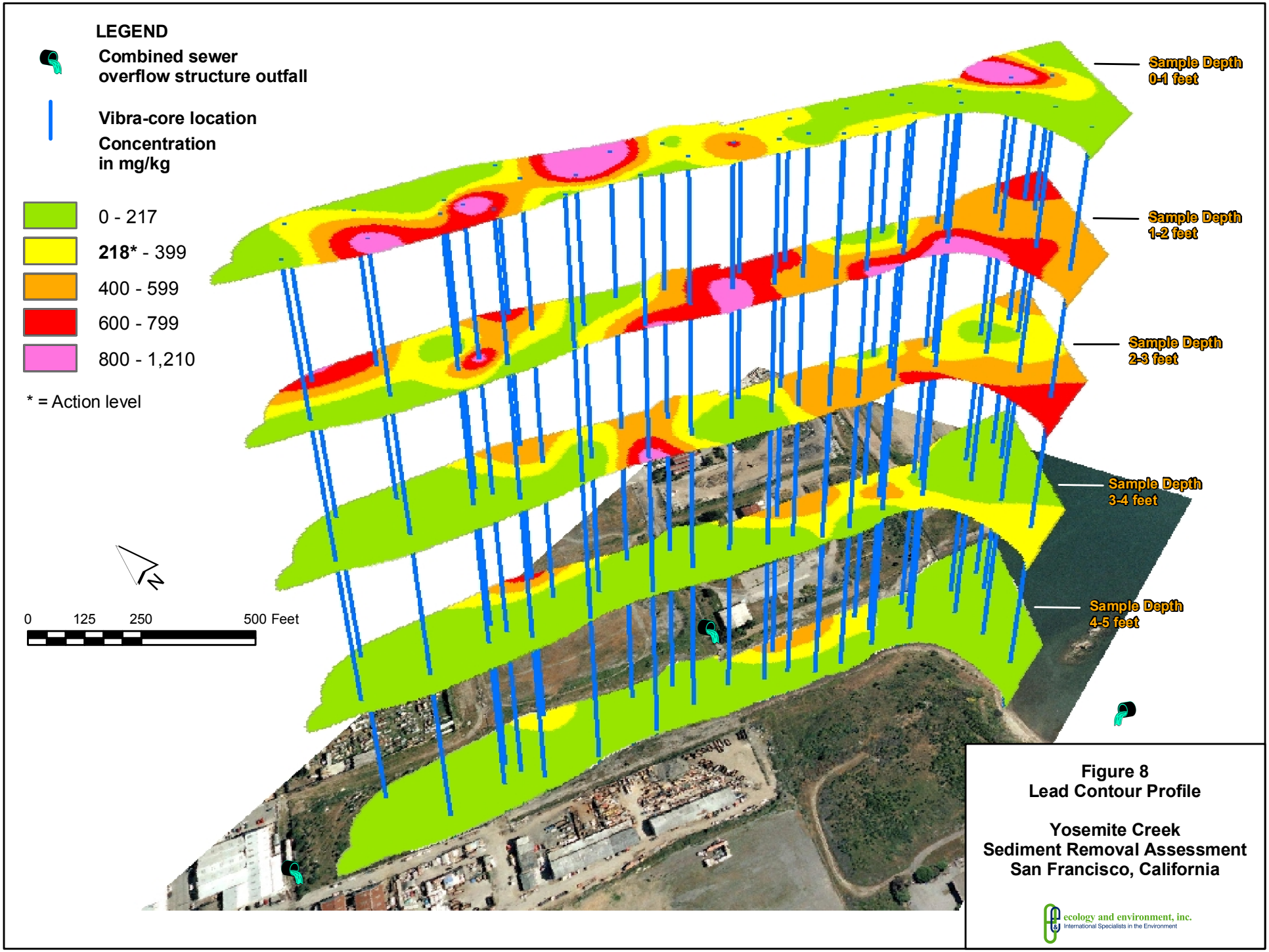


Figure 8
Lead Contour Profile

Yosemite Creek
Sediment Removal Assessment
San Francisco, California

ecology and environment, inc.
International Specialists in the Environment

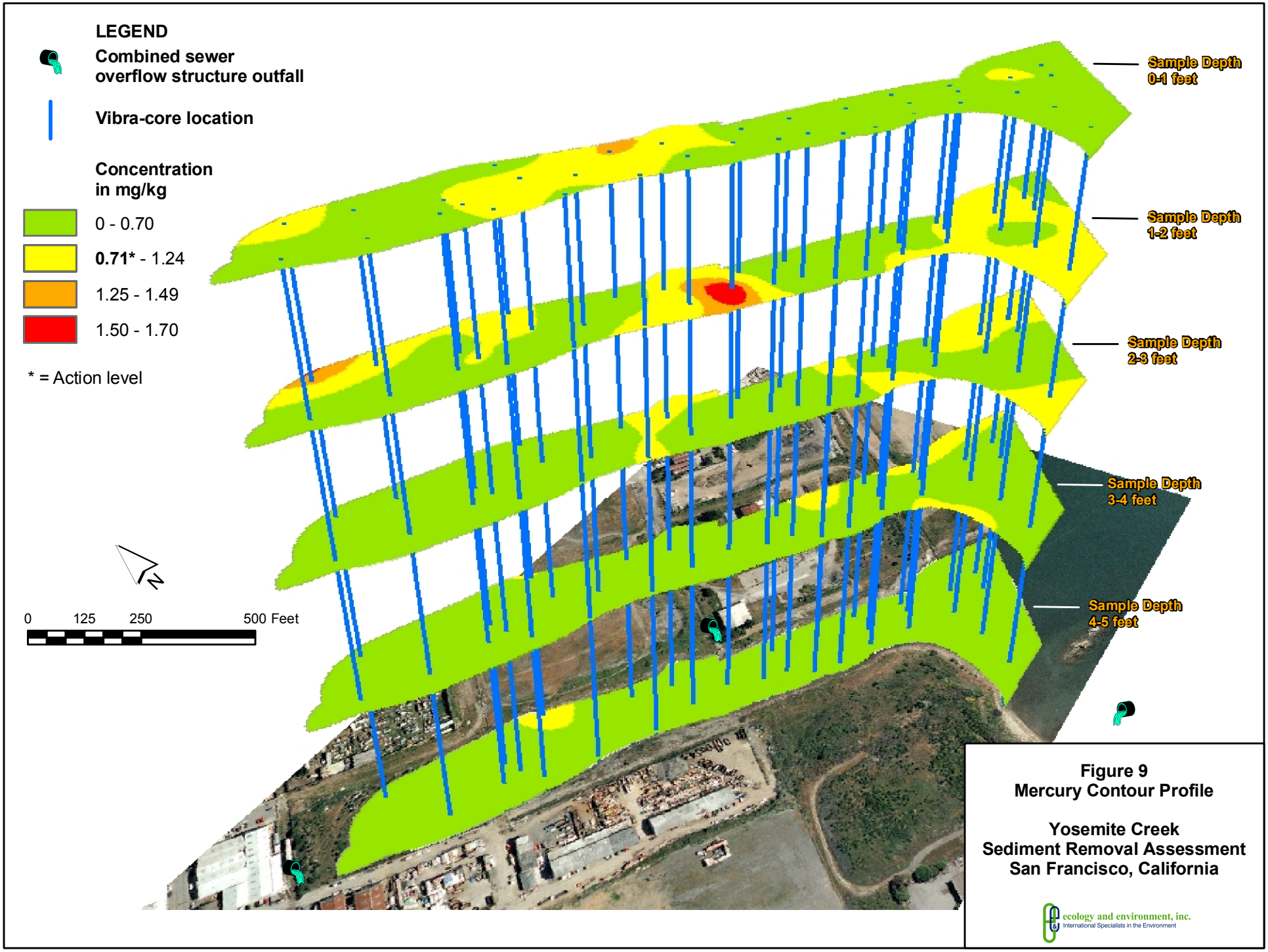


Figure 9
Mercury Contour Profile

Yosemite Creek
Sediment Removal Assessment
San Francisco, California

ecology and environment, inc.
International Specialists in the Environment

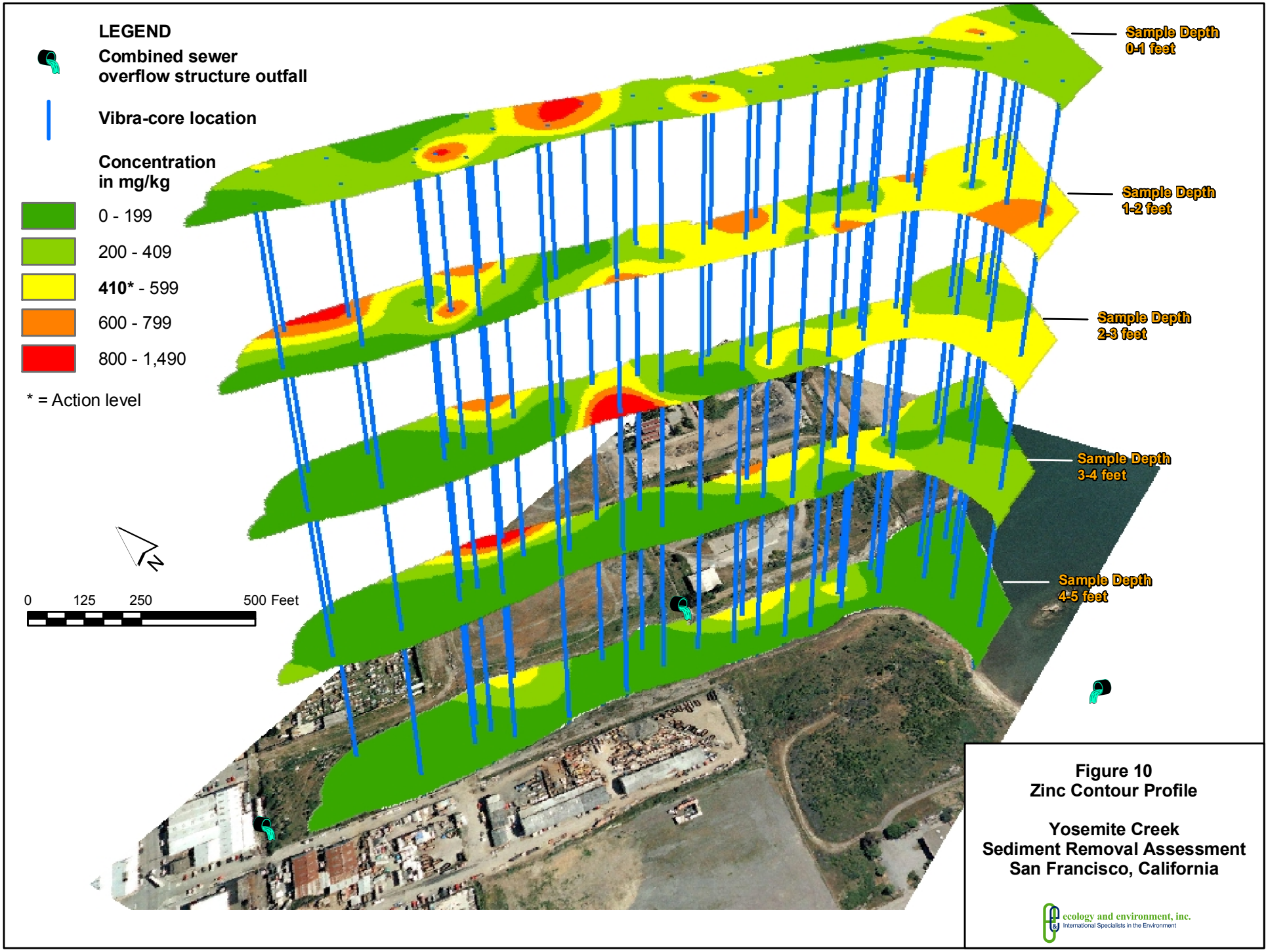


Figure 10
Zinc Contour Profile

Yosemite Creek
Sediment Removal Assessment
San Francisco, California

ecology and environment, inc.
International Specialists in the Environment

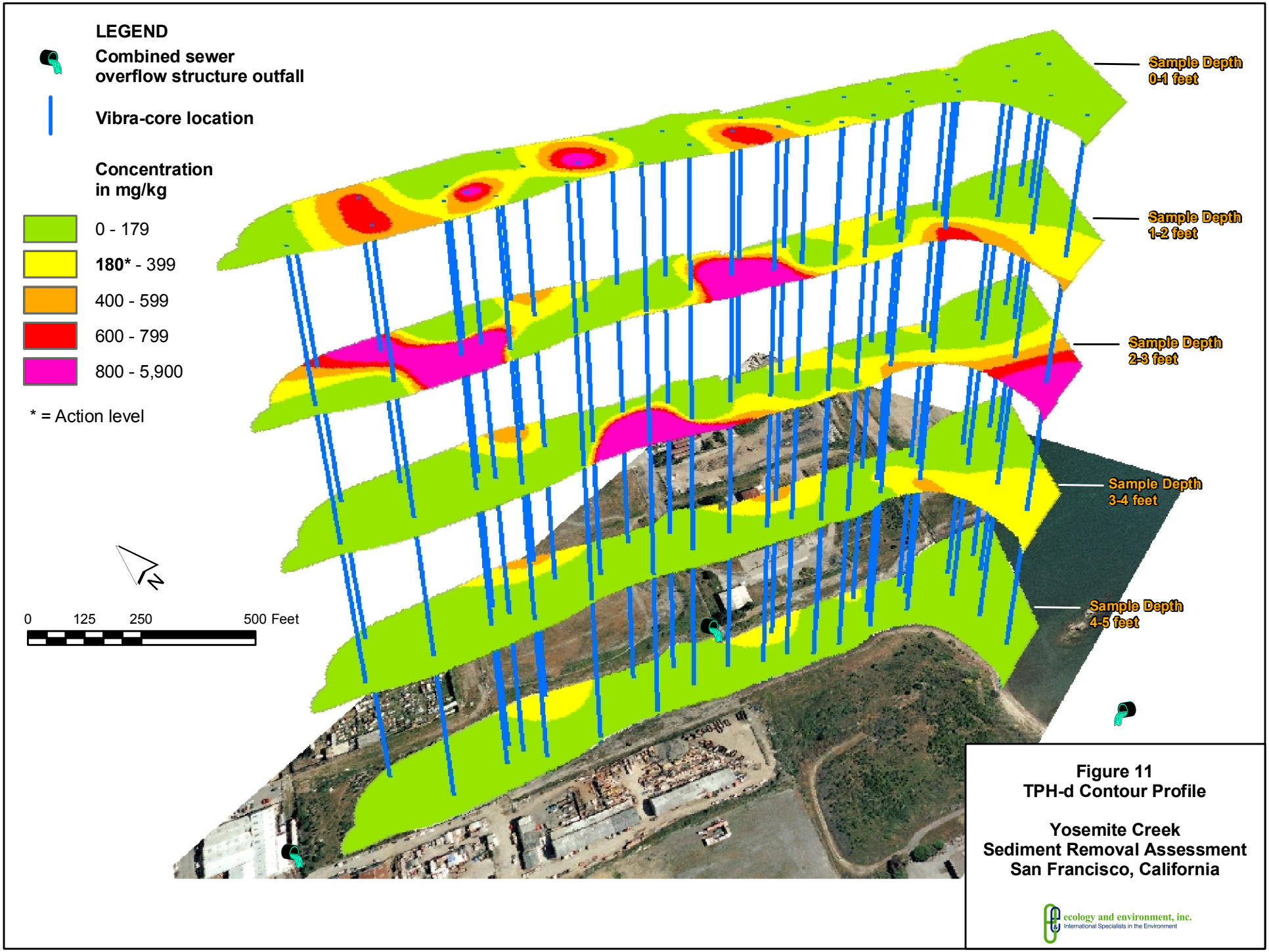


Figure 11
TPH-d Contour Profile

Yosemite Creek
Sediment Removal Assessment
San Francisco, California

ecology and environment, inc.
International Specialists in the Environment

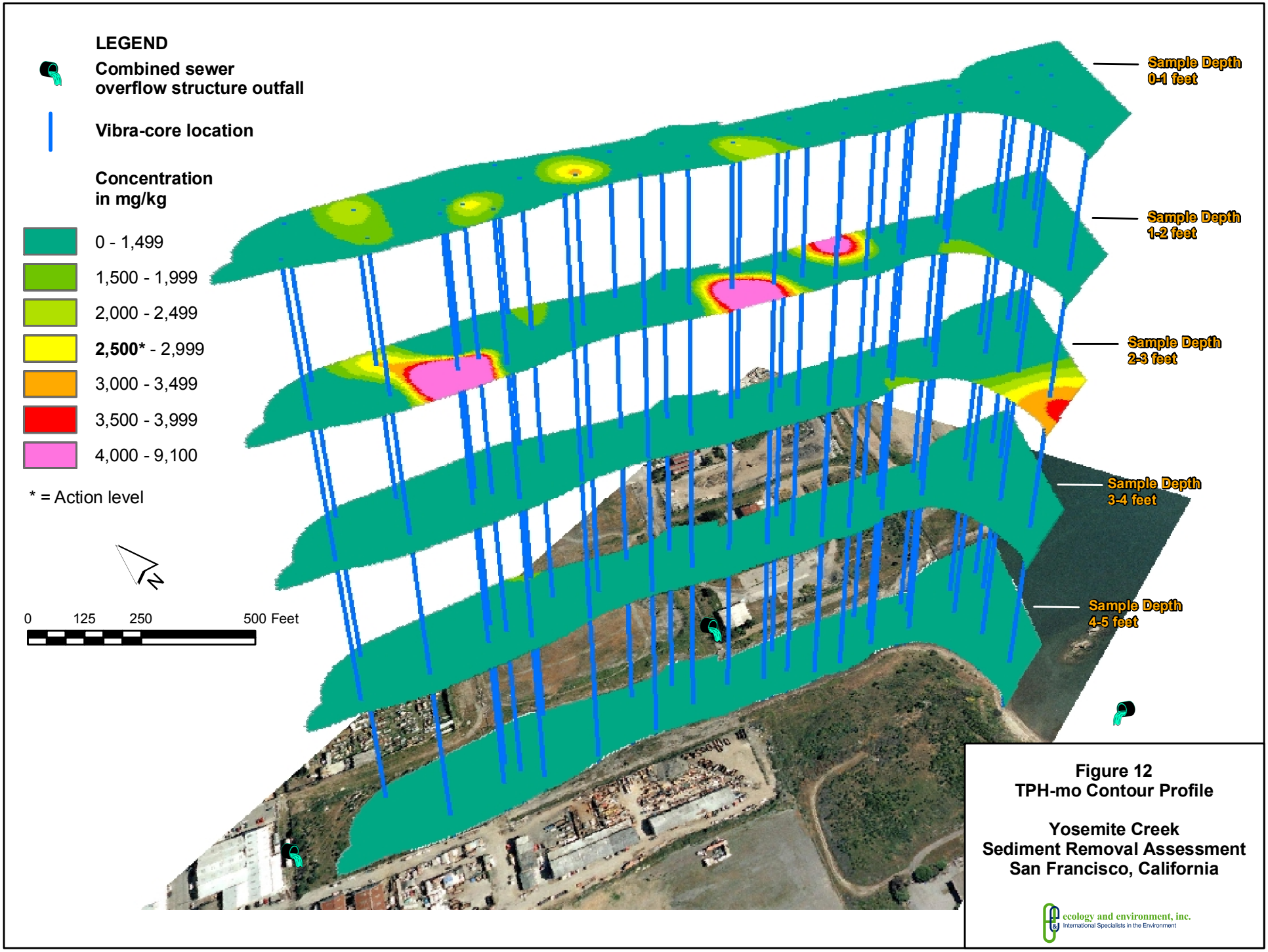


Figure 12
TPH-mo Contour Profile

Yosemite Creek
Sediment Removal Assessment
San Francisco, California

ecology and environment, inc.
International Specialists in the Environment

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 found to be acceptable for intended uses under this investigation. Data produced as a result of this sediment removal assessment was 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.

Due to matrix interferences, high sulfur content in some samples, and the presence of Aroclor-1254 in some samples, laboratory practical quantitation limits (PQLs) were elevated and exceeded site action levels for some contaminants of concern. The laboratory reported results that fell between the MDL and the PQL, if applicable. These concentrations were designated as J (estimated) data. For these reasons, non-detect analytical results are presented in the analytical results tables as less than the MDL.

5.2 QA/QC Samples

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. Samples in which duplicates exceeded 20% relative percent difference were qualified with a J (estimated) data validation qualifier.

5.2.2 Rinse Blanks

Ten rinse blank samples were collected to represent the 13 days in which samples were collected. Rinse blanks were collected by pouring distilled water over a decontaminated sample collection device (sampling spoon or bowl) and capturing the water in the specified sampling containers. Rinse blanks were sent to APPL for analysis of CAM 17 Metals by EPA Method 6010B/7470A, Pesticides and PCBs by EPA Method 8081A/8082; and TPH (TPH-gas and extractable hydrocarbons) by EPA Method 8015B.

Analytical results for rinse blanks indicate that no PCBs, pesticides of concern, TPH, chromium, or mercury were reported at levels exceeding MDLs. Lead was reported in one sample at a concentration of 2.3 micrograms per liter (µg/L) (estimated). Zinc was reported in seven samples at concentrations ranging from 2.7 µg/L (estimated) to 12.1 µg/L (estimated). These reported concentrations are well below site sediment action levels and are unlikely to have contributed to elevated sediment sample results. Analytical results for rinse blanks are summarized in Tables B6 through B9. Decontamination procedures for site activities were adequate and are unlikely to have resulted in any cross-contamination between samples.

6 Summary, Conclusions, and Recommendations

Between June 17 to July 9, 2009, START assisted USEPA with the collection of a total of 191 sediment samples from 36 sampling locations at Yosemite Creek, San Francisco, San Francisco County, California. Based on the results of the sediment sampling, PCBs (Aroclor-1254 and 1260 and PCB Congeners), metals (chromium, lead, mercury, and zinc), and TPH as diesel and motor oil are present in Yosemite Creek sediments at concentrations that exceed their respective ERMs or ESLs. A comparison of pesticides and their respective ERMs was not possible during this removal assessment due to elevated pesticide laboratory PQLs and MDLs. Elevated COPCs were predominantly located in the upper three feet of sediment at Yosemite Creek, although contaminant concentrations exceeding site action levels did occur in the 3-5 foot interval. PCBs, lead, mercury, zinc, and TPH-diesel contamination boundaries above site action levels were not thoroughly defined during this sediment removal assessment. Additionally, PCBs, lead, mercury, zinc, TPH-diesel, and TPH-motor oil were not defined in the downstream direction towards the entrance to San Francisco Bay.

Removal and/or remediation of sediments with concentrations of PCBs, metals, and TPH that exceed site action levels may be appropriate at Yosemite Creek. A removal action targeting the 0-3 foot interval in the Yosemite Creek site would result in the removal of approximately 1,396,800 cubic feet of contaminated sediment. This calculation was based on an investigation area of approximately 465,600 square feet, larger than the original intended investigation area. Removal of the 0-3 foot interval would likely remove most significant contamination above ERMs or ESLs, although COPCs at concentrations exceeding site action levels were present throughout the entire 5-foot interval sampled during this investigation and laterally into San Francisco Bay.

7 References

Barajas & Associates, Inc. April 2008. *Final Feasibility Study Report for Parcel F, Hunters Point Shipyard, San Francisco, California*.

Battelle. May 2004. Draft Report, *Sediment Investigation at Yosemite Creek.*

Battelle Memorial Institute. 2009. Visual Sample Plan, Version 5.3.1.

Buchman. 2008. National Oceanic and Atmospheric Administration (NOAA) Screening Quick Reference Tables (SQuiRTs), NOAA OR&R Report 08-1, Seattle WA, Office of Response and Restoration Division, NOAA, 34 pages.

Ecology and Environment, Inc. January 2009. *Sampling and Analysis Plan, Yosemite Creek Sediment Removal Assessment.*

GFA International website: http://www.gfa-intl.com/services/geo07.aspx accessed January 8, 2009.

Harding Lawson Associates. 1999. *Remedial Investigation Report, Former Bay Area Drum Site, 1212 Thomas Avenue, San Francisco, California*.

Little, Arthur D. May 1999. *Sediment Investigation at Yosemite Creek, Fall 1998.*

McCoy, Jill and Johnston, Kevin. 2001. Using ArcGIS Spatial Analyst. Redlands, California: ESRI.

San Francisco Bay Regional Water Quality Control Board (SFRWQCB). 2008. Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final).

San Francisco Public Utilities Commission. May 2008. *Urban Watershed Planning Charrette Bayside Basins Summary Report.*

USEPA. 2005. Multi-Media, Multi-Concentration Chlorinated Biphenyl Congeners Analytical Service for Superfund (CBC01.0). Website: http://www.epa.gov/superfund/programs/clp/download/cbc/cbc1fs.pdf accessed December 10, 2009

A Photodocumentation

ECOLOGY AND ENVIRONMENT, INC.
Superfund Technical Assessment and Response Team
Yosemite Creek, San Francisco, California

E&E Project. No.: 002693.2024.01RA

TDD No: TO2-09-08-12-0002
Contract No. EP-S5-08-01

PHOTO 1

Date: 6/22/09

Direction: Northwest

Photographer: Sara Dwight

Description: View of Yosemite Creek at high tide.

PHOTO 2

Date: 6/22/09

Direction: Southwest

Photographer: Sara Dwight

Description: Yosemite Creek at high tide with U.S. EPA sampling boat.

PHOTO 3

Date: 6/22/09

Direction: West

Photographer: Sara Dwight

Description: The USCG prepares to advance the Vibracore into Yosemite Creek to collect a sample. START member A. Ellis collects GPS information about the sample location.

ECOLOGY AND ENVIRONMENT, INC.
Superfund Technical Assessment and Response Team
Yosemite Creek, San Francisco, California

E&E Project. No.: 002693.2024.01RA

TDD No: TO2-09-08-12-0002
Contract No. EP-S5-08-01

PHOTO 4

Date: 6/22/09

Direction: West

Photographer: Sara Dwight

Description: The USCG pulls up a Vibracore sampling tube from Yosemite Creek and prepares to temporarily stage the sediment sample on the boat.

PHOTO 5

Date: 6/29/09

Direction: East

Photographer: Michael Friedman

Description: The USCG attempts to collect a sample from location YC-003 at low tide in Yosemite Creek. No sample was collected using the Vibracore from this location due to muddy conditions.

PHOTO 6

Date: 6/29/09

Direction: South

Photographer: Michael Friedman

Description: The potentially responsible party group hired a contractor to video tape sample collection activities at Yosemite Creek. Taping occurred during sampling activities at low tide.

ECOLOGY AND ENVIRONMENT, INC.
Superfund Technical Assessment and Response Team
Yosemite Creek, San Francisco, California

E&E Project. No.: 002693.2024.01RA

TDD No: TO2-09-08-12-0002
Contract No. EP-S5-08-01

PHOTO 7

Date: 6/25/09

Direction: West

Photographer: Steve Calanog

Description: View of the sample preparation area on the northeast side of Yosemite Creek.

PHOTO 8

Date: 6/29/09

Direction: East

Photographer: Steve Calanog

Description: START collects samples from the sediment core.

PHOTO 9

Date: 6/30/09

Direction: South

Photographer: Sara Dwight

Description: The START overseeing the USCG attempt to sample at YC-001 utilizing a sampling tube and slide hammer at Yosemite Creek.

B Analytical Results Tables

Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		**PCB-1016**	**PCB-1221**	**PCB-1232**	**PCB-1242**	**PCB-1248**	**PCB-1254**	**PCB-1260**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		180	180	180	180	180	180	180
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**							
YC-001-1	07/01/09	<15.0	<8.2	<6.0	<3.9	<2.1	<2.4	<5.4
YC-001-2	07/01/09	<13.0	<7.1	<5.1	<3.3	<1.8	<2.1	<4.6
YC-001-3	07/01/09	<19.0	<10.0	<7.6	<5.0	<2.7	<3.0	<6.9
YC-001-4	07/01/09	<21.0	<12.0	<8.7	<5.7	<3.00	**300J**	<7.8
YC-002-1	07/01/09	<23.0	<13.0	<9.5	<6.2	<3.30	**600J**	<8.6
YC-002-2	07/01/09	<17.0	<9.8	<7.1	<4.6	<2.5	**7000J**	**4700J**
YC-002-3	07/01/09	<13.0	<7.2	<5.2	<3.4	<1.80	**470J**	**300J**
YC-802-3	07/01/09	<13.0	<7.3	<5.3	<3.4	<1.8	**640J**	**400J**
YC-002-4	07/01/09	<15.0	<8.6	<6.3	<4.1	<2.2	<2.5	<5.7
YC-002-5	7/1/2009	<15.0	<8.2	<6.0	<3.9	<2.1	<2.4	<5.4
YC-003-1	06/29/09	<15.0	<8.3	<6.1	<3.9	<2.1	**13000J**	**6600J**
YC-003-2	06/29/09	<20.0	<11.0	<8.0	<5.2	<2.8	**320J**	**180J**
YC-803-2	06/29/09	<19.0	<11.0	<7.8	<5.1	<2.7	**390J**	<7.0
YC-003-3	06/29/09	<15.0	<8.4	<6.1	<4.0	<2.1	<2.4	<5.5
YC-003-4	06/29/09	<12.0	<6.9	<5.0	<3.3	<1.8	<2.0	<4.5
YC-003-5	06/29/09	<18.0	<10.0	<7.4	<4.8	<2.60	<3.0	<6.7
YC-004-1	07/02/09	<26.0	<15.0	<11.0	<7.0	<3.7	**2300J**	<9.6
YC-004-2	07/02/09	<21.0	<12.0	<8.6	<5.6	<3.0	**11000J**	<7.7
YC-004-3	07/02/09	<13.0	<7.4	<5.4	<3.5	<1.9	160J	<4.8
YC-005-1	07/07/09	<14.0	<8.0	<5.8	<3.8	<2.0	**17000J**	<5.3
YC-005-2	07/07/09	<16.0	<8.8	<6.4	<4.2	<2.2	**49000J**	<5.8
YC-805-2	07/07/09	<15.0	<8.6	<6.3	<4.1	<2.2	**45000J**	<5.6
YC-005-3	07/07/09	<13.0	<7.1	<5.1	<3.3	<1.8	**1000J**	<4.6
YC-005-4	07/07/09	<14.0	<7.8	<5.7	<3.7	<2.0	160J	<5.1
YC-005-5	07/07/09	<16.0	<9.0	<6.6	<4.3	<2.3	<2.6	<5.9
YC-006-1	06/29/09	<23.0	<13.0	<9.5	<6.2	<3.30	<3.8	<8.6
YC-006-2	06/29/09	<19.0	<10.0	<7.6	<4.9	<2.6	**3700J**	<6.8
YC-006-3	06/29/09	<14.0	<7.7	<5.6	<3.7	<2.0	<2.3	<5.1

Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		**PCB-1016**	**PCB-1221**	**PCB-1232**	**PCB-1242**	**PCB-1248**	**PCB-1254**	**PCB-1260**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		180	180	180	180	180	180	180
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**							
YC-006-4	06/29/09	<12.0	<6.9	<5.0	<3.3	<1.8	<2.0	<4.5
YC-006-5	06/29/09	<12.0	<6.8	<4.9	<3.2	<1.7	<2.0	<4.4
YC-007-1	07/07/09	<21.0	<12.0	<8.4	<5.4	<2.9	**18000J**	<7.5
YC-007-2	07/07/09	<13.0	<7.4	<5.4	<3.5	<1.9	**2700J**	**2100**
YC-007-3	07/07/09	<15.0	<8.5	<6.2	<4.0	<2.2	**190J**	<5.6
YC-807-3	07/07/09	<14.0	<7.6	<5.5	<3.6	<1.9	**240J**	<5.0
YC-007-4	07/07/09	<12.0	<6.7	<4.9	<3.2	<1.7	63J	<4.4
YC-007-5	07/07/09	<12.0	<6.6	<4.8	<3.1	<1.7	<1.9	<4.3
YC-008-1	07/02/09	<17.0	<9.6	<7.0	<4.6	<2.5	**1000J**	<6.3
YC-008-2	07/02/09	<22.0	<13.0	<9.1	<5.9	<3.2	**28000J**	<8.2
YC-008-3	07/02/09	<21.0	<12.0	<8.4	<5.5	<2.9	**18000J**	**14000**
YC-008-4	07/02/09	<21.0	na	na	na	na	**2800J**	<7.8
YC-008-5	07/02/09	<15.0	<8.6	<6.3	<4.1	<2.2	**1600J**	<5.6
YC-009-1	06/25/09	<22.0	<12.0	<9.0	<5.9	<3.2	<3.6	<8.1
YC-009-2	06/25/09	<17.0	<9.4	<6.8	<4.4	<2.4	**960J**	<6.1
YC-009-3	06/25/09	<13.0	<7.3	<5.3	<3.4	<1.8	<2.1	<4.8
YC-009-4	06/25/09	<12.0	<6.6	<4.8	<3.1	<1.7	<1.9	<4.3
YC-009-5	06/25/09	<15.0	<8.6	<6.3	<4.1	<2.2	**1200J**	<5.6
YC-010-1	07/09/09	<200	<110.0	<80.0	<52.0	<28.0	**70000J**	<72.0
YC-010-2	07/09/09	<13.0	<7.4	<5.4	<3.5	<1.9	**2600J**	<4.8
YC-010-3	07/09/09	<12.0	<6.9	<5.0	<3.3	<1.8	<2.0	<4.5
YC-810-3	07/09/09	<13.0	<7.4	<5.4	<3.5	<1.9	<2.2	<4.8
YC-010-4	07/09/09	<12.0	<6.7	<4.9	<3.2	<1.7	<1.9	<4.4
YC-011-1	06/25/09	<20.0	<11.0	<8.1	<5.3	<2.8	**1100J**	<7.3
YC-011-2	06/25/09	<91.0	<51.0	<37.0	<24.0	<13.0	**7400J**	<33.0
YC-811-2	06/25/09	<19.0	<11.0	<7.7	<5.0	<2.7	**4700J**	<6.9
YC-011-3	06/25/09	<190.0	<100.0	<76.0	<49.0	<27.0	**32000J**	**26000**
YC-011-4	06/25/09	<13.0	<7.2	<5.2	<3.4	<1.8	<2.1	<4.7
YC-011-5	06/25/09	<12.0	<6.9	<5.0	<3.3	<1.8	<2.0	<4.5
YC-012-1	06/25/09	<100.0	<59.0	<43.0	<28.0	<15.0	**8700J**	<38.0
YC-012-2	06/25/09	<160.0	<88.0	<64.0	<41.0	<22.0	**13000J**	<57.0
YC-012-3	06/25/09	<15.0	<8.2	<6.0	<3.9	<2.1	**910J**	<5.4
YC-012-4	06/25/09	<13.0	<7.2	<5.2	<3.4	<1.8	<2.1	<4.7

Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		**PCB-1016**	**PCB-1221**	**PCB-1232**	**PCB-1242**	**PCB-1248**	**PCB-1254**	**PCB-1260**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		180	180	180	180	180	180	180
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**							
YC-012-5	06/25/09	<12.0	<6.8	<5.0	<3.2	<1.7	<2.0	<4.5
YC-013-1	06/24/09	<18.0	<9.9	<7.2	<4.7	<2.5	**3100J**	**2300**
YC-013-2	06/24/09	<76.0	<43.0	<31.0	<20.0	<11.0	**30000J**	<28.0
YC-013-3	06/24/09	<12.0	<6.7	<4.9	<3.2	<1.7	**2700J**	<4.4
YC-013-4	06/24/09	<13.0	<7.1	<5.1	<3.3	<1.8	<2.1	<4.6
YC-813-4	06/24/09	<13.0	<7.1	<5.2	<3.4	<1.8	<2.1	<4.7
YC-013-5	06/24/09	<14.0	<7.7	<5.6	<3.7	<2.0	<2.3	<5.1
YC-014-1	06/25/09	<20.0	<11.0	<8.3	<5.4	<2.9	**750J**	<7.5
YC-014-2	06/25/09	<180.0	<99.0	<72.0	<47.0	<25.0	**27000J**	<65.0
YC-014-3	06/25/09	<14.0	<8.1	<5.9	<3.8	<2.1	**1200J**	<5.3
YC-014-4	06/25/09	<13.0	<7.2	<5.2	<3.4	<1.8	<2.1	<4.7
YC-814-4	06/25/09	<13.0	<7.3	<5.3	<3.4	<1.8	<2.1	<4.7
YC-014-5	06/25/09	<14.0	<7.6	<5.5	<3.6	<1.9	<2.2	<5.0
YC-015-1	07/07/09	<17.0	<9.6	<7.0	<4.5	<2.4	**8500J**	<6.3
YC-015-2	07/07/09	<340.0	<190.0	<140.0	<91.0	<49.0	**130000J**	<130.0
YC-015-3	07/07/09	<13.0	<7.3	<5.3	<3.4	<1.9	**12000J**	<4.8
YC-015-4	07/07/09	<13.0	<7.1	<5.1	<3.3	<1.8	**300J**	<4.6
YC-015-5	07/07/09	<17.0	<9.5	<6.9	<4.5	<2.4	<2.8	<6.3
YC-016-1	07/01/09	<15.0	<8.6	<6.3	<4.1	<2.2	**1900J**	<5.6
YC-016-2	07/01/09	<16.0	<8.8	<6.4	<4.1	<2.2	**9000J**	<5.7
YC-016-3	07/01/09	<14.0	<7.8	<5.6	<3.7	<2.0	**500J**	<5.1
YC-017-1	06/23/09	<20.0	<11.0	<8.3	<5.4	<2.9	**940J**	<7.5
YC-817-1	06/23/09	<20.0	<11.0	<8.1	<5.3	<2.8	**2300J**	<7.3
YC-017-2	06/23/09	<18.0	<10.0	<7.3	<4.7	<2.6	**1500J**	<6.6
YC-017-3	06/23/09	<16.0	<9.2	<6.7	<4.3	<2.3	**1500J**	<6.0
YC-017-4	06/23/09	<15.0	<8.2	<6.0	<3.9	<2.1	<2.4	<5.4
YC-017-5	06/23/09	<13.0	<7.3	<5.3	<3.4	<1.9	<2.1	<4.8
YC-018-1	06/23/09	<17.0	<9.4	<6.8	<4.5	<2.4	**850J**	<6.2
YC-018-2	06/23/09	<17.0	<9.8	<7.1	<4.6	<2.5	**27000J**	<6.4
YC-018-3	06/23/09	<18.0	<10.0	<7.4	<4.8	<2.6	**12000J**	**7600J**
YC-018-4	06/23/09	<17.0	<9.6	<7.0	<4.5	<2.4	**4000J**	**3100J**
YC-818-4	06/23/09	<17.0	<9.6	<7.0	<4.5	<2.4	**5400J**	**4500J**
YC-018-5	06/23/09	<15.0	<8.5	<6.2	<4.0	<2.2	**880J**	<5.6

Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		**PCB-1016**	**PCB-1221**	**PCB-1232**	**PCB-1242**	**PCB-1248**	**PCB-1254**	**PCB-1260**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		180	180	180	180	180	180	180
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**							
YC-019-1	06/22/09	<18.0	<10.0	<7.4	<4.8	<2.6	**1200J**	<6.7
YC-019-2	06/22/09	<17.0	<9.8	<7.1	<4.6	<2.5	**5300J**	<6.4
YC-019-3	06/22/09	<16.0	<9.2	<6.7	<4.4	<2.3	**1900J**	<6.0
YC-019-4	06/22/09	<16.0	<8.9	<6.4	<4.2	<2.3	**610J**	<5.8
YC-019-5	06/22/09	<15.0	<8.6	<6.2	<4.0	<2.2	<2.5	<5.6
YC-020-1	06/22/09	<20.0	<11.0	<8.0	<5.2	<2.8	**580J**	<7.2
YC-820-1	06/22/09	<19.0	<11.0	<7.8	<5.1	<2.7	**430J**	<7.0
YC-020-2	06/22/09	<14.0	<8.1	<5.9	<3.8	<2.1	**1800J**	<5.3
YC-020-3	06/22/09	<18.0	<10.0	<7.4	<4.8	<2.6	**3400J**	<6.6
YC-020-4	06/22/09	<17.0	<9.6	<7.0	<4.5	<2.4	**1500J**	<6.3
YC-020-5	06/22/09	<13.0	<7.4	<5.4	<3.5	<1.9	**920J**	<4.9
YC-021-1	06/22/09	<15.0	<8.6	<6.2	<4.0	<2.2	**750J**	<5.6
YC-021-2	06/22/09	<14.0	<8.0	<5.8	<3.8	<2.0	**3700J**	<5.2
YC-021-3	06/22/09	<19.0	<11.0	<7.7	<5.0	<2.7	**5300J**	**3700J**
YC-021-4	06/22/09	<18.0	<10.0	<7.4	<4.8	<2.6	**2300J**	**1800J**
YC-021-5	06/22/09	<19.0	<11.0	<7.9	<5.2	<2.8	**930J**	<7.1
YC-022-1	06/22/09	<15.0	<8.6	<6.3	<4.1	<2.2	**300J**	<5.6
YC-022-2	06/22/09	<13.0	<7.4	<5.4	<3.5	<1.9	**890J**	<4.8
YC-022-3	06/22/09	<18.0	<10.0	<7.4	<4.8	<2.6	**650J**	<6.6
YC-022-4	06/22/09	<16.0	<8.8	<6.4	<4.2	<2.3	**2400J**	<5.8
YC-022-5	06/22/09	<15.0	<8.4	<6.1	<4.0	<2.1	**2400J**	<5.5
YC-023-1	06/18/09	<14.0	<7.8	<5.6	<3.7	<2.0	**1500J**	<5.0
YC-023-2	06/18/09	<21.0	<12.0	<8.5	<5.5	<3.0	**9000J**	<7.6
YC-023-3	06/18/09	<19.0	<11.0	<7.9	<5.1	<2.8	**380J**	<7.1
YC-023-4	06/18/09	<15.0	<8.3	<6.0	<3.9	<2.1	<2.4	<5.4
YC-023-5	06/18/09	<17.0	<9.4	<6.8	<4.4	<2.4	<2.7	<6.1
YC-823-5	06/18/09	<16.0	<9.0	<6.5	<4.2	<2.3	<2.6	<5.9
YC-024-1	06/22/09	<17.0	<9.5	<6.9	<4.5	<2.4	**1400J**	<6.2
YC-024-2	06/22/09	<15.0	<8.6	<6.3	<4.1	<2.2	**4500J**	<5.7
YC-024-3	06/22/09	<19.0	<11.0	<8.0	<5.2	<2.8	**3000J**	<7.2
YC-824-3	06/22/09	<19.0	<10.0	<7.6	<5.0	<2.7	**4000J**	<6.9
YC-024-4	06/22/09	<20.0	<11.0	<8.3	<5.4	<2.9	**470J**	<7.5
YC-024-5	06/22/09	<18.0	<10.0	<7.3	<4.7	<2.5	**180J**	<6.5

Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		**PCB-1016**	**PCB-1221**	**PCB-1232**	**PCB-1242**	**PCB-1248**	**PCB-1254**	**PCB-1260**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		180	180	180	180	180	180	180
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**							
YC-025-1	06/18/09	170J	<8.4	<6.1	<4.0	<2.1	**1000J**	**770**
YC-025-2	06/18/09	<16.0	<9.1	<6.6	<4.3	<2.3	**3300J**	<6.0
YC-025-3	06/18/09	<19.0	<11.0	<7.7	<5.0	<2.7	**2900J**	<6.9
YC-825-3	06/18/09	<18.0	<10.0	<7.4	<4.8	<2.6	**1200J**	<6.6
YC-025-4	06/18/09	<19.0	<10.0	<7.6	<5.0	<2.7	170J	<6.9
YC-025-5	06/18/09	<18.0	<9.9	<7.2	<4.7	<2.5	94J	<6.5
YC-026-1	06/18/09	<16.0	<9.2	<6.7	<4.3	<2.3	**3900J**	<6.0
YC-026-2	06/18/09	<20.0	<11.0	<8.2	<5.4	<2.9	**1500J**	<7.4
YC-026-3	06/18/09	<21.0	<12.0	<8.7	<5.6	<3.0	**360J**	<7.8
YC-026-4	06/18/09	<21.0	<12.0	<8.5	<5.5	<3.0	**220J**	<7.7
YC-026-5	06/18/09	<17.0	<9.5	<6.9	<4.5	<2.4	<2.8	<6.2
YC-027-1	06/18/09	<15.0	<8.6	<6.3	<4.1	<2.2	**3600J**	<5.6
YC-027-2	06/18/09	<19.0	<11.0	<7.8	<5.0	<2.7	**2700J**	<7.0
YC-027-3	06/18/09	<20.0	<11.0	<8.2	<5.3	<2.9	**260J**	<7.4
YC-027-4	06/18/09	<17.0	<9.6	<7.0	<4.5	<2.4	<2.8	<6.3
YC-027-5	06/18/09	<17.0	<9.5	<6.9	<4.5	<2.4	<2.8	<6.2
YC-028-1	06/17/09	<17.0	<9.5	<6.9	<4.5	<2.4	120J	<6.2
YC-028-2	06/17/09	<19.0	<11.0	<7.6	<5.0	<2.7	**3000J**	<6.9
YC-028-3	06/17/09	<20.0	<11.0	<8.2	<5.3	<2.9	**1000J**	<7.4
YC-028-4	06/17/09	<20.0	<11.0	<8.3	<5.4	<2.9	**1200J**	<7.4
YC-028-5	06/17/09	<17.0	<9.7	<7.0	<4.6	<2.5	<2.8	<6.3
YC-029-1	07/06/09	<20.0	<11.0	<8.0	<5.2	<2.8	**2200J**	<7.2
YC-029-2	07/06/09	<20.0	<11.0	<8.0	<5.2	<2.8	**11000J**	<7.2
YC-029-3	07/06/09	<21	<12.0	<8.8	<5.7	<3.1	**38000J**	<7.9
YC-829-3	07/06/09	<21.0	<12.0	<8.7	<5.7	<3.1	**33000J**	<7.8
YC-029-4	07/06/09	<22.0	<12.0	<8.8	<5.7	<3.1	**13000J**	**8800**
YC-029-5	07/06/09	<15.0	<8.6	<6.3	<4.1	<2.2	**1000J**	<5.7
YC-030-1	07/06/09	<19.0	<11.0	<7.7	<5.0	<2.7	<3.1	**2000**
YC-030-2	07/06/09	<19.0	<11.0	<7.8	<5.0	<2.7	**15000J**	<7.0

Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		**PCB-1016**	**PCB-1221**	**PCB-1232**	**PCB-1242**	**PCB-1248**	**PCB-1254**	**PCB-1260**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		180	180	180	180	180	180	180
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**							
YC-030-3	07/06/09	<19.0	<10.0	<7.6	<4.9	<2.7	**24000J**	<6.8
YC-030-4	07/06/09	<21.0	<12.0	<8.7	<5.7	<3.1	**4300J**	<7.8
YC-030-5	07/06/09	<17.0	<9.8	<7.1	<4.6	<2.5	**780J**	<6.4
YC-031-1	07/07/09	<16.0	<9.2	<6.7	<4.3	<2.3	**3600J**	<6.0
YC-031-2	07/07/09	<19.0	<10.0	<7.6	<4.9	<2.7	**5200J**	<6.8
YC-031-3	07/07/09	<15.0	<8.2	<6.0	<3.9	<2.1	**2100J**	<5.4
YC-831-3	07/07/09	<15.0	<8.2	<5.9	<3.9	<2.1	**1300J**	<5.3
YC-031-4	07/07/09	<14.0	<7.8	<5.7	<3.7	<2.0	160J	<5.1
YC-031-5	07/07/09	<13.0	<7.5	<5.4	<3.5	<1.9	<2.2	<4.9
YC-032-1	07/07/09	<19.0	<11.0	<7.9	<5.2	<2.8	**30000J**	<7.1
YC-032-2	07/07/09	<390.0	<220.0	<160.0	<100.0	<56.0	**68000J**	<140.0
YC-032-3	07/07/09	<12.0	<7.0	<5.1	<3.3	<1.8	**1500J**	<4.6
YC-032-4	07/07/09	<12.0	<6.7	<4.9	<3.2	<1.7	**360J**	<4.4
YC-032-5	07/07/09	<13.0	<7.2	<5.2	<3.4	<1.8	<2.1	<4.7
YC-033-1	07/08/09	<17.0	<9.4	<6.8	<4.4	<2.4	**950J**	<6.2
YC-833-1	07/08/09	<17.0	<9.5	<6.9	<4.5	<2.4	**1200J**	<6.3
YC-033-2	07/08/09	<15.0	<8.7	<6.3	<4.1	<2.2	**4500J**	<5.7
YC-033-3	07/08/09	<17.0	<9.7	<7.1	<4.6	<2.5	**4900J**	**2800**
YC-033-4	07/08/09	<18.0	<10.0	<7.5	<4.9	<2.6	**4600J**	<6.7
YC-033-5	07/08/09	<17.0	<9.7	<7.1	<4.6	<2.5	**220J**	<6.4
YC-034-1	07/08/09	<18.0	<10.0	<7.4	<4.8	<2.6	**970J**	<6.7
YC-034-2	07/08/09	<15.0	<8.3	<6.1	<3.9	<2.1	**5100J**	<5.5
YC-034-3	07/08/09	**200.0**	110.0	80.0	52.0	28.0	**25000J**	**21000**
YC-034-4	07/08/09	<17.0	<9.8	<7.1	<4.6	<2.5	**430J**	<6.4
YC-034-5	07/08/09	<16.0	<8.9	<6.5	<4.2	<2.3	42J	<5.8

Table B1 - PCBs Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		**PCB-1016**	**PCB-1221**	**PCB-1232**	**PCB-1242**	**PCB-1248**	**PCB-1254**	**PCB-1260**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		180	180	180	180	180	180	180
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**							
YC-035-1	07/08/09	<17.0	<9.5	<6.9	<4.5	<2.4	**2800J**	<6.2
YC-035-2	07/08/09	<19.0	<11.0	<7.8	<5.1	<2.7	**9000J**	<7.1
YC-035-3	07/08/09	<140.0	<78.0	<57.0	<37.0	<20.0	**24000J**	**16000**
YC-035-4	07/08/09	<15.0	<8.4	<6.1	<4.0	<2.1	**2100J**	**1600**
YC-035-5	07/08/09	<15.0	<8.2	<6.0	<3.9	<2.1	170J	<5.4
YC-036-1	07/09/09	<19.0	<11.0	<7.7	<5.0	<2.7	**19000J**	<6.9
YC-036-2	07/09/09	<160.0	<90.0	<65.0	<43.0	<23.0	**25000J**	**18000**
YC-036-3	07/09/09	<13.0	<7.3	<5.3	<3.5	<1.9	**1000J**	<4.8
YC-836-3	07/09/09	<13.0	<7.6	<5.5	<3.6	<1.9	**2600J**	<5.0
YC-036-4	07/09/09	<12.0	<6.8	<4.9	<3.2	<1.7	130J	<4.4

Notes:

PCBs = Polychlorinated Biphenyls

ug/kg = micrograms per kilogram

ERM = National Oceanic and Atmospheric Administration (NOAA) effects range median (ERM) levels for marine sediment (Buchman 2008, Screening Quick Reference Tables [SQuiRTs])

J = Data validation qualifier indicating concentration is estimated.

<X = not detected above method detection limit of X

na = not analyzed

Concentrations exceeding ERMs are shaded and bold.

Table B2 - PCB Congeners Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		PCB-8	PCB-18	PCB-28	PCB-44	PCB-52	PCB-66	PCB-77	PCB-81	PCB-101	PCB-105	PCB-114	PCB-118	PCB-123	PCB-126	PCB-128	PCB-138
Analytical Method		8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082
ERM		TOTAL PCBs = 180															
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Sample ID	Sample Date																
YC-001-1	7/1/2009	<0.07	<0.06	<0.03	<0.01	<0.01	<0.01	<0.09	<0.09	1.1J	<0.01	<0.01	<0.01	0.68J	<0.07	<0.01	1.5
YC-001-2	7/1/2009	<0.06	<0.05	<0.03	<0.01	<0.01	<0.01	<0.08	<0.08	<0.01	<0.01	<0.01	<0.01	<0.06	<0.06	<0.01	<0.01
YC-001-3	7/1/2009	<0.10	<0.08	<0.04	<0.02	<0.02	<0.02	<0.11	0.64J	<0.02	<0.02	<0.02	<0.02	<0.10	<0.10	<0.02	1.2J
YC-001-4	7/1/2009	46	<0.09	<0.04	<0.02	<0.02	<0.02	<0.13	<0.13	<0.02	<0.02	<0.02	4.7J	<0.11	<0.11	1.4J	7.4J
YC-002-1	7/1/2009	<0.12	<0.10	<0.05	<0.02	<0.02	<0.02	<0.14	7.6J	7.1J	<0.02	<0.02	3.9J	2.6	<0.12	<0.02	7.7J
YC-002-2	7/1/2009	<0.09	<0.07	<0.04	44J	230J	450J	1200	<0.11	610J	160J	<0.02	350J	<0.09	<0.09	59J	800J
YC-002-3	7/1/2009	0.22J	1.2J	<0.03	1.8J	4.2J	9.1J	22	<0.08	16J	6.4J	<0.01	8.2J	<0.07	<0.07	1.8J	20J
YC-802-3	7/1/2009	<0.07	<0.05	<0.03	1.9J	4.5J	9.6J	2.8	7.5J	17J	6.6J	<0.01	9.3J	<0.07	<0.07	7.7J	14J
YC-002-4	7/1/2009	<0.08	<0.06	<0.03	<0.02	1.4J	<0.02	<0.09	<0.09	2.2J	<0.02	2.8	<0.02	<0.08	<0.08	<0.02	2.9J
YC-002-5	7/1/2009	<0.07	<0.06	<0.03	<0.01	<0.01	<0.01	<0.09	<0.09	<0.01	<0.01	<0.01	<0.01	<0.07	<0.07	<0.01	<0.01
YC-003-1	6/29/2009	5.8	<0.06	<0.03	29J	93J	33J	62	27J	200J	44J	<0.01	120J	<0.08	<0.08	26J	230J
YC-003-2	6/29/2009	<0.10	0.95J	<0.04	1.1J	3.1J	5.2J	<0.12	1.4J	10J	2.0J	<0.02	5.5J	<0.10	<0.10	<0.02	11J
YC-803-2	6/29/2009	<0.10	1.8J	<0.04	2.2J	4.9J	8.6J	<0.12	2.2J	16J	3.1J	9.2	8.9J	6.2	<0.10	<0.02	13J
YC-003-3	6/29/2009	<0.08	<0.06	<0.03	<0.01	<0.01	<0.01	<0.09	<0.09	<0.01	<0.01	<0.01	<0.01	0.37J	<0.08	<0.01	0.59J
YC-003-4	6/29/2009	<0.06	<0.05	<0.03	<0.01	<0.01	<0.01	<0.08	<0.08	<0.01	<0.01	<0.01	<0.01	<0.06	<0.06	<0.01	<0.01
YC-003-5	6/29/2009	<0.09	<0.07	<0.04	<0.02	<0.02	<0.02	<0.11	<0.11	<0.02	<0.02	<0.02	<0.02	<0.09	<0.09	<0.02	<0.02
YC-004-1	7/2/2009	<0.13	<0.11	2.2	3.5J	9.6J	15J	<0.16	<0.16	34J	12J	<0.03	21J	<0.13	<0.13	13J	41J
YC-004-2	7/2/2009	10	<0.09	<0.04	53J	240J	380J	<0.13	<0.13	730J	280J	<0.02	380J	<0.11	<0.11	81J	810J
YC-004-3	7/2/2009	<0.07	<0.05	<0.03	<0.01	1.3J	<0.01	<0.08	<0.08	3.9J	1.5J	<0.01	2.7J	<0.07	<0.07	<0.01	4.4J
YC-005-1	7/7/2009	<0.73	<0.58	27J	140J	320J	410J	<0.88	<0.88	640J	210	<0.15	410J	<0.73	<0.73	150J	490J
YC-005-2	7/7/2009	<1.60	<1.30	<0.64	320J	740J	970J	<1.90	1500	1500J	530	<0.32	910J	<1.60	<1.60	440J	1300J
YC-805-2	7/7/2009	<1.60	<1.30	49J	310J	720J	920J	<1.90	<1.90	1500J	500	<0.31	940J	<1.60	<1.60	310J	1100J
YC-005-3	7/7/2009	<0.06	<0.05	1.1J	7.1J	17J	23J	<0.08	<0.08	35J	12	<0.01	21J	<0.06	<0.06	9.3J	31J
YC-005-4	7/7/2009	<0.07	<0.06	<0.03	<0.01	<0.01	<0.01	<0.09	<0.09	<0.01	<0.01	<0.01	0.78J	<0.07	<0.07	<0.01	1.2J
YC-005-5	7/7/2009	<0.08	<0.07	<0.03	<0.02	<0.02	<0.02	<0.10	<0.10	<0.02	<0.02	<0.02	<0.02	<0.08	<0.08	<0.02	<0.02
YC-006-1	06/24/09	<0.12	<0.10	<0.05	<0.02	3.6J	7.3J	<0.14	<0.14	12J	3.7J	<0.02	9.9	<0.12	<0.12	2.9J	15J
YC-006-2	06/24/09	2.8	16	3.8J	20J	48J	120J	<0.11	<0.11	180J	36J	<0.02	110	<0.10	<0.10	30J	240J
YC-006-3	06/24/09	<0.07	<0.06	<0.03	1.7J	4.2J	8.4J	<0.08	<0.08	16J	5.5J	<0.01	8.3	<0.07	<0.07	5.6J	14J
YC-006-4	06/24/09	<0.06	<0.05	<0.03	1.0J	2.9J	6.1J	<0.08	<0.08	10J	1.9J	<0.01	5.5	<0.06	<0.06	1.5J	9.6J
YC-006-5	06/24/09	<0.06	<0.05	<0.03	<0.01	<0.01	<0.01	<0.07	<0.07	1.1J	<0.01	<0.01	<0.01	<0.06	<0.06	<0.01	1.5J
YC-007-1	7/7/2009	<10.0	<8.40	<4.20	250J	670J	800J	<13.0	<13.0	1200J	230	840J	710J	<10.0	<10.0	180J	660J
YC-007-2	7/7/2009	<1.30	<1.10	<0.54	<0.27	41J	21J	<1.60	<1.60	39J	<0.27	64J	14J	<1.30	<1.30	<0.27	29J
YC-007-3	7/7/2009	<0.08	<0.06	<0.03	<0.01	2.4J	<0.01	<0.09	<0.09	2.6J	<0.01	<0.01	1.5J	<0.08	<0.08	<0.01	1.8J
YC-807-3	7/7/2009	<0.07	<0.06	0.97J	<0.01	3.1J	2.4J	<0.08	<0.08	3.7J	0.63J	3.7J	1.9J	<0.07	<0.07	<0.01	2.1J
YC-007-4	7/7/2009	<0.06	<0.05	<0.02	<0.01	<0.01	<0.01	<0.07	<0.07	1.1J	<0.01	<0.01	0.53J	<0.06	<0.06	<0.01	0.56J
YC-007-5	7/7/2009	<0.06	<0.05	<0.02	<0.01	1.0J	<0.01	<0.07	<0.07	1.2J	<0.01	<0.01	0.67J	<0.06	<0.06	<0.01	<0.01
YC-008-1	7/2/2009	<0.09	<0.07	<0.04	2.3J	5.8J	11J	<0.11	<0.11	25J	9.4	<0.02	17J	<0.09	<0.09	5.7J	35J
YC-008-2	7/2/2009	45	<1.80	<0.91	160J	380J	700J	1400	<2.70	1100J	430	1000J	550J	<2.30	<2.30	560J	1300J
YC-008-3	7/2/2009	6.2J	<0.84	<0.42	51J	130J	260J	550J	<1.30	390J	170J	<0.21	190J	<1.00	<1.00	240J	500J
YC-008-4	7/2/2009	<0.11	<0.09	<0.04	3.4J	10J	15J	<0.13	<0.13	37J	12	<0.02	21J	<0.11	<0.11	<0.02	30J
YC-008-5	7/2/2009	<0.08	<0.06	<0.03	1.5J	4.6J	7.1J	<0.09	<0.09	16J	6.2	7.8J	13J	<0.08	<0.08	3.7J	13J
YC-009-1	06/25/09	<0.11	<0.09	<0.04	<0.02	<0.02	<0.02	<0.14	<0.14	3.6J	<0.02	<0.02	2.7	<0.11	<0.11	<0.02	4.4J

Table B2 - PCB Congeners Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		PCB-8	PCB-18	PCB-28	PCB-44	PCB-52	PCB-66	PCB-77	PCB-81	PCB-101	PCB-105	PCB-114	PCB-118	PCB-123	PCB-126	PCB-128	PCB-138
Analytical Method		8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082
ERM		TOTAL PCBs = 180															
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Sample ID	Sample Date																
YC-009-2	06/25/09	<0.09	<0.07	<0.03	2.7J	16J	12J	<0.10	<0.10	27J	2.4J	<0.02	10	<0.09	<0.09	1.8J	11J
YC-009-3	06/25/09	<0.07	<0.05	<0.03	<0.01	52J	27J	<0.08	<0.08	400J	<0.01	<0.01	130	<0.07	<0.07	<0.01	560J
YC-009-4	06/25/09	<0.06	<0.05	<0.02	<0.01	<0.01	<0.01	<0.07	<0.07	<0.01	<0.01	<0.01	0.29J	<0.06	<0.06	<0.01	<0.01
YC-009-5	06/25/09	<0.08	<0.06	<0.03	<0.02	4.6J	2.4J	<0.09	<0.09	5.5J	0.79J	<0.02	3.0	<0.08	<0.08	<0.02	3.9J
YC-010-1	7/9/2009	92J	<8.00	<4.00	350J	1200J	1600J	760J	1900	2700J	750J	<2.00	1300J	2400	<10.00	850J	2300J
YC-010-2	7/9/2009	1.8	<0.05	<0.03	5.9J	29J	33J	<0.08	<0.08	100J	<0.01	<0.01	27J	<0.07	<0.07	10J	120J
YC-010-3	7/9/2009	<0.06	<0.05	<0.03	<0.01	0.97J	<0.01	<0.07	<0.07	2.2J	<0.01	<0.01	0.83J	<0.06	<0.06	<0.01	2.3J
YC-810-3	7/9/2009	<0.07	<0.05	<0.03	<0.01	1.1J	<0.01	<0.08	<0.08	2.6J	<0.01	<0.01	1.1J	<0.07	<0.07	<0.01	2.2J
YC-010-4	7/9/2009	<0.06	<0.05	<0.02	<0.01	<0.01	<0.01	<0.07	<0.07	<0.01	<0.01	<0.01	<0.01	<0.06	<0.06	<0.01	<0.01
YC-011-1	06/25/09	<0.10	7.3	<0.04	2.5J	6.0J	11J	<0.12	<0.12	17J	5.5J	<0.02	14	<0.10	<0.10	3.7J	19J
YC-011-2	06/25/09	13J	<0.07	7.7J	26J	85J	110J	<0.11	<0.11	230J	37J	59	<0.02	<0.09	<0.09	21J	110J
YC-811-2	06/25/09	5.4J	40	4.4J	19J	60J	74J	<0.12	<0.12	100J	29J	<0.02	84	<0.10	<0.10	16J	72J
YC-011-3	06/25/09	<0.10	<0.08	11J	56J	220J	560J	420J	<0.11	660J	<0.02	<0.02	330J	<0.10	<0.10	<0.02	1100J
YC-011-4	06/25/09	<0.07	1.3	0.28J	1.3J	3.3J	6.5J	<0.08	<0.08	8.2J	<0.01	<0.01	5.1	<0.07	<0.07	1.6J	12J
YC-011-5	06/25/09	<0.06	<0.05	<0.03	<0.01	<0.01	<0.01	<0.07	<0.07	1.4J	<0.01	<0.01	0.82	<0.06	<0.06	<0.01	1.7J
YC-012-1	06/25/09	<0.11	<0.09	<0.04	20J	66J	73J	<0.13	<0.13	92J	45J	<0.02	14	<0.11	<0.11	24J	98J
YC-012-2	06/25/09	2.1J	12	4.9J	18J	52J	190J	<0.10	<0.10	270J	31J	<0.02	120	<0.08	<0.08	36J	510J
YC-012-3	06/25/09	<0.07	<0.06	<0.03	1.7J	5.2J	10J	<0.09	<0.09	23J	4.4J	<0.01	12	<0.07	<0.07	3.0J	21J
YC-012-4	06/25/09	<0.07	<0.05	<0.03	<0.01	<0.01	<0.01	<0.08	<0.08	2.2J	<0.01	<0.01	1.6	<0.07	<0.07	<0.01	2.6J
YC-012-5	06/25/09	<0.06	<0.05	<0.03	<0.01	<0.01	<0.01	<0.07	<0.07	<0.01	<0.01	<0.01	<0.01	<0.06	<0.06	<0.01	<0.01
YC-013-1	06/24/09	3.0J	<0.07	<0.04	7.5J	17J	30J	<0.11	<0.11	100J	13J	<0.02	38	<0.09	3.6	7.3J	56J
YC-013-2	06/24/09	12J	<0.06	<0.03	140J	380J	490J	<0.09	<0.09	610J	220J	<0.01	570	<0.08	<0.08	120J	410J
YC-013-3	06/24/09	2.5J	16	<0.02	14J	320J	100J	<0.07	<0.07	200J	15	<0.01	80	<0.06	<0.06	10J	130J
YC-013-4	06/24/09	<0.06	<0.05	<0.03	<0.01	2.4J	3.5J	<0.08	<0.08	5.0J	<0.01	<0.01	2.4	<0.06	<0.06	1.0J	9.4J
YC-813-4	6/24/2009	<0.07	<0.05	<0.03	<0.01	2.3J	<0.01	<0.08	<0.08	4.1J	<0.01	<0.01	2.0	<0.07	<0.07	0.70J	7.1J
YC-013-5	06/24/09	<0.07	<0.06	<0.03	0.81J	<0.01	0.94J	<0.08	<0.08	1.3J	0.89J	<0.01	<0.01	<0.07	<0.07	1.0J	1.5J
YC-014-1	06/25/09	<0.10	<0.08	<0.04	<0.02	3.2J	5.6J	<0.13	<0.13	10J	2.7J	<0.02	7.7	<0.10	<0.10	2.1J	12J
YC-014-2	06/25/09	2.9J	20	64J	15	170J	120J	<0.11	<0.11	250J	22J	<0.02	96	<0.09	<0.09	19J	270J
YC-014-3	06/25/09	<0.07	<0.06	<0.03	1.9J	13J	14J	<0.09	<0.09	25J	3.6J	<0.01	12	<0.07	<0.07	3.2J	36J
YC-014-4	06/25/09	<0.07	<0.05	<0.03	<0.01	3.0J	1.9J	<0.08	<0.08	3.4J	<0.01	<0.01	1.4	<0.07	<0.07	<0.01	2.6J
YC-814-4	6/25/2009	<0.07	<0.05	<0.03	<0.01	2.5J	1.7J	<0.08	<0.08	3.7J	<0.01	<0.01	1.6	<0.07	<0.07	<0.01	3.1J
YC-014-5	06/25/09	<0.07	<0.06	<0.03	<0.01	<0.01	<0.01	<0.08	<0.08	<0.01	<0.01	<0.01	<0.01	<0.07	<0.07	<0.01	<0.01
YC-015-1	7/7/2009	59	<0.07	<0.04	84J	270J	310J	<0.10	<0.10	930J	150	<0.02	290J	<0.09	<0.09	55J	490J
YC-015-2	7/7/2009	<4.40	<3.50	<1.80	1500J	3800J	4600J	<5.30	<5.30	6400J	1700	<0.88	4000J	<4.40	<4.40	1000J	3600J
YC-015-3	7/7/2009	<0.07	<0.05	<0.03	78J	430J	240J	<0.08	<0.08	340J	88	<0.01	200J	<0.07	<0.07	60J	210J
YC-015-4	7/7/2009	<0.06	<0.05	<0.03	2.1J	5.3J	6.0J	1.1	<0.08	8.2J	2.3	<0.01	5.3J	<0.06	<0.06	1.4J	4.7J
YC-015-5	7/7/2009	<0.09	<0.07	<0.04	<0.02	3.3J	4.1J	<0.10	<0.10	5.3J	1.4	<0.02	3.5J	<0.09	<0.09	<0.02	3.0J
YC-016-1	07/01/09	<0.08	<0.06	<0.03	19J	24J	52J	36	<0.09	110J	34J	24	31J	<0.08	<0.08	44	130J
YC-016-2	07/01/09	<0.08	<0.06	<0.03	<0.02	<0.02	260J	110	<0.10	380J	120J	<0.02	240J	<0.08	<0.08	65J	340J
YC-016-3	07/01/09	<0.07	0.94J	<0.03	1.3J	3.9J	8.7J	<0.09	<0.09	15J	1.6J	<0.01	6.6	<0.07	<0.07	1.4J	18J
YC-017-1	6/23/2009	7.5	20	8.2	3.3J	9.0J	4.4J	<0.12	<0.12	21J	5.2J	<0.02	13J	<0.10	<0.10	4.0J	23J
YC-817-1	6/23/2009	3.5	12	4.6	2.0J	6.0J	8.5J	<0.12	<0.12	14J	3.4J	<0.02	8.5J	<0.10	<0.10	2.8J	16J
YC-017-2	6/23/2009	<0.09	<0.07	12	6.7J	38J	22J	<0.11	<0.11	40J	7.7J	<0.02	20J	<0.09	<0.09	4.9J	25J
YC-017-3	6/23/2009	<0.08	<0.07	<0.03	3.9J	14J	21J	<0.10	<0.10	36J	24J	<0.02	9.4J	<0.08	<0.08	6.8J	47J
YC-017-4	6/23/2009	<0.07	<0.06	<0.03	<0.01	<0.01	<0.01	<0.09	<0.09	2.7J	<0.01	<0.01	0.96J	<0.07	<0.07	<0.01	4.0J
YC-017-5	6/23/2009	<0.07	<0.05	<0.03	<0.01	<0.01	<0.01	<0.08	<0.08	<0.01	<0.01	<0.01	<0.01	<0.07	<0.07	<0.01	<0.01
YC-018-1	6/23/2009	<0.09	<0.07	5.0	8.4J	26J	27J	<0.10	<0.10	40J	5.9J	<0.02	20J	<0.09	<0.09	3.5J	17J
YC-018-2	6/23/2009	24	18	33	210J	470J	680J	<0.11	<0.11	770J	300J	<0.02	730J	<0.09	<0.09	150J	600J
YC-018-3	6/23/2009	18	100	15	60J	250J	380J	<0.11	<0.11	430J	100J	<0.02	280J	<0.09	<0.09	55J	430J
YC-018-4	6/23/2009	<0.09	8.1	3.6	14J	38J	26J	<0.10	<0.10	160J	22J	<0.02	38J	<0.09	<0.09	19J	200J
YC-818-4	6/23/2009	<0.09	<0.07	3.3	13J	35J	96J	<0.10	<0.10	120J	21J	<0.02	35J	<0.09	<0.09	18J	160J
YC-018-5	6/23/2009	<0.08	<0.06	<0.03	2.3J	7.7J	12J	<0.09	<0.09	19J	7.8J	<0.01	<0.01	<0.08	<0.08	<0.01	100J
YC-019-1	6/22/2009	<0.09	<0.07	<0.04	3.8J	9.1J	16J	<0.11	<0.11	26J	6.7J	<0.02	15J	<0.09	<0.09	4.5J	23J
YC-019-2	6/22/2009	3.0	30	<0.04	21J	160J	95J	<0.11	<0.11	160J	30J	<0.02	83J	<0.09	<0.09	16J	110J

Table B2 - PCB Congeners Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		PCB-8	PCB-18	PCB-28	PCB-44	PCB-52	PCB-66	PCB-77	PCB-81	PCB-101	PCB-105	PCB-114	PCB-118	PCB-123	PCB-126	PCB-128	PCB-138
Analytical Method		8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082
ERM		TOTAL PCBs = 180															
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Sample ID	Sample Date																
YC-019-3	6/22/2009	<0.08	<0.07	<0.03	2.8J	27J	16J	<0.10	<0.10	23J	7.4J	<0.02	12J	<0.08	<0.08	3.1J	27J
YC-019-4	6/22/2009	<0.08	<0.06	<0.03	<0.02	5.3J	<0.02	<0.10	<0.10	5.1J	<0.02	<0.02	1.9J	<0.08	<0.08	<0.02	3.5J
YC-019-5	6/22/2009	<0.08	<0.06	<0.03	<0.02	<0.02	<0.02	<0.09	<0.09	<0.02	<0.02	<0.02	0.36J	<0.08	<0.08	<0.02	<0.02
YC-020-1	6/22/2009	<0.10	<0.08	<0.04	<0.02	2.1J	<0.02	<0.12	<0.12	6.4J	2.6J	<0.02	4.0J	<0.10	<0.10	1.3J	7.7J
YC-820-1	6/22/2009	<0.10	<0.08	<0.04	<0.02	2.7J	4.9J	<0.12	<0.12	7.5J	1.9J	<0.02	5.1J	<0.10	<0.10	1.6J	9.6J
YC-020-2	6/22/2009	1.3	<0.06	2.0	4.1J	9.1J	16J	<0.09	<0.09	25J	8.1J	<0.01	15J	<0.07	<0.07	4.0J	22J
YC-020-3	6/22/2009	4.0	39	32	23J	100J	64J	<0.11	<0.11	68J	22J	<0.02	50J	<0.09	<0.09	9.1J	57J
YC-020-4	6/22/2009	<0.09	<0.07	<0.04	3.4J	7.8J	<0.02	<0.10	<0.10	23J	<0.02	<0.02	<0.02	<0.09	<0.09	4.1J	<0.02
YC-020-5	6/22/2009	<0.07	<0.05	<0.03	1.7J	5.4J	<0.01	<0.08	<0.08	8.9J	2.7J	<0.01	<0.01	<0.07	<0.07	1.4J	12J
YC-021-1	6/22/2009	<0.08	<0.06	<0.03	<0.02	3.5J	5.0J	<0.09	<0.09	7.8J	1.8J	<0.02	4.7J	<0.08	<0.08	1.4J	8.3J
YC-021-2	6/22/2009	2.9	<0.06	<0.03	14	41J	58J	<0.09	<0.09	60J	22J	<0.01	51J	<0.07	<0.07	11J	67J
YC-021-3	6/22/2009	<0.10	<0.08	3.8	18J	50J	93J	<0.12	<0.12	140J	43J	<0.02	77J	<0.10	<0.10	17J	140J
YC-021-4	6/22/2009	<0.09	<0.07	<0.04	6.4J	18J	40J	<0.11	<0.11	60J	14J	<0.02	39J	<0.09	<0.09	42J	140J
YC-021-5	6/22/2009	<0.10	<0.08	<0.04	2.3J	7.5J	13J	<0.12	<0.12	30J	8.1J	<0.02	20J	<0.10	<0.10	5.2J	22J
YC-022-1	6/22/2009	<0.08	<0.06	<0.03	<0.02	1.9J	3.4J	<0.09	<0.09	5.3J	1.3J	<0.02	3.3J	<0.08	<0.08	1.0J	6.1J
YC-022-2	6/22/2009	<0.07	<0.05	<0.03	2.3J	8.7J	6.9J	<0.08	<0.08	9.8J	2.0J	<0.01	6.2J	<0.07	<0.07	1.5J	7.5J
YC-022-3	6/22/2009	<0.09	<0.07	<0.04	1.7J	5.3J	9.2J	<0.11	<0.11	11J	2.5J	<0.02	7.0J	<0.09	<0.09	2.1J	13J
YC-022-4	6/22/2009	<0.08	<0.06	1.0	6.9J	19J	38J	<0.10	<0.10	68J	24J	<0.02	34J	<0.08	<0.08	9.5J	91J
YC-022-5	6/22/2009	<0.08	<0.06	<0.03	<0.01	25J	12J	<0.09	<0.09	80J	21J	<0.01	32J	<0.08	<0.08	8.6J	54J
YC-023-1	6/18/2009	0.84	<0.06	0.95J	2.0J	5.8J	10J	<0.09	<0.09	21	<0.01	<0.01	9.7	<0.07	<0.07	2.8	23J
YC-023-2	6/18/2009	5.5	26	8.6J	35J	56J	110J	<0.13	<0.13	120	57	<0.02	91	<0.11	<0.11	26	98J
YC-023-3	6/18/2009	<0.10	<0.08	<0.04	2.6J	6.8J	9.6J	<0.12	<0.12	14	4.4	10	9.8	<0.10	<0.10	2.8	13J
YC-023-4	6/18/2009	<0.07	<0.06	<0.03	<0.01	<0.01	<0.01	<0.09	<0.09	0.24J	<0.01	<0.01	<0.01	<0.07	<0.07	<0.01	0.26J
YC-023-5	6/18/2009	<0.09	<0.07	<0.03	<0.02	<0.02	<0.02	<0.10	<0.10	<0.02	<0.02	<0.02	<0.02	<0.09	<0.09	<0.02	<0.02
YC-823-5	6/18/2009	<0.08	<0.07	<0.03	<0.02	<0.02	<0.02	<0.10	<0.10	<0.02	<0.02	<0.02	<0.02	<0.08	<0.08	<0.02	<0.02
YC-024-1	6/22/2009	2.9	17	4.6	6.0J	16J	33J	<0.10	<0.10	48J	9.6J	<0.02	13J	<0.09	<0.09	7.7J	65J
YC-024-2	6/22/2009	<0.08	<0.06	3.4	7.9J	33J	38J	<0.09	<0.09	56J	12J	<0.02	16J	<0.08	<0.08	9.0J	57J
YC-024-3	6/22/2009	<0.10	<0.08	<0.04	5.4J	13J	21J	<0.12	<0.12	24J	7.5J	<0.02	20J	<0.10	<0.10	4.7J	29J
YC-824-3	6/22/2009	<0.10	<0.08	1.6	11J	27J	43J	<0.11	<0.11	51J	17J	<0.02	46J	<0.10	<0.10	10J	53J
YC-024-4	6/22/2009	<0.10	<0.08	<0.04	<0.02	2.6J	2.8J	<0.12	<0.12	5.0J	1.2J	<0.02	<0.02	<0.10	<0.10	0.83J	4.0J
YC-024-5	6/22/2009	<0.09	<0.07	<0.04	<0.02	<0.02	<0.02	<0.11	<0.11	1.9J	<0.02	<0.02	<0.02	<0.09	<0.09	<0.02	1.9J
YC-025-1	6/18/2009	3.4	22	9.1J	9.1J	38J	41J	<0.09	<0.09	55	20	<0.01	25	<0.08	<0.08	7.1	46J
YC-025-2	6/18/2009	5.9	39	28J	19J	140J	92J	<0.10	<0.10	140	21	<0.02	72	<0.08	<0.08	15	97J
YC-025-3	6/18/2009	1.6	8.2	4.6J	16J	42J	58J	<0.12	<0.12	63	20	<0.02	45	<0.10	<0.10	12	72J
YC-825-3	6/18/2009	1.4	7.5	2.6J	13J	32J	45J	<0.11	<0.11	53	17	34	38	<0.09	<0.09	11	49
YC-025-4	6/18/2009	<0.10	<0.08	<0.04	1.0J	3.5J	4.4J	<0.11	<0.11	5.6	1.2	<0.02	3.9	<0.10	<0.10	1.1	4.7J
YC-025-5	6/18/2009	<0.09	<0.07	<0.04	0.25J	0.75J	<0.02	<0.11	<0.11	0.99	<0.02	<0.02	0.67J	<0.09	<0.09	<0.02	2.7J
YC-026-1	6/18/2009	11	<0.07	19J	17J	62J	83J	<0.10	<0.10	120	28	<0.02	86	<0.08	<0.08	17	91J
YC-026-2	6/18/2009	<0.10	<0.08	3.1J	13J	34J	57J	<0.12	<0.12	66	21	53	55	<0.10	<0.10	12	75J
YC-026-3	6/18/2009	<0.11	<0.09	<0.04	1.7J	4.6J	4.4J	<0.13	<0.13	6.2	2.1	3.2	4.2	<0.11	<0.11	0.81J	4.1J
YC-026-4	6/18/2009	<0.11	<0.09	<0.04	<0.02	5.6J	5.6J	<0.13	<0.13	7.3	1.4	<0.02	4.8	<0.11	<0.11	1.1	5.9J
YC-026-5	6/18/2009	<0.09	<0.07	<0.03	<0.02	<0.02	<0.02	<0.10	<0.10	1.1	<0.02	<0.02	0.67J	0.91J	<0.09	<0.02	0.92J
YC-027-1	6/18/2009	15	<0.06	15J	20J	130J	<0.02	<0.09	<0.09	280	26	<0.02	<0.02	<0.08	<0.08	18	170J
YC-027-2	6/18/2009	<0.10	8.7	11J	10J	43J	49J	<0.12	<0.12	62	18	<0.02	42	43J	<0.10	20	46J
YC-027-3	6/18/2009	<0.10	<0.08	<0.04	0.81J	3.1J	<0.02	<0.12	<0.12	5.4	0.78J	3.5	2.9	<0.10	<0.10	<0.02	4.5J
YC-027-4	6/18/2009	<0.09	<0.07	<0.04	<0.02	<0.02	<0.02	<0.10	<0.10	<0.02	<0.02	<0.02	<0.02	<0.09	<0.09	<0.02	<0.02
YC-027-5	6/18/2009	<0.09	<0.07	<0.04	<0.02	<0.02	<0.02	<0.10	<0.10	<0.02	<0.02	<0.02	<0.02	<0.09	<0.09	<0.02	<0.02
YC-028-1	6/17/2009	<0.09	<0.07	1.6J	<0.02	6.6J	13J	<0.10	<0.10	20J	9.1J	<0.02	11J	<0.09	<0.09	3.7J	29J
YC-028-2	6/17/2009	6.4	<0.08	9.2J	25J	59J	120J	<0.11	<0.11	160	44	6.1	130	<0.10	<0.10	27	140J
YC-028-3	6/17/2009	<0.10	<0.08	<0.04	5.8J	13J	20J	<0.12	<0.12	35	7.6	14	20	<0.10	<0.10	4.2	23J
YC-028-4	6/17/2009	<0.10	<0.08	<0.04	0.88J	2.7J	3.5J	<0.12	<0.12	5.4	<0.02	<0.02	3.4	<0.10	<0.10	<0.02	5.0J
YC-028-5	6/17/2009	<0.09	<0.07	<0.04	<0.02	<0.02	<0.02	<0.11	<0.11	1.8	<0.02	<0.02	1.2	<0.09	<0.09	<0.02	1.8J
YC-029-1	7/6/2009	2.8	<0.08	<0.04	4.2J	8.7J	18J	53	<0.12	32J	<0.02	<0.02	16J	<0.10	<0.10	<0.02	48J
YC-029-2	7/6/2009	<0.10	<0.08	<0.04	22J	51J	97J	61	<0.12	230J	81	<0.02	93J	<0.10	<0.10	<0.02	290J

Table B2 - PCB Congeners Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		PCB-8	PCB-18	PCB-28	PCB-44	PCB-52	PCB-66	PCB-77	PCB-81	PCB-101	PCB-105	PCB-114	PCB-118	PCB-123	PCB-126	PCB-128	PCB-138
Analytical Method		8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082	8082
ERM		TOTAL PCBs = 180															
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Sample ID	Sample Date																
YC-029-3	7/6/2009	<1.10	<0.88	55	130	330J	480J	<1.30	<1.30	800J	230	<0.22	480J	<1.10	<1.10	240J	650J
YC-829-3	7/6/2009	<1.10	<0.87	<0.44	150J	370J	550J	<1.30	<1.30	870J	260	<0.22	530J	<1.10	<1.10	250J	720J
YC-029-4	7/6/2009	<1.10	<0.88	<0.44	61J	150J	270J	<1.30	<1.30	450J	130	<0.22	240J	<1.10	<1.10	180J	400J
YC-029-5	7/6/2009	<0.08	<0.06	1.3	3.3J	8.3J	<0.02	<0.09	<0.09	23J	6.8	<0.02	13J	<0.08	<0.08	7.9J	21J
YC-030-1	7/6/2009	<0.10	28	9.9	12J	21J	31J	18	34	51J	18	37J	22J	44	22	26J	60J
YC-030-2	7/6/2009	<0.39	<0.31	<0.16	59J	140J	200J	<0.47	<0.47	330J	95	<0.08	210J	<0.39	<0.39	93J	270J
YC-030-3	7/6/2009	<3.80	<3.00	<1.50	330J	830J	1100J	1400J	<4.50	1700J	460J	<0.76	1000J	<3.80	<3.80	470J	1400J
YC-030-4	7/6/2009	15	<0.35	<0.17	33J	90J	130J	<0.52	<0.52	220J	65	<0.09	120J	<0.44	<0.44	71J	200J
YC-030-5	7/6/2009	<0.09	<0.07	<0.04	1.7J	4.8J	6.1J	<0.11	<0.11	8.3J	2.6	<0.02	5.9J	<0.09	<0.09	2.4J	7.4J
YC-031-1	7/7/2009	<0.08	<0.07	<0.03	17J	100J	61J	<0.10	<0.10	140J	35	<0.02	57J	<0.08	<0.08	42J	120J
YC-031-2	7/7/2009	<0.10	<0.08	190J	250J	670J	650J	<0.11	<0.11	1000J	320	<0.02	540J	<0.10	<0.10	340J	850J
YC-031-3	7/7/2009	<0.07	<0.06	<0.03	17J	390J	64J	<0.09	<0.09	200J	<0.01	240J	69J	<0.07	<0.07	<0.01	400J
YC-831-3	7/7/2009	<0.07	<0.06	<0.03	14J	510J	42J	<0.09	<0.09	200J	<0.01	330J	54J	<0.07	<0.07	<0.01	89J
YC-031-4	7/7/2009	<0.07	<0.06	<0.03	<0.01	12J	3.3J	<0.09	<0.09	8.8J	<0.01	6.2J	3.0J	4.1	<0.07	<0.01	<0.01
YC-031-5	7/7/2009	<0.07	<0.05	<0.03	<0.01	3.1J	<0.01	<0.08	<0.08	1.1J	<0.01	1.5J	<0.01	<0.07	<0.07	<0.01	<0.01
YC-032-1	7/7/2009	<0.10	<0.08	<0.04	430J	920J	1200J	<0.12	<0.12	1900J	590	<0.02	1200J	<0.10	<0.10	400J	1300J
YC-032-2	7/7/2009	<10.00	<8.00	<4.00	560J	1300J	490J	<12.00	<12.00	3200J	1300	<2.00	1700J	<10.00	<10.00	570J	3600J
YC-032-3	7/7/2009	2.5	<0.05	<0.03	12J	29J	39J	13	<0.08	63J	22	<0.01	39J	<0.06	<0.06	15J	52J
YC-032-4	7/7/2009	<0.06	<0.05	<0.03	1.3J	5.2J	4.0J	0.90	<0.07	6.6J	1.8	<0.01	4.3J	<0.06	<0.06	1.3J	4.9J
YC-032-5	7/7/2009	<0.07	<0.05	<0.03	<0.01	<0.01	<0.01	<0.08	<0.08	<0.01	<0.01	<0.01	<0.01	<0.07	<0.07	<0.01	<0.01
YC-033-1	7/8/2009	<0.09	<0.09	1.5	2.3J	6.0J	10J	23J	<0.10	18J	6.5J	14J	9.1J	<0.09	<0.09	8.8J	21J
YC-833-1	7/8/2009	1.7	<0.07	<0.04	3.9J	9.9J	26J	29J	35	44J	26J	28J	27J	41	<0.09	35J	48J
YC-033-2	7/8/2009	6.7	29	15	18J	58J	47J	73J	<0.10	75J	20J	46J	41J	45	<0.08	20J	58J
YC-033-3	7/8/2009	1.9	<0.07	<0.04	11J	49J	42J	47J	<0.11	63J	14J	33J	34J	35	<0.09	16J	44J
YC-033-4	7/8/2009	3.2J	<1.50	<0.75	16J	45J	66J	<2.20	<2.20	85J	32J	57J	50J	<1.90	<1.90	36J	90J
YC-033-5	7/8/2009	<0.09	<0.07	1.1	<0.02	0.86J	<0.02	<0.11	<0.11	<0.02	<0.02	<0.02	<0.02	<0.09	<0.09	<0.02	1.3J
YC-034-1	7/8/2009	<0.09	<0.07	<0.04	2.1J	4.9J	9.0J	21J	<0.11	15J	6.4J	12J	6.9J	<0.09	<0.09	8.7J	19J
YC-034-2	7/8/2009	11J	<1.20	<0.61	49J	240J	150J	190J	<1.80	210J	46J	<0.30	110J	<1.50	<1.50	43J	140J
YC-034-3	7/8/2009	<10.00	41J	490	38J	1100J	240J	610J	<12.00	630J	19J	850J	180J	<10.00	140	180J	420J
YC-034-4	7/8/2009	1.7	<0.07	<0.04	1.1J	23J	5.7J	<0.11	<0.11	14J	2.1J	12J	4.7J	<0.09	<0.09	2.9J	96J
YC-034-5	7/8/2009	<0.08	<0.07	<0.03	<0.02	<0.02	<0.02	<0.10	<0.10	<0.02	<0.02	<0.02	<0.02	<0.08	<0.08	<0.02	<0.02
YC-035-1	7/8/2009	2.4	<0.07	<0.03	2.8J	6.6J	9.0J	5.9J	<0.10	17J	6.1J	11J	8.2J	<0.09	<0.09	8.1J	19J
YC-035-2	7/8/2009	17	110	60	86J	180J	190J	76	<2.40	290J	87J	100J	170J	<2.00	<2.00	60J	250J
YC-035-3	7/8/2009	20J	110J	300J	250J	1300J	1100J	<8.50	<8.50	1900J	510J	2200J	800J	<7.10	<7.10	410J	1300J
YC-035-4	7/8/2009	2.0	<0.06	18	23J	180J	140J	<0.09	<0.09	210J	54J	<0.01	90J	<0.08	<0.08	17J	240J
YC-035-5	7/8/2009	<0.07	<0.06	<0.03	1.6J	11J	5.4J	<0.09	<0.09	7.9J	1.4J	9.0J	3.3J	<0.07	<0.07	<0.01	6.0J
YC-036-1	7/9/2009	<3.80	<3.10	59J	310J	740J	880J	260J	1500J	1300J	4.5J	480J	890J	<3.80	<3.80	270J	1000J
YC-036-2	7/9/2009	30J	130	32J	250J	610J	1100J	<9.80	<9.80	1500J	640J	1000J	780J	<8.20	<8.20	780J	1800J
YC-036-3	7/9/2009	<0.07	<0.05	<0.03	8.1J	23J	33J	20J	<0.08	110J	27J	53J	40J	<0.07	<0.07	25J	110J
YC-836-3	7/9/2009	4.2	<0.06	<0.03	15J	39J	99J	36J	<0.08	190J	54J	20J	100J	<0.07	<0.07	19J	220J
YC-036-4	7/9/2009	<0.06	<0.05	<0.03	0.72J	1.8J	2.4J	<0.07	<0.07	4.0J	1.2J	<0.01	2.5J	<0.06	<0.06	0.93J	3.2J

Notes:
PCBs = Polychlorinated Biphenyls
ug/kg = micrograms per kilogram
ERM = National Oceanic and Atmospheric Administration (NOAA) effects range median (ERM) levels for marine sediment (Buchman 2008, Screening Quick Reference Tables [SQuiRTs])
J = Data validation qualifier indicating concentration is estimated.
<X = not detected above method detection limit of X
Concentrations exceeding ERMs are shaded and bold.
Total PCB concentration is a sum of detected congener concentrations and does not include non-detects.

Table B2 - PCB Congeners Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		PCB-153	PCB-156	PCB-157	PCB-167	PCB-169	PCB-170	PCB-180	PCB-187	PCB-189	PCB-195	PCB-206	PCB-209	Total PCBs
Analytical Method		8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082
ERM		TOTAL PCBs = 180												
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Sample ID	Sample Date													
YC-001-1	7/1/2009	1.8J	<0.07	2.1	<0.07	2.0J	2.0	2.0	1.7	0.47J	<0.01	1.8	<0.01	17.2J
YC-001-2	7/1/2009	<0.01	<0.06	<0.06	<0.06	<0.08	<0.01	<0.01	<0.01	<0.06	<0.01	<0.01	<0.01	<0.08
YC-001-3	7/1/2009	<0.02	<0.10	1.1	<0.10	<0.11	<0.02	1.1	<0.02	<0.10	<0.02	<0.02	<0.02	4.04J
YC-001-4	7/1/2009	6.4J	8.6	<0.11	<0.11	2.0J	5.9	9.2	5.6	1.2	1.2	0.8J	<0.02	100J
YC-002-1	7/1/2009	9.9J	3.9	<0.12	<0.12	<0.14	2.6	4.1	4.8	<0.12	<0.02	<0.02	<0.02	54.2J
YC-002-2	7/1/2009	900J	<0.09	<0.09	35	170J	510	840	440	10.0	37	16	4.0	**6865J**
YC-002-3	7/1/2009	16J	14	<0.07	1.5	14J	8.5	15	6.7	<0.07	<0.01	<0.01	<0.01	167J
YC-802-3	7/1/2009	16J	14	<0.07	<0.07	7.1J	8.2	14	6.2	<0.07	1.2	0.77	<0.01	145J
YC-002-4	7/1/2009	3.7J	<0.08	<0.08	<0.08	<0.09	1.6	3.1	1.8	<0.08	<0.02	<0.02	<0.02	19.5J
YC-002-5	7/1/2009	<0.01	<0.07	<0.07	<0.07	<0.09	<0.01	<0.01	<0.01	<0.07	<0.01	<0.01	<0.01	<0.09
YC-003-1	6/29/2009	260J	<0.08	<0.08	<0.08	34J	130J	210J	110J	4.3	19	8.3	2.6	**1648J**
YC-003-2	6/29/2009	12J	<0.10	14	<0.10	2.1J	6.9	13	6.1	<0.10	<0.02	<0.02	<0.02	94.4J
YC-803-2	6/29/2009	15J	13	15	1.3	<0.12	8.1	14	6.6	<0.10	1.2	0.70J	<0.02	151J
YC-003-3	6/29/2009	<0.01	0.47J	0.53J	<0.08	<0.09	<0.01	0.50J	<0.01	<0.08	<0.01	<0.01	<0.01	1.96J
YC-003-4	6/29/2009	<0.01	<0.06	<0.06	<0.06	<0.08	<0.01	<0.01	<0.01	<0.06	<0.01	<0.01	<0.01	<0.08
YC-003-5	6/29/2009	<0.02	<0.09	<0.09	<0.09	<0.11	<0.02	<0.02	<0.02	<0.09	<0.02	<0.02	<0.02	<0.11
YC-004-1	7/2/2009	41J	<0.13	25J	<0.13	<0.16	18J	25J	16J	<0.13	3.0J	<0.03	<0.03	**279J**
YC-004-2	7/2/2009	930J	140J	730J	<0.11	170J	440J	740J	350J	37J	70J	23J	13	**6607J**
YC-004-3	7/2/2009	5.2J	<0.07	<0.07	<0.07	<0.08	3.1J	3.4J	2.6J	<0.07	<0.01	<0.01	<0.01	28.1J
YC-005-1	7/7/2009	440J	<0.73	280J	<0.73	<0.88	170J	280J	150J	<0.73	27J	15J	17J	**4176J**
YC-005-2	7/7/2009	1200J	<1.60	850J	<1.60	<1.90	530J	860J	390J	<1.60	82J	40J	<0.32	**12162J**
YC-805-2	7/7/2009	950J	<1.60	570J	<1.60	<1.90	370J	580J	260J	<1.60	58J	<0.31	20J	**9157J**
YC-005-3	7/7/2009	26J	<0.06	19J	<0.06	<0.08	15J	19J	8.7J	<0.06	<0.01	<0.01	<0.01	**244J**
YC-005-4	7/7/2009	<0.01	<0.07	<0.07	<0.07	<0.09	<0.01	<0.01	<0.01	<0.07	<0.01	<0.01	<0.01	1.98J
YC-005-5	7/7/2009	<0.02	<0.08	<0.08	<0.08	<0.10	<0.02	<0.02	<0.02	<0.08	<0.02	<0.02	<0.02	<0.10
YC-006-1	06/24/09	16J	1.7J	<0.12	<0.12	<0.14	7.8J	12J	8.2J	<0.12	1.2J	<0.02	<0.02	101J
YC-006-2	06/24/09	310J	<0.10	<0.10	<0.10	<0.11	170J	280J	150J	<0.10	23J	11J	4.7	**1755J**
YC-006-3	06/24/09	18J	1.8J	<0.07	<0.07	<0.08	8.5J	15J	8.4J	<0.07	1.2J	<0.01	<0.01	117J
YC-006-4	06/24/09	13J	1.2J	<0.06	<0.06	<0.08	6.0J	10J	6.0J	<0.06	0.92J	<0.01	<0.01	75.6J
YC-006-5	06/24/09	1.9J	<0.06	<0.06	<0.06	<0.07	0.98J	1.6J	0.92J	<0.06	0.16J	<0.01	<0.01	8.16J
YC-007-1	7/7/2009	1100J	<10.0	390J	<10.0	<13.0	270J	400J	350J	<10.0	47J	22J	<2.10	**8119J**
YC-007-2	7/7/2009	88J	<1.30	29J	<1.30	<1.60	17J	29J	33J	<1.30	<0.27	<0.27	<0.27	**404J**
YC-007-3	7/7/2009	3.4J	<0.08	1.4J	<0.08	<0.09	<0.01	1.4J	1.3J	<0.08	<0.01	<0.01	<0.01	15.8J
YC-807-3	7/7/2009	4.5J	<0.07	<0.07	<0.07	<0.08	<0.01	1.6J	1.5J	<0.07	<0.01	<0.01	<0.01	26.1J
YC-007-4	7/7/2009	<0.01	<0.06	<0.06	<0.06	<0.07	<0.01	<0.01	<0.01	<0.06	<0.01	<0.01	<0.01	2.19J
YC-007-5	7/7/2009	<0.01	<0.06	<0.06	<0.06	<0.07	<0.01	<0.01	<0.01	<0.06	<0.01	<0.01	<0.01	2.87J
YC-008-1	7/2/2009	34J	<0.09	<0.09	<0.09	<0.11	15J	23J	15J	<0.09	2.7J	1.9J	2.3J	**205J**
YC-008-2	7/2/2009	1400J	<2.30	1200J	<2.30	<2.70	710J	1200J	570J	<2.30	110J	50J	<0.46	**12865J**
YC-008-3	7/2/2009	540J	94J	490J	<1.00	<1.30	300J	490J	230J	<1.00	49J	22J	<0.21	**4702J**
YC-008-4	7/2/2009	29J	<0.11	24J	<0.11	<0.13	15J	24J	12J	<0.11	4.1J	3.2J	3.8J	**244J**
YC-008-5	7/2/2009	11J	<0.08	<0.08	<0.08	<0.09	3.8J	6.3J	2.7J	<0.08	<0.02	<0.02	2.1J	98.8J
YC-009-1	06/25/09	5.5J	0.56J	<0.11	<0.11	<0.14	2.4J	3.8J	2.8	<0.11	<0.02	<0.02	<0.02	25.8J

Table B2 - PCB Congeners Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		PCB-153	PCB-156	PCB-157	PCB-167	PCB-169	PCB-170	PCB-180	PCB-187	PCB-189	PCB-195	PCB-206	PCB-209	Total PCBs
Analytical Method		8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082
ERM		TOTAL PCBs = 180												
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Sample ID	Sample Date													
YC-009-2	06/25/09	34J	1.2J	<0.09	<0.09	<0.10	6.8J	11J	22J	<0.09	1.3J	1.5J	<0.02	161J
YC-009-3	06/25/09	1900J	<0.07	<0.07	<0.07	<0.08	47J	100J	680J	<0.07	8.3J	21J	<0.01	**3925J**
YC-009-4	06/25/09	<0.01	<0.06	<0.06	<0.06	<0.07	<0.01	0.49J	0.42J	<0.06	<0.01	<0.01	<0.01	1.20J
YC-009-5	06/25/09	11J	0.46J	<0.08	<0.08	<0.09	2.3J	3.6J	4.5J	<0.08	0.37J	<0.02	<0.02	42.4J
YC-010-1	7/9/2009	3900J	<10.00	1800J	<10.00	<12.00	1100J	1700J	1400J	<10.00	340J	160J	100	**26702J**
YC-010-2	7/9/2009	190J	12J	120J	<0.07	<0.08	54J	120J	46J	3.7	6.9J	4.0J	2.2	**886J**
YC-010-3	7/9/2009	4.0J	<0.06	<0.06	<0.06	<0.07	1.3J	2.3J	1.5J	<0.06	<0.01	<0.01	<0.01	15.4J
YC-810-3	7/9/2009	3.9J	<0.07	1.9J	<0.07	<0.08	1.3J	2.0J	1.3J	<0.07	<0.01	<0.01	<0.01	17.4J
YC-010-4	7/9/2009	<0.01	<0.06	<0.06	<0.06	<0.07	<0.01	<0.01	<0.01	<0.06	<0.01	<0.01	<0.01	<0.07
YC-011-1	06/25/09	21J	<0.10	15J	<0.10	3.7	9.1J	15J	9.7J	<0.10	1.6J	1.1J	<0.02	162J
YC-011-2	06/25/09	120J	15J	55J	<0.09	11	34J	52J	29J	<0.09	4.9J	3.9J	3.3	**1027J**
YC-811-2	6/25/2009	72J	10J	<0.10	<0.10	<0.12	25J	42J	22J	<0.10	3.8J	3.0J	3.5	**685J**
YC-011-3	06/25/09	1500J	<0.10	<0.10	<0.10	280	840J	<0.02	760J	23	130J	44J	5.8	**6940J**
YC-011-4	06/25/09	17J	<0.07	<0.07	<0.07	2.7	9.0J	<0.01	7.3J	<0.07	1.3J	<0.01	<0.01	76.9J
YC-011-5	06/25/09	2.1J	<0.06	<0.06	<0.06	<0.07	1.1J	1.7J	1.1J	<0.06	<0.01	<0.01	<0.01	9.92J
YC-012-1	06/25/09	81J	15J	<0.11	<0.11	<0.13	27J	45J	21J	<0.11	3.7J	3.1J	2.7	**631J**
YC-012-2	06/25/09	560J	56J	<0.08	<0.08	<0.10	310J	510J	300J	<0.08	40J	16J	2.4J	**3040J**
YC-012-3	06/25/09	24J	<0.07	<0.07	<0.07	<0.09	11J	21J	10J	<0.07	2.5J	1.2J	0.86	151J
YC-012-4	06/25/09	3.4J	<0.07	<0.07	<0.07	<0.08	1.5J	2.7J	1.4J	<0.07	0.20J	<0.01	<0.01	15.6J
YC-012-5	06/25/09	<0.01	<0.06	<0.06	<0.06	<0.07	<0.01	<0.01	<0.01	<0.06	<0.01	<0.01	<0.01	<0.07
YC-013-1	06/24/09	45J	<0.09	<0.09	<0.09	<0.11	20J	34J	17J	<0.09	3.3J	2.8J	4.6	**402J**
YC-013-2	06/24/09	550J	53J	<0.08	<0.08	<0.09	110J	160J	170J	<0.08	9.5J	7.5J	5.9	**4018J**
YC-013-3	06/24/09	540J	<0.06	<0.06	<0.06	<0.07	88J	130J	270J	<0.06	12J	10J	3.6	**1941J**
YC-013-4	06/24/09	12J	<0.06	<0.06	<0.06	<0.08	6.1J	11J	5.5J	<0.06	0.82J	0.88J	<0.01	60J
YC-813-4	6/24/2009	10J	0.70J	<0.07	<0.07	<0.08	4.8J	9.0J	4.7J	<0.07	0.66J	<0.01	<0.01	46.1J
YC-013-5	06/24/09	1.8J	1.1J	<0.07	<0.07	<0.08	1.3J	1.1J	1.6J	<0.07	1.0J	1.8J	3.2	19.3J
YC-014-1	06/25/09	16J	1.4J	<0.10	<0.10	<0.13	7.6J	12J	8.2J	<0.10	1.1J	1.1J	<0.02	90.7J
YC-014-2	06/25/09	600J	19J	<0.09	<0.09	<0.11	150J	260J	300J	<0.09	24J	14J	2.8	**2419J**
YC-014-3	06/25/09	46J	<0.07	<0.07	<0.07	<0.09	16J	30J	18J	<0.07	2.4J	1.5J	<0.01	**223J**
YC-014-4	06/25/09	7.1J	<0.07	<0.07	<0.07	<0.08	2.0J	3.4J	3.3J	<0.07	0.32J	<0.01	<0.01	28.4J
YC-814-4	6/25/2009	7.9J	<0.07	<0.07	<0.07	<0.08	2.8J	4.7J	3.6J	<0.07	0.43J	<0.01	<0.01	32.0J
YC-014-5	06/25/09	<0.01	<0.07	<0.07	<0.07	<0.08	<0.01	<0.01	<0.01	<0.07	<0.01	<0.01	<0.01	<0.08
YC-015-1	7/7/2009	440J	<0.09	270J	<0.09	<0.10	170J	270J	150J	<0.09	24J	19J	14J	**3995J**
YC-015-2	7/7/2009	3600J	<4.40	1200J	<4.40	<5.30	830J	1200J	760J	<4.40	100J	78J	<0.88	**34368J**
YC-015-3	7/7/2009	330J	<0.07	85J	<0.07	<0.08	70J	86J	110J	<0.07	<0.01	<0.01	<0.01	**2327J**
YC-015-4	7/7/2009	5.0J	<0.06	<0.06	<0.06	<0.08	1.1J	1.6J	1.1J	<0.06	<0.01	<0.01	<0.01	45.2J
YC-015-5	7/7/2009	3.5J	<0.09	<0.09	<0.09	<0.10	<0.02	1.2J	<0.02	<0.09	<0.02	<0.02	<0.02	25.3J
YC-016-1	07/01/09	170J	13	<0.08	8.6	17J	51	150	47	2.8	7.1	3.8	<0.02	**974J**
YC-016-2	07/01/09	420J	<0.08	<0.08	<0.08	33J	180	270	170	4.2	16	8.4	3.6	**2620J**
YC-016-3	07/01/09	17J	13	<0.07	<0.07	1.8J	7.6	14	7.7	<0.07	0.93	1.4	<0.01	121J
YC-017-1	6/23/2009	31J	21	<0.10	<0.10	<0.12	14J	22J	15J	<0.10	2.2J	<0.02	<0.02	**224J**
YC-817-1	6/23/2009	21J	2.0	<0.10	<0.10	<0.12	9.8J	16J	10J	<0.10	1.6J	1.2J	<0.02	143J
YC-017-2	6/23/2009	40J	3.3	<0.09	<0.09	<0.11	14J	23J	18J	<0.09	2.3J	1.8J	<0.02	**279J**
YC-017-3	6/23/2009	56J	55	<0.08	<0.08	<0.10	32J	59J	25J	<0.08	7.4J	2.8J	1.5	**401J**
YC-017-4	6/23/2009	5.6J	<0.07	<0.07	<0.07	<0.09	2.8J	5.0J	2.5J	<0.07	0.34J	<0.01	<0.01	23.9J
YC-017-5	6/23/2009	<0.01	<0.07	<0.07	<0.07	<0.08	<0.01	<0.01	<0.01	<0.07	<0.01	<0.01	<0.01	<0.08
YC-018-1	6/23/2009	23J	2.0	<0.09	<0.09	<0.10	13J	19J	11J	<0.09	2.3J	4.4J	1.9	**229J**
YC-018-2	6/23/2009	510J	69	<0.09	<0.09	<0.11	130J	190J	730J	<0.09	8.5J	8.9J	5.5	**5637J**
YC-018-3	6/23/2009	590J	41	<0.09	<0.09	<0.11	280J	480J	290J	<0.09	33J	18J	5.5	**3856J**
YC-018-4	6/23/2009	280J	<0.09	<0.09	<0.09	<0.10	150J	260J	150J	<0.09	17J	7.7J	2.1	**1396J**
YC-818-4	6/23/2009	220J	<0.09	<0.09	<0.09	<0.10	130J	220J	120J	<0.09	16J	7.8J	3.0	**1218J**
YC-018-5	6/23/2009	18J	<0.08	<0.08	<0.08	<0.09	7.5J	13J	<0.01	<0.08	2.4J	2.0J	2.4	**194J**
YC-019-1	6/22/2009	24J	3.0J	<0.09	<0.09	<0.11	13J	19J	9.8J	<0.09	2.0J	2.0J	<0.02	177J
YC-019-2	6/22/2009	230J	14	<0.09	<0.09	<0.11	41J	110J	66J	<0.09	8.2J	5.3	<0.02	**1183J**

Table B2 - PCB Congeners Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		PCB-153	PCB-156	PCB-157	PCB-167	PCB-169	PCB-170	PCB-180	PCB-187	PCB-189	PCB-195	PCB-206	PCB-209	Total PCBs
Analytical Method		8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082
ERM		TOTAL PCBs = 180												
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Sample ID	Sample Date													
YC-019-3	6/22/2009	37J	<0.08	<0.08	<0.08	<0.10	11J	<0.02	15J	<0.08	2.7J	1.2J	<0.02	**185J**
YC-019-4	6/22/2009	8.8J	<0.08	<0.08	<0.08	<0.10	1.6J	<0.02	2.9J	<0.08	0.31J	<0.02	<0.02	29.4J
YC-019-5	6/22/2009	<0.02	<0.08	<0.08	<0.08	<0.09	<0.02	<0.02	<0.02	<0.08	<0.02	<0.02	<0.02	0.36J
YC-020-1	6/22/2009	9.9J	0.78J	<0.10	<0.10	<0.12	4.5J	<0.02	3.6J	<0.10	<0.02	<0.02	<0.02	42.9J
YC-820-1	6/22/2009	12J	1.6	<0.10	<0.10	<0.12	5.7J	8.5J	6.0J	<0.10	0.85J	0.63J	<0.02	67.7J
YC-020-2	6/22/2009	28J	2.5	<0.07	<0.07	<0.09	11J	18J	9.9J	<0.07	1.5J	0.96J	<0.01	178J
YC-020-3	6/22/2009	73J	47	<0.09	<0.09	<0.11	31J	<0.02	26J	<0.09	4.2J	2.6J	<0.02	**652J**
YC-020-4	6/22/2009	<0.02	<0.09	<0.09	<0.09	<0.10	12J	19J	<0.02	<0.09	2.8J	<0.02	<0.02	72.1J
YC-020-5	6/22/2009	5.9J	<0.07	<0.07	<0.07	<0.08	2.7J	6.3J	12J	<0.07	<0.01	0.46J	<0.01	59.5J
YC-021-1	6/22/2009	13J	0.93	<0.08	<0.08	<0.09	3.4J	6.5J	4.0J	<0.08	0.64J	0.48J	<0.02	61.5J
YC-021-2	6/22/2009	73J	8.4	<0.07	<0.07	<0.09	20J	39J	28J	<0.07	4.1J	2.6J	<0.01	**502J**
YC-021-3	6/22/2009	200J	14	<0.10	<0.10	<0.12	70J	120J	67J	<0.10	10J	5.5J	<0.02	**1068J**
YC-021-4	6/22/2009	180J	<0.09	<0.09	<0.09	<0.11	70J	180J	54J	<0.09	9.6J	4.7J	<0.02	**858J**
YC-021-5	6/22/2009	21J	<0.10	<0.10	<0.10	<0.12	9.0J	16J	8.3J	<0.10	2.8J	1.6J	<0.02	167J
YC-022-1	6/22/2009	7.3J	0.55J	<0.08	<0.08	<0.09	3.1J	4.8J	3.4J	<0.08	0.41J	<0.02	<0.02	41.9J
YC-022-2	6/22/2009	11J	0.90	<0.07	<0.07	<0.08	4.0J	<0.01	4.0J	<0.07	0.52J	0.83J	<0.01	66.2J
YC-022-3	6/22/2009	17J	<0.09	<0.09	<0.09	<0.11	8.1J	<0.02	6.1J	<0.09	1.4J	<0.02	<0.02	84.4J
YC-022-4	6/22/2009	110J	10.0	<0.08	<0.08	<0.10	45J	<0.02	34J	<0.08	7.4J	3.2J	1.8	**503J**
YC-022-5	6/22/2009	100J	8.1	<0.08	<0.08	12	35J	<0.01	21J	<0.08	6.1J	2.6J	1.1	**419J**
YC-023-1	6/18/2009	57	3.0	<0.07	1.4	<0.09	13J	23J	22J	<0.07	2.7	1.9J	<0.01	**200J**
YC-023-2	6/18/2009	150	20	<0.11	8.5	<0.13	66J	110J	79J	4.4	15	7.9J	3.0	**1097J**
YC-023-3	6/18/2009	14	10	11	<0.10	<0.12	5.5J	11J	4.4J	<0.10	1.1J	<0.02	<0.02	130J
YC-023-4	6/18/2009	0.39J	<0.07	<0.07	<0.07	<0.09	<0.01	<0.01	<0.01	<0.07	<0.01	<0.01	<0.01	0.89J
YC-023-5	6/18/2009	<0.02	<0.09	<0.09	<0.09	<0.10	<0.02	<0.02	<0.02	<0.09	<0.02	<0.02	<0.02	<0.09
YC-823-5	6/18/2009	<0.02	<0.08	<0.08	<0.08	<0.10	<0.02	<0.02	<0.02	<0.08	<0.02	<0.02	<0.02	<0.08
YC-024-1	6/22/2009	99J	<0.09	<0.09	<0.09	<0.10	37J	62J	33J	<0.09	6.1J	2.8J	<0.02	**463J**
YC-024-2	6/22/2009	110J	7.1	<0.08	<0.08	<0.09	40J	61J	31J	<0.08	5.7J	3.5J	<0.02	**491J**
YC-024-3	6/22/2009	29J	<0.10	<0.10	<0.10	<0.12	12J	18J	9.7J	<0.10	2.2J	1.5J	<0.02	**197J**
YC-824-3	6/22/2009	58J	8.3	<0.10	<0.10	<0.11	26J	43J	22J	<0.10	3.8J	2.3J	<0.02	**423J**
YC-024-4	6/22/2009	4.7J	<0.10	<0.10	<0.10	<0.12	1.6J	3.1J	<0.02	<0.10	<0.02	<0.02	<0.02	25.8J
YC-024-5	6/22/2009	<0.02	<0.09	<0.09	<0.09	<0.11	0.97J	1.6J	0.64J	<0.09	<0.02	<0.02	<0.02	7.01J
YC-025-1	6/18/2009	110	<0.08	<0.08	2.3	<0.09	31J	52J	34J	<0.08	5.1	3.5J	1.5	**515J**
YC-025-2	6/18/2009	230	14	<0.08	4.7	<0.10	48J	77J	110J	2.5	8.3	6.5J	4.9	**1175J**
YC-025-3	6/18/2009	69	<0.10	<0.10	2.8	<0.12	30J	49J	23J	<0.10	4.9	3.0J	2.1	**526J**
YC-825-3	6/18/2009	57	38	<0.09	<0.09	7.9	23J	39	18J	<0.09	5.0	2.3J	2.0	**496J**
YC-025-4	6/18/2009	6.6	4.8	<0.10	<0.10	<0.11	2.8J	5.0J	2.8J	<0.10	0.57J	<0.02	<0.02	48.0J
YC-025-5	6/18/2009	1.3	<0.09	<0.09	<0.09	<0.11	0.43J	0.73J	<0.02	<0.09	<0.02	<0.02	<0.02	7.82J
YC-026-1	6/18/2009	110	12	<0.08	37	<0.10	42J	72J	39J	<0.08	5.6	4.7J	2.9	**859J**
YC-026-2	6/18/2009	110	<0.10	<0.10	<0.10	<0.12	44J	75J	34J	<0.10	5.7	3.5J	4.0	**665J**
YC-026-3	6/18/2009	4.5	<0.11	<0.11	<0.11	<0.13	<0.02	3.1J	1.5J	<0.11	<0.02	<0.02	<0.02	40.4J
YC-026-4	6/18/2009	8.3	0.91J	5.4	<0.11	<0.13	3.0J	5.1J	3.2J	<0.11	<0.02	<0.02	<0.02	57.6J
YC-026-5	6/18/2009	<0.02	<0.09	0.87J	<0.09	<0.10	<0.02	0.83J	0.45J	<0.09	<0.02	<0.02	<0.02	5.75J
YC-027-1	6/18/2009	530	<0.08	<0.08	<0.08	<0.09	140J	230J	260J	4.9	19	12J	3.3	**1873J**
YC-027-2	6/18/2009	97	6.0	<0.10	<0.10	<0.12	32J	53J	34J	<0.10	4.4	3.0J	3.4	**586J**
YC-027-3	6/18/2009	5.3	<0.10	<0.10	<0.10	<0.12	2.4J	4.4J	2.4J	<0.10	<0.02	<0.02	<0.02	35.5J
YC-027-4	6/18/2009	<0.02	<0.09	<0.09	<0.09	<0.10	<0.02	<0.02	<0.02	<0.09	<0.02	<0.02	<0.02	<0.10
YC-027-5	6/18/2009	<0.02	<0.09	<0.09	<0.09	<0.10	<0.02	<0.02	<0.02	<0.09	<0.02	<0.02	<0.02	<0.10
YC-028-1	6/17/2009	32J	<0.09	26J	<0.09	<0.10	14J	25J	15J	<0.09	2.1J	1.5J	1.7J	**211J**
YC-028-2	6/17/2009	160	20	<0.10	<0.10	<0.11	66J	110J	56J	3.2	9.7	5.8J	5.3	**1163J**
YC-028-3	6/17/2009	23	<0.10	<0.10	1.2	<0.12	11J	18J	8.2J	<0.10	2.6	1.2J	<0.02	**208J**
YC-028-4	6/17/2009	6.6	<0.10	<0.10	<0.10	<0.12	2.9J	4.9J	3.0J	<0.10	<0.02	<0.02	<0.02	38.3J
YC-028-5	6/17/2009	2.4	<0.09	<0.09	<0.09	<0.11	0.99J	1.6J	0.97J	<0.09	<0.02	<0.02	<0.02	10.8J
YC-029-1	7/6/2009	51J	<0.10	<0.10	<0.10	<0.12	28J	46J	27J	<0.10	4.5J	2.7J	1.5J	**343J**
YC-029-2	7/6/2009	220J	<0.10	<0.10	<0.10	<0.12	170J	270J	110J	<0.10	21J	10J	4.2J	**1730J**

Table B2 - PCB Congeners Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		PCB-153	PCB-156	PCB-157	PCB-167	PCB-169	PCB-170	PCB-180	PCB-187	PCB-189	PCB-195	PCB-206	PCB-209	Total PCBs
Analytical Method		8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082	EPA 8082
ERM		TOTAL PCBs = 180												
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Sample ID	Sample Date													
YC-029-3	7/6/2009	720J	<1.10	440J	<1.10	<1.30	300J	450J	240J	<1.10	46J	25J	<0.22	**5616J**
YC-829-3	7/6/2009	790J	<1.10	500J	<1.10	<1.30	310J	500J	260J	<1.10	50J	29J	<0.22	**6139J**
YC-029-4	7/6/2009	550J	74J	380	<1.10	<1.30	240J	390J	200J	<1.10	42J	23J	17J	**3797J**
YC-029-5	7/6/2009	23J	<0.08	<0.08	<0.08	<0.09	9.5J	16J	8.9J	<0.08	<0.02	<0.02	1.5J	144J
YC-030-1	7/6/2009	64J	51J	<0.10	27	17	33J	54J	32J	<0.10	5.4J	4.3J	2.7J	**724J**
YC-030-2	7/6/2009	270J	<0.39	<0.39	<0.39	<0.47	110J	180J	93J	<0.39	18J	13J	8.6J	**2090J**
YC-030-3	7/6/2009	1400J	<3.80	960J	<3.80	<4.50	590J	970J	500J	<3.80	110J	74J	<0.76	**13294J**
YC-030-4	7/6/2009	220J	<0.44	170J	<0.44	34	99J	170J	78J	<0.44	23J	<0.09	9.0J	**1747J**
YC-030-5	7/6/2009	8.6J	<0.09	4.9J	<0.09	<0.11	3.2J	4.9J	2.9J	<0.09	<0.02	<0.02	<0.02	63.7J
YC-031-1	7/7/2009	180J	<0.08	<0.08	<0.08	<0.10	54J	100J	65J	<0.08	11J	7.1J	3.5J	**993J**
YC-031-2	7/7/2009	940J	<0.10	<0.10	<0.10	<0.11	430J	680J	400J	<0.10	<0.02	<0.02	<0.02	**7260J**
YC-031-3	7/7/2009	330J	<0.07	59J	<0.07	<0.09	38J	59J	85J	<0.07	10J	<0.01	<0.01	**1961J**
YC-831-3	7/7/2009	460J	<0.07	52J	<0.07	<0.09	32J	53J	160J	<0.07	7.9J	<0.01	<0.01	**2004J**
YC-031-4	7/7/2009	8.4J	<0.07	2.9J	<0.07	<0.09	1.7J	3.0J	3.3J	<0.07	<0.01	<0.01	<0.01	56.7J
YC-031-5	7/7/2009	2.0J	<0.07	<0.07	<0.07	<0.08	<0.01	<0.01	0.82J	<0.07	<0.01	<0.01	<0.01	8.52J
YC-032-1	7/7/2009	1300J	<0.10	750J	<0.10	<0.12	510J	760J	410J	<0.10	55J	35J	21J	**11781J**
YC-032-2	7/7/2009	3800J	<10.00	<10.00	<10.00	<12.00	2000J	3300J	1500J	<10.00	320J	150J	<2.00	**23790J**
YC-032-3	7/7/2009	42J	7.1J	27J	<0.06	<0.08	19J	27J	13J	<0.06	11J	<0.01	<0.01	**433J**
YC-032-4	7/7/2009	5.7J	<0.06	2.9J	<0.06	<0.07	1.4J	3.0J	2.7J	<0.06	<0.01	<0.01	<0.01	46.0J
YC-032-5	7/7/2009	<0.01	<0.07	<0.07	<0.07	<0.08	<0.01	<0.01	<0.01	<0.07	<0.01	<0.01	<0.01	<0.08
YC-033-1	7/8/2009	26J	<0.09	18J	<0.09	<0.10	11J	18J	11J	<0.09	1.9J	1.3J	<0.02	**207J**
YC-833-1	7/8/2009	52J	17J	34J	36	26J	25J	42J	33J	<0.09	4.7J	2.5J	<0.02	**627J**
YC-033-2	7/8/2009	140J	<0.08	<0.08	<0.08	<0.10	23J	38J	30J	<0.08	4.2J	2.7J	2.9	**793J**
YC-033-3	7/8/2009	59J	<0.09	<0.09	<0.09	<0.11	22J	34J	22J	<0.09	3.7J	2.5J	1.6	**535J**
YC-033-4	7/8/2009	110J	80J	82J	37	29J	49J	83J	41J	<1.90	16J	<0.37	<0.37	**1007J**
YC-033-5	7/8/2009	1.9J	<0.09	1.4J	<0.09	<0.11	<0.02	1.4J	0.80J	<0.09	<0.02	<0.02	<0.02	8.76J
YC-034-1	7/8/2009	21J	<0.09	<0.09	8.9	<0.11	12J	19J	9.4J	<0.09	1.8J	1.2J	<0.02	178J
YC-034-2	7/8/2009	210J	<1.50	87J	<1.50	74J	60J	88J	78J	<1.50	10J	7.5J	<0.30	**1804J**
YC-034-3	7/8/2009	1200J	69J	440J	<10.00	<12.00	420J	440J	540J	<10.00	74J	<2.00	<2.00	**8121J**
YC-034-4	7/8/2009	20J	<0.09	7.4J	<0.09	2.9J	4.8J	7.5J	8.9J	<0.09	1.5J	<0.02	<0.02	**216J**
YC-034-5	7/8/2009	<0.02	<0.08	<0.08	<0.08	<0.10	<0.02	<0.02	<0.02	<0.08	<0.02	<0.02	<0.02	<0.08
YC-035-1	7/8/2009	20J	2.3J	<0.09	<0.09	<0.10	10J	16J	9.6J	<0.09	1.7J	1.2J	<0.02	157J
YC-035-2	7/8/2009	200J	29J	120J	<2.00	<2.40	76J	120J	65J	<2.00	12J	10J	<0.39	**2308J**
YC-035-3	7/8/2009	3000J	190J	990J	<7.10	<8.5	600J	1000J	1100J	<7.10	110J	67J	<1.40	**17257J**
YC-035-4	7/8/2009	370J	28J	250J	<0.08	30J	140J	250J	150J	<0.08	22J	8.7J	4.1	**2227J**
YC-035-5	7/8/2009	12J	<0.07	4.1J	<0.07	<0.09	2.6J	4.1J	5.2J	<0.07	<0.01	<0.01	<0.01	73.6J
YC-036-1	7/9/2009	830J	150J	460J	<3.80	220J	290J	460J	220J	<3.80	44J	37J	43	**10448J**
YC-036-2	7/9/2009	1900J	320J	1600	<8.20	<9.80	970J	1600J	780J	<8.20	170J	76J	36J	**16104J**
YC-036-3	7/9/2009	120J	11J	96J	<0.07	15J	34J	97J	30J	<0.07	8.3J	3.5J	5.3	**869J**
YC-836-3	7/9/2009	230J	20J	190J	<0.07	31J	110J	190J	85J	<0.07	17J	6.0J	4.7	**1680J**
YC-036-4	7/9/2009	3.2J	<0.06	2.1J	<0.06	<0.07	1.3J	2.1J	1.1J	<0.06	<0.01	<0.01	<0.01	26.6J

Table B3 - Pesticides Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

		Total DDT			Total Chlordane		
Analyte		**4,4'-DDE**	**4,4'-DDT**	**4,4'-TDE/DDD**	**alpha-Chlordane**	**gamma-Chlordane**	**Dieldrin**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		46.1	46.1	46.1	6.0	6.0	8.0
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**						
YC-001-1	7/1/2009	<2.40	<3.30	<2.70	<3.10	<3.10	<1.60
YC-001-2	7/1/2009	<2.10	<2.80	<2.30	<2.70	<2.70	<1.40
YC-001-3	7/1/2009	<3.00	<4.20	<3.40	<4.00	<4.00	<2.10
YC-001-4	7/1/2009	<70	<4.80	<3.90	<4.60	NA	<48.00
YC-002-1	7/1/2009	<95.00	<5.20	<4.30	<5.00	<5.00	<65.00
YC-002-2	7/1/2009	<570.00	<780.00	<3.20	<750.00	<750.00	<390.00
YC-002-3	7/1/2009	<52.00	<2.90	<2.40	<2.70	<2.70	<36.00
YC-802-3	07/01/09	<53.00	<2.90	<2.40	<2.80	<2.80	<36.00
YC-002-4	7/1/2009	<2.50	<3.50	<2.80	<3.30	<3.30	<1.70
YC-002-5	7/1/2009	<2.40	<3.30	<2.70	<3.10	<3.10	<1.60
YC-003-1	06/29/09	<730.00	<1000.00	<2.70	<950.00	<950.00	<500.00
YC-003-2	06/29/09	<64.00	<4.40	<3.60	<4.20	<4.20	<44.00
YC-803-2	06/29/09	<63.00	<4.30	<3.50	<4.10	<4.10	<43.00
YC-003-3	06/29/09	<2.40	<3.40	<2.80	<3.20	<3.20	<1.70
YC-003-4	06/29/09	<2.00	<2.80	<2.30	<2.60	<2.60	<1.40
YC-003-5	06/29/09	<3.00	<4.10	<3.30	<3.90	<3.90	<2.00
YC-004-1	07/02/09	<210.00	<5.90	<4.80	<280.00	<280.00	<150.00
YC-004-2	07/02/09	<690.00	<4.70	<3.90	<900.00	<900.00	<470.00
YC-004-3	07/02/09	<43.00	<2.90	<2.40	<2.80	<2.80	<1.50
YC-005-1	07/07/09	<930.00	<3.20	<2.60	<1200.00	<1200.00	<640.00
YC-005-2	07/07/09	<2600.00	<3.50	<2.90	<3400.00	<3400.00	<1800.00
YC-805-2	07/07/09	<2500.00	<3.40	<2.80	<3300.00	<3300.00	<1700.00
YC-005-3	07/07/09	<100.00	<2.80	<2.30	<130.00	<130.00	<71.00
YC-005-4	07/07/09	<2.30	<3.10	<2.50	<3.00	<3.00	<1.60
YC-005-5	07/07/09	<2.60	<3.60	<3.00	<3.50	<3.50	<1.80
YC-006-1	6/24/2009	<3.80	<5.20	<4.30	<5.00	<5.00	<2.60
YC-006-2	6/24/2009	<300.00	<420.00	<3.40	<4.00	<400.00	<210.00
YC-006-3	6/24/2009	<2.30	<3.10	<2.50	<3.00	<3.00	<1.50
YC-006-4	6/24/2009	<2.00	<2.80	<2.30	<2.60	<2.60	<1.40
YC-006-5	6/24/2009	<2.00	<2.70	<2.20	<2.60	<2.60	<1.40

Table B3 - Pesticides Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

		Total DDT			Total Chlordane		
Analyte		**4,4'-DDE**	**4,4'-DDT**	**4,4'-TDE/DDD**	**alpha-Chlordane**	**gamma-Chlordane**	**Dieldrin**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		46.1	46.1	46.1	6.0	6.0	8.0
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**						
YC-007-1	07/07/09	<1300	<4.60	<3.80	<1800.00	<1800.00	<920.00
YC-007-2	07/07/09	<220.00	<3.00	<2.40	<280.00	<2.80	<150.00
YC-007-3	07/07/09	<49.00	<3.40	<2.80	<3.20	<3.20	<34.00
YC-807-3	07/07/09	<44.00	<3.00	<2.50	<2.90	<2.90	<30.00
YC-007-4	07/07/09	<2.00	<2.70	<2.20	<2.60	<2.60	<1.30
YC-007-5	07/07/09	<1.90	<2.60	<2.10	<2.50	<2.50	<1.30
YC-008-1	07/02/09	<140.00	<3.90	<3.20	<180.00	<180.00	<96.00
YC-008-2	07/02/09	<1800.00	<5.00	<4.10	<2400.00	<2400.00	<1300.00
YC-008-3	07/02/09	<840.00	<4.60	<3.80	<1100.00	<1100.00	<580.00
YC-008-4	07/02/09	<700.00	<4.80	<3.90	<920.00	<920.00	<480.00
YC-008-5	07/02/09	<130.00	<3.40	<2.80	<160.00	<160.00	<86.00
YC-009-1	06/25/09	<3.60	<5.00	<4.10	<4.70	<4.70	<2.50
YC-009-2	06/25/09	<2.70	<3.80	<3.10	<110.00	<3.60	<56.00
YC-009-3	06/25/09	<2.10	<2.90	<2.40	<2.80	<2.80	<1.50
YC-009-4	06/25/09	<1.90	<2.60	<2.20	<2.50	<2.50	<1.30
YC-009-5	06/25/09	<100.00	<140.00	<2.80	<130.00	<3.30	<69.00
YC-010-1	07/09/09	<3800.00	<44.00	<36.00	<5000.00	<5000.00	<2600.00
YC-010-2	07/09/09	<260	<2.90	<2.40	<340	<340	<180
YC-010-3	07/09/09	<2.00	<2.80	<2.30	<2.60	<2.60	<1.40
YC-810-3	07/09/09	<2.20	<3.00	<2.40	<2.80	<2.80	<1.50
YC-010-4	07/09/09	<1.90	<2.70	<2.20	<2.60	<2.60	<1.30
YC-011-1	06/25/09	<97.00	<130.00	<3.70	<4.30	<130.00	<67.00
YC-011-2	06/25/09	<590.00	<820.00	<17.00	<780.00	<780	<410.00
YC-811-2	06/25/09	<310.00	<420.00	<3.50	<400.00	<400.00	<210.00
YC-011-3	06/25/09	<1800	<2500.00	<34.00	<40.00	<40.00	<1300.00
YC-011-4	06/25/09	<2.10	<2.90	<2.30	<2.70	<2.70	<1.40
YC-011-5	06/25/09	<2.00	<2.80	<2.30	<2.60	<2.60	<1.40
YC-012-1	06/25/09	<680.00	<940.00	<19.00	<890.00	<890.00	<470.00
YC-012-2	06/25/09	<1000.00	<1400.00	<29.00	<33.00	<1300.00	<18.00
YC-012-3	06/25/09	<95.00	<130.00	<2.70	<3.10	<3.10	<1.60

Table B3 - Pesticides Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

		Total DDT			Total Chlordane		
Analyte		**4,4'-DDE**	**4,4'-DDT**	**4,4'-TDE/DDD**	**alpha-Chlordane**	**gamma-Chlordane**	**Dieldrin**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		46.1	46.1	46.1	6.0	6.0	8.0
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**						
YC-012-4	06/25/09	<2.10	<2.90	<2.30	<2.70	<2.70	<1.40
YC-012-5	06/25/09	<2.00	<2.70	<2.20	<2.60	<2.60	<1.40
YC-013-1	06/24/09	<430.00	<590.00	<3.20	<560.00	<560.00	<300.00
YC-013-2	06/24/09	<2200.00	<3100.00	<14.00	<2900.00	<2900.00	<1500.00
YC-013-3	06/24/09	<240.00	<320.00	<2.20	<310.00	<310.00	<160.00
YC-013-4	06/24/09	<2.10	<2.80	<2.30	<2.70	<2.70	<1.40
YC-813-4	06/24/09	<2.10	<2.80	<2.30	<2.70	<2.70	<1.40
YC-013-5	06/24/09	<2.30	<3.10	<2.50	<3.00	<3.00	<1.50
YC-014-1	06/25/09	<83.00	<110.00	<3.80	<4.40	<4.40	<57.00
YC-014-2	06/25/09	<1400	<2000.00	<32.00	<38.00	<38.00	<990.00
YC-014-3	06/25/09	<95.00	<130.00	<2.70	<3.10	<3.10	<65.00
YC-014-4	06/25/09	<2.10	<2.90	<2.40	<2.80	<2.80	<1.40
YC-814-4	06/25/09	<2.10	<2.90	<2.40	<2.80	<2.80	<1.50
YC-014-5	06/25/09	<2.20	<3.00	<2.50	<2.90	<2.90	<1.50
YC-015-1	07/07/09	<1100.00	<3.80	<1300.00	<1500.00	<1500.00	<770.00
YC-015-2	07/07/09	<3400.00	<77.00	<63.00	<4400.00	<4400.00	<2300.00
YC-015-3	07/07/09	<740.00	<1000.00	<2.40	<970.00	<970.00	<510.00
YC-015-4	07/07/09	<41	<2.80	<2.30	<2.70	<2.70	<28
YC-015-5	07/07/09	<2.80	<3.80	<3.10	<3.60	<3.60	<1.90
YC-016-1	07/01/09	<250.00	<3.40	<280.00	<330.00	<330.00	<170.00
YC-016-2	07/01/09	<1300.00	<3.50	<2.90	<1700.00	<1700.00	<880.00
YC-016-3	07/01/09	<56.00	<3.10	<2.50	<3.00	<3.00	<39.00
YC-017-1	06/23/09	<66	<91.00	<3.70	<87.00	<87.00	<46.00
YC-817-1	06/23/09	<81.00	<110.00	<3.70	<4.30	<4.30	<2.20
YC-017-2	06/23/09	<73.00	<100.00	<3.30	<96.00	<96.00	<50.00
YC-017-3	06/23/09	<67	<3.70	<3.00	<3.50	<3.50	<1.80
YC-017-4	06/23/09	8.7J	<3.3	<2.70	<3.10	<3.10	<1.60
YC-017-5	06/23/09	<2.10	<2.90	<2.40	<2.80	<2.80	<1.50
YC-018-1	06/23/09	<55.00	<75.00	<62.00	<72.00	<72.00	<38.00
YC-018-2	06/23/09	<1100	<1600.00	<3.20	<3.70	<1500.00	<780.00

Table B3 - Pesticides Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

		Total DDT			Total Chlordane		
Analyte		**4,4'-DDE**	**4,4'-DDT**	**4,4'-TDE/DDD**	**alpha-Chlordane**	**gamma-Chlordane**	**Dieldrin**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		46.1	46.1	46.1	6.0	6.0	8.0
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**						
YC-018-3	06/23/09	<590.00	<810.00	<3.30	<3.90	<780.00	<410.00
YC-018-4	06/23/09	<280.00	<380.00	<3.10	<3.70	<3.70	<190.00
YC-818-4	06/23/09	<280.00	<380.00	<3.10	<3.70	<3.70	<190.00
YC-018-5	06/23/09	<250	<340.00	<2.80	<3.20	<3.20	<1.70
YC-019-1	06/22/09	<59.00	<82.00	<3.30	<3.90	<3.90	<41.00
YC-019-2	06/22/09	<430.00	<590.00	<480.00	<560.00	<560.00	<290.00
YC-019-3	06/22/09	<130	<180.00	<150.00	<3.50	<3.50	<92.00
YC-019-4	06/22/09	<2.60	<3.50	<2.90	<34.00	<3.40	<18.00
YC-019-5	06/22/09	<2.50	<3.40	<2.80	<3.30	<3.30	<1.70
YC-020-1	06/22/09	<32.00	<44.00	<3.60	<4.20	<4.20	<22.00
YC-820-1	06/22/09	<3.10	<4.30	<3.50	<4.10	<4.10	<2.10
YC-020-2	06/22/09	<470.00	<650.00	<530.00	<620.00	<620.00	<320.00
YC-020-3	06/22/09	<300	<410.00	<330.00	<390.00	<390.00	<200.00
YC-020-4	06/22/09	<140.00	<190.00	<160.00	<3.70	<3.70	<96.00
YC-020-5	06/22/09	NA	<150.00	<120.00	<2.80	<2.80	<1.50
YC-021-1	06/22/09	<120.00	<170.00	<2.80	<3.30	<3.30	<86.00
YC-021-2	06/22/09	<230.00	<320.00	<260.00	<3.10	<3.10	<160.00
YC-021-3	06/22/09	<310.00	<420.00	<350.00	<400.00	<400.00	<210.00
YC-021-4	06/22/09	<150	<200.00	<3.30	<3.90	<3.90	<100.00
YC-021-5	06/22/09	<95.00	<130.00	<3.60	<4.20	<4.20	<2.20
YC-022-1	06/22/09	<2.50	<3.40	<2.80	<3.30	<3.30	<1.70
YC-022-2	06/22/09	<110	<150.00	<120.00	<140.00	<140.00	<74.00
YC-022-3	06/22/09	<29.00	<40.00	NA	<3.90	<39.00	<2.00
YC-022-4	06/22/09	<260.00	<350.00	<2.90	<3.40	<3.40	<180.00
YC-022-5	06/22/09	<240	<330.00	<2.70	<3.20	<3.20	<170.00
YC-023-1	06/18/09	<2.20	<3.10	<2.50	<2.90	<2.90	<1.50
YC-023-2	06/18/09	<3.40	<4.70	<3.80	<4.40	<4.40	<2.30
YC-023-3	06/18/09	<3.2	<4.30	<3.60	<4.10	<4.10	<2.20
YC-023-4	06/18/09	<2.40	<3.30	<2.70	<3.20	<3.20	<1.70
YC-023-5	06/18/09	<2.70	<3.80	<3.10	<3.60	<3.60	<1.90

Table B3 - Pesticides Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

		Total DDT			Total Chlordane		
Analyte		**4,4'-DDE**	**4,4'-DDT**	**4,4'-TDE/DDD**	**alpha-Chlordane**	**gamma-Chlordane**	**Dieldrin**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		46.1	46.1	46.1	6.0	6.0	8.0
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**						
YC-823-5	06/18/09	<2.60	<3.60	<2.90	<3.40	<3.40	<1.80
YC-024-1	06/22/09	<140.00	<190.00	<3.10	<3.60	<180.00	<95.00
YC-024-2	06/22/09	<300.00	<420.00	<340.00	<400.00	<400.00	<210.00
YC-024-3	06/22/09	<320.00	<440.00	<3.60	<4.20	<4.20	<2.20
YC-824-3	06/22/09	<310.00	<420.00	<3.40	<400.00	<400.00	<210.00
YC-024-4	06/22/09	<3.30	<4.60	<3.70	<4.40	<4.40	<2.30
YC-024-5	06/22/09	<2.90	<4.00	<3.30	<3.80	<3.80	<2.00
YC-025-1	06/18/09	<2.40	<3.40	<2.70	<3.20	<3.20	<1.70
YC-025-2	06/18/09	<2.7	<3.60	<3.00	<3.50	<3.50	<1.80
YC-025-3	06/18/09	<3.10	<4.20	<3.50	<4.00	<4.00	<2.10
YC-825-3	06/18/09	<2.90	<4.10	<3.30	<3.90	<3.90	<2.00
YC-025-4	06/18/09	<3.00	<4.20	<3.40	<4.00	<4.00	<2.10
YC-025-5	06/18/09	<2.90	<3.90	<3.20	<3.80	<3.80	<2.00
YC-026-1	06/18/09	<2.70	<3.70	<3.00	<3.50	<3.50	<1.80
YC-026-2	06/18/09	<3.3	<4.50	<3.70	<4.30	<4.30	<2.30
YC-026-3	06/18/09	<3.50	<4.80	<3.90	<4.50	<4.50	<2.40
YC-026-4	06/18/09	<3.40	<4.70	<3.80	<4.50	<4.50	<2.30
YC-026-5	06/18/09	<2.80	<3.80	<3.10	<3.60	<3.60	<1.90
YC-027-1	06/18/09	<2.50	<3.40	<2.80	<3.30	<3.30	<1.70
YC-027-2	06/18/09	<3.10	<4.30	<3.50	<4.10	<4.10	<2.10
YC-027-3	06/18/09	<3.30	<4.50	<3.70	<4.30	<4.30	<2.20
YC-027-4	06/18/09	<2.80	<3.80	<3.10	<3.70	<3.70	<1.90
YC-027-5	06/18/09	<2.80	<3.80	<3.10	<3.60	<3.60	<1.90
YC-028-1	06/17/09	<2.80	<3.80	<3.10	<3.60	<3.60	<1.90
YC-028-2	06/17/09	<3.10	<4.20	<3.40	<4.00	<4.00	<2.10
YC-028-3	06/17/09	<3.30	<4.50	<3.70	<4.30	<4.30	<2.30
YC-028-4	06/17/09	<3.30	<4.50	<3.70	<4.30	<4.30	<2.30
YC-028-5	06/17/09	<2.80	<3.90	<3.20	<3.70	<3.70	<1.90
YC-029-1	07/06/09	<160.00	<4.40	<3.60	<210.00	<210.00	<110.00
YC-029-2	07/06/09	<640.00	<4.40	<3.60	<850.00	<850.00	<440.00

Table B3 - Pesticides Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

		Total DDT			Total Chlordane		
Analyte		**4,4'-DDE**	**4,4'-DDT**	**4,4'-TDE/DDD**	**alpha-Chlordane**	**gamma-Chlordane**	**Dieldrin**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		46.1	46.1	46.1	6.0	6.0	8.0
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**						
YC-029-3	07/06/09	<2500.00	<4.80	<3.90	<3200.00	<3200.00	<1700.00
YC-829-3	07/06/09	<2100.00	<4.80	<3.90	<2700.00	<2700.00	<1400.00
YC-029-4	07/06/09	<710.00	<4.90	<4.00	<930.00	<930.00	<490.00
YC-029-5	07/06/09	<130.00	<3.50	<2.80	<160.00	<160.00	<86.00
YC-030-1	07/06/09	<180	<4.20	<3.50	<240	<240	<130
YC-030-2	07/06/09	<1100.00	<4.30	<3.50	<1400.00	<1400.00	<750.00
YC-030-3	07/06/09	<1500.00	<4.20	<3.40	<2000.00	<2000.00	<1000.00
YC-030-4	07/06/09	<420.00	<4.80	<3.90	<550.00	<550.00	<290.00
YC-030-5	07/06/09	<85.00	<3.90	<3.20	<110.00	<110.00	<59.00
YC-031-1	07/07/09	<270.00	<3.70	<3.00	<350.00	<350.00	<180.00
YC-031-2	07/07/09	<300.00	<4.20	<340.00	<400.00	<400.00	<210.00
YC-031-3	07/07/09	<170.00	<3.30	<2.70	<220.00	<220.00	<110.00
YC-831-3	07/07/09	<120.00	<3.30	<2.70	<160.00	<160.00	<82.00
YC-031-4	07/07/09	<2.3	<3.10	<2.50	<3.00	<3.00	<31.00
YC-031-5	07/07/09	<2.20	<3.00	<2.40	<2.80	<2.80	<1.50
YC-032-1	07/07/09	<1900.00	<4.40	<3.60	<2500.00	<2500.00	<1300.00
YC-032-2	07/07/09	<4500.00	<88.00	<72.00	<5900.00	<5900.00	<3100.00
YC-032-3	07/07/09	<100.00	<2.80	<2.30	<130.00	<130.00	<70.00
YC-032-4	07/07/09	<39.00	<2.70	<2.20	<2.60	<2.60	<27.00
YC-032-5	07/07/09	<2.10	<2.90	<2.30	<2.70	<2.70	<1.40
YC-033-1	07/08/09	<140.00	<3.80	<3.10	<3.60	<180.00	<94.00
YC-833-1	07/08/09	<140.00	<3.80	<3.10	<180.00	<180.00	<95.00
YC-033-2	07/08/09	<510.00	<3.50	<2.80	<660.00	<660.00	<350.00
YC-033-3	07/08/09	<340.00	<470.00	<3.20	<450.00	<450.00	<230.00
YC-033-4	07/08/09	<300.00	<410.00	<3.40	<390.00	<390.00	<210.00
YC-033-5	07/08/09	<57.00	<3.90	<3.20	<3.70	<3.70	<1.90
YC-034-1	07/08/09	<150	<4.10	<3.30	<190	<190	<100
YC-034-2	07/08/09	<360.00	<3.30	<2.70	<480.00	<480.00	<250.00
YC-034-3	07/08/09	<1600	<44.00	<36.00	<2100	<42.00	<1100
YC-034-4	07/08/09	<57.00	<3.90	<3.20	<3.70	<3.70	<39.00

Table B3 - Pesticides Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

		Total DDT			Total Chlordane		
Analyte		**4,4'-DDE**	**4,4'-DDT**	**4,4'-TDE/DDD**	**alpha-Chlordane**	**gamma-Chlordane**	**Dieldrin**
Analytical Method		8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082	8081A/ 8082
ERM		46.1	46.1	46.1	6.0	6.0	8.0
Units		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Sample ID	**Sample Date**						
YC-034-5	07/08/09	<2.60	<3.50	<2.90	<3.40	<3.40	<1.80
YC-035-1	07/08/09	<330.00	<3.80	<370.00	<3.60	<430.00	<230.00
YC-035-2	07/08/09	<630.00	<860.00	<710.00	<820.00	<820.00	<430.00
YC-035-3	07/08/09	<1600.00	<31.00	<25.00	<30.00	<30.00	<1100.00
YC-035-4	07/08/09	<120.00	<3.40	<2.80	<160.00	<160.00	<84.00
YC-035-5	07/08/09	<2.40	<3.30	<2.70	<3.10	<3.10	<33.00
YC-036-1	07/09/09	<1200.00	<4.20	<3.50	<1600.00	<1600.00	<850.00
YC-036-2	07/09/09	<1600.00	<36.00	<29.00	<2100.00	<2100.00	<1100.00
YC-036-3	07/09/09	<110.00	<2.90	<2.40	<2.80	<140.00	<73.00
YC-836-3	07/09/09	<440.00	<3.00	<500.00	<2.90	<580.00	<300.00
YC-036-4	07/09/09	<2.00	<2.70	<2.20	<2.60	<2.60	<1.40

Notes:

DDE = dichlorodiphenyldichloroethylene

DDT = dichlorodiphenyltrichloroethane

TDE/DDD = dichlorodiphenyldichloroethane

ug/kg = micrograms per kilogram

ERM = National Oceanic and Atmospheric Administration (NOAA) effects range median (ERM) levels for marine sediment (Buchman 2008, Screening Quick Reference Tables [SQuiRTs])

J = Data validation qualifier indicating concentration is estimated.

<X = not detected above method detection limit of X

Concentrations exceeding ERMs are shaded and bold.

NA = Not analyzed

Table B4 - Metals Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Franciso County, California

Analyte		**Chromium**	**Lead**	**Mercury**	**Zinc**
Analytical Method		6010B	6010B	7471A	6010B
ERM		370	218	0.71	410
Units		mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Date**				
YC-001-1	07/01/09	36.9J	20.5J	0.052J	40.2
YC-001-2	07/01/09	30.9J	15.9J	0.073	38.0J
YC-001-3	07/01/09	66.9J	24.0J	0.044	83.8J
YC-001-4	07/01/09	98.9J	124J	0.50	167J
YC-002-1	07/01/09	182J	**269J**	**1.2**	407J
YC-002-2	07/01/09	**796J**	**746J**	**1.4**	**730J**
YC-002-3	07/01/09	42.4J	31.0J	0.17	51.4J
YC-802-3	07/01/09	52.0J	36.9J	0.20	70.3J
YC-002-4	07/01/09	58.6J	26.7J	0.25	71.3J
YC-002-5	07/01/09	55.1J	8.0J	0.12	43.4J
YC-003-1	06/29/09	318J	**891J**	0.29	394J
YC-003-2	06/29/09	72.0J	44.2J	<0.04	98.6J
YC-803-2	06/29/09	82.8J	156J	<0.04	198J
YC-003-3	06/29/09	47.1J	26.0J	0.057	67.4J
YC-003-4	06/29/09	29.4J	8.2J	0.048	31.5J
YC-003-5	06/29/09	68.4J	8.3J	<0.04	65.1J
YC-004-1	07/02/09	145J	203J	0.37J	286J
YC-004-2	07/02/09	249J	**584J**	**0.97J**	**762J**
YC-004-3	07/02/09	39.6J	14.7J	0.13J	40.2J
YC-005-1	07/07/09	165J	**439J**	0.26J	378J
YC-005-2	07/07/09	222J	**539J**	0.61J	**448J**
YC-805-2	07/07/09	219J	**563J**	0.31J	**474J**
YC-005-3	07/07/09	43.5J	28.6J	0.40J	54.1J
YC-005-4	07/07/09	58.5J	8.5J	0.088J	42.1J
YC-005-5	07/07/09	58.7J	5.4J	<0.03	52.0J
YC-006-1	06/24/09	125J	161J	**0.71J**	242J
YC-006-2	06/24/09	134J	175J	0.49J	251J
YC-006-3	06/24/09	50.1J	67.1J	0.28J	77.6J
YC-006-4	06/24/09	39.8J	16.2J	0.078J	47.5J
YC-006-5	06/24/09	38.1J	4.1J	0.037J	42.3J
YC-007-1	07/07/09	291J	**724J**	**1.0J**	**500J**
YC-007-2	07/07/09	79.4J	102J	0.16J	114J
YC-007-3	07/07/09	52.8J	17.6J	0.082J	66.2J
YC-807-3	07/07/09	47.7J	21.7J	0.047J	54.9J
YC-007-4	07/07/09	35.3J	5.5J	0.083J	29.4J
YC-007-5	07/07/09	25.1J	3.2J	<0.02	32.3J
YC-008-1	07/02/09	99.8J	139J	0.23J	205J
YC-008-2	07/02/09	**462J**	**702J**	**1.0J**	**713J**
YC-008-3	07/02/09	**411J**	**587J**	0.67J	**761J**
YC-008-4	07/02/09	268J	**658J**	**0.72J**	**1130J**
YC-008-5	07/02/09	119J	**309J**	**0.92J**	**509J**
YC-009-1	06/25/09	112J	137J	0.61J	212J
YC-009-2	06/25/09	111J	191J	0.51J	252J

Table B4 - Metals Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Franciso County, California

Analyte		**Chromium**	**Lead**	**Mercury**	**Zinc**
Analytical Method		6010B	6010B	7471A	6010B
ERM		370	218	0.71	410
Units		mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Date**				
YC-009-3	06/25/09	46.0J	36.9J	0.24J	64.5J
YC-009-4	06/25/09	37.3J	9.2J	0.10J	34.2J
YC-009-5	06/25/09	63.0J	77.0J	0.58J	126J
YC-010-1	07/09/09	**534J**	**1000J**	**0.96J**	**759J**
YC-010-2	07/09/09	73.6J	191J	0.25J	177J
YC-010-3	07/09/09	40.5J	8.0J	0.10J	40.1J
YC-810-3	07/09/09	45.3J	20.8J	0.22J	62.5J
YC-010-4	07/09/09	18.4J	1.6J	0.062J	21.1J
YC-011-1	06/25/09	109J	178J	**0.83J**	239J
YC-011-2	06/25/09	263J	**783J**	**1.1J**	**649J**
YC-811-2	06/25/09	274J	**814J**	**1.5J**	**666J**
YC-011-3	06/25/09	328J	**915J**	**0.83J**	**1490J**
YC-011-4	06/25/09	46.3J	54.9J	0.21J	81.1J
YC-011-5	06/25/09	33.9J	8.4J	0.094J	29.8J
YC-012-1	6/25/09	283J	**1130J**	**1.3J**	**806J**
YC-012-2	6/25/09	220J	**290J**	**0.73J**	225J
YC-012-3	6/25/09	129J	**440J**	0.64J	**415J**
YC-012-4	06/25/09	42.4J	23.2J	0.13J	53.8J
YC-012-5	06/25/09	30.4J	3.4J	0.043J	32.5J
YC-013-1	06/24/09	128J	**267J**	0.57J	312J
YC-013-2	06/24/09	155J	**619J**	**1.1J**	364J
YC-013-3	06/24/09	64.4J	195J	0.32J	193J
YC-013-4	06/24/09	48.1J	24.2J	0.18J	58.6J
YC-813-4	06/24/09	44.7J	26.2J	0.14J	60.1J
YC-013-5	06/24/09	39.8J	5.2J	0.091J	47.5J
YC-014-1	06/25/09	140J	213J	**1.1J**	321J
YC-014-2	06/25/09	291J	**455J**	**1.1J**	**417J**
YC-014-3	06/25/09	144J	**458J**	**0.81J**	**415J**
YC-014-4	06/25/09	47.9J	44.0J	0.24J	68.5J
YC-814-4	06/25/09	46.8J	27.4J	0.18J	53.3J
YC-014-5	06/25/09	50.0J	4.3J	0.053J	42.7J
YC-015-1	07/07/09	188J	**619J**	**0.71J**	**668J**
YC-015-2	07/07/09	270J	**937J**	**1.7J**	**516J**
YC-015-3	07/07/09	69.4J	129J	0.13J	122J
YC-015-4	07/07/09	33.3J	8.3J	0.060J	30.4J
YC-015-5	07/07/09	64.2J	7.3J	<0.04	61.6J
YC-016-1	07/01/09	87.8J	**288J**	0.36	341J
YC-016-2	07/01/09	159J	**697J**	0.65	**594J**
YC-016-3	07/01/09	116J	193J	0.62	265J
YC-017-1	06/23/09	131J	182J	0.41J	261J
YC-817-1	06/23/09	170J	**258J**	0.39J	350J
YC-017-2	06/23/09	252J	**449J**	0.27J	**507J**
YC-017-3	06/23/09	164J	**427J**	0.22J	**508J**
YC-017-4	06/23/09	60.8J	38.1J	0.14J	93.7J

Table B4 - Metals Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Franciso County, California

Analyte		**Chromium**	**Lead**	**Mercury**	**Zinc**
Analytical Method		6010B	6010B	7471A	6010B
ERM		370	218	0.71	410
Units		mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Date**				
YC-017-5	06/23/09	39.2J	6.3J	0.077J	30.7J
YC-018-1	06/23/09	97.6J	**262J**	0.53J	**454J**
YC-018-2	06/23/09	161J	**722J**	0.55J	**681J**
YC-018-3	06/23/09	229J	**394J**	0.26J	351J
YC-018-4	06/23/09	272J	**460J**	0.42J	**573J**
YC-818-4	06/23/09	270J	**448J**	0.56J	**580J**
YC-018-5	06/23/09	127J	**428J**	0.36J	**522J**
YC-019-1	06/22/09	125J	**254J**	0.63J	328J
YC-019-2	06/22/09	257J	**809J**	0.51J	**644J**
YC-019-3	06/22/09	148J	**409J**	0.22J	394J
YC-019-4	06/22/09	83.6J	86.2J	0.23J	154J
YC-019-5	06/22/09	48.8J	11.7J	0.076J	45.0J
YC-020-1	06/22/09	99.0J	127J	0.58J	210J
YC-820-1	06/22/09	98.2J	106J	0.41J	192J
YC-020-2	06/22/09	87.9J	**271J**	0.47J	296J
YC-020-3	06/22/09	223J	**483J**	**0.76J**	**448J**
YC-020-4	06/22/09	171J	**453J**	**0.85J**	**458J**
YC-020-5	06/22/09	112J	**426J**	0.58J	387J
YC-021-1	06/22/09	94.1J	154J	0.34J	215J
YC-021-2	06/22/09	169J	**320J**	0.16J	336J
YC-021-3	06/22/09	262J	**530J**	0.37J	**478J**
YC-021-4	06/22/09	208J	**525J**	0.39J	**582J**
YC-021-5	06/22/09	168J	**248J**	0.34J	**458J**
YC-022-1	06/22/09	59.6J	70.1J	0.25J	131J
YC-022-2	06/22/09	66.5J	137J	0.20J	197J
YC-022-3	06/22/09	300J	178J	0.50J	278J
YC-022-4	06/22/09	162J	**333J**	0.51J	400J
YC-022-5	06/22/09	153J	**307J**	0.58J	371J
YC-023-1	06/18/09	91.5J	156J	0.68	213J
YC-023-2	06/18/09	**426J**	**561J**	**0.97**	**517J**
YC-023-3	06/18/09	188J	**288J**	**0.71**	**422J**
YC-023-4	06/18/09	51.8J	8.3J	0.036	52.7J
YC-023-5	06/18/09	58.4J	4.4J	0.053	53.6J
YC-823-5	06/18/09	59.2J	5.1J	0.034	60.7J
YC-024-1	06/22/09	123J	**280J**	0.54J	320J
YC-024-2	06/22/09	189J	**509J**	**0.71J**	**629J**
YC-024-3	06/22/09	276J	**457J**	0.64J	**485J**
YC-824-3	06/22/09	240J	**393J**	0.29J	406J
YC-024-4	06/22/09	175J	**218J**	**0.79J**	407J
YC-024-5	06/22/09	82.9J	49.2J	0.33J	119J
YC-025-1	06/18/09	106J	204J	0.46	271J
YC-025-2	06/18/09	287J	**439J**	0.60	391J
YC-025-3	06/18/09	194J	**363J**	0.65	404J
YC-825-3	06/18/09	322J	**361J**	0.55	403J

Table B4 - Metals Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Franciso County, California

Analyte		**Chromium**	**Lead**	**Mercury**	**Zinc**
Analytical Method		6010B	6010B	7471A	6010B
ERM		370	218	0.71	410
Units		mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Date**				
YC-025-4	06/18/09	134J	103J	0.50	225J
YC-025-5	06/18/09	74.9J	12.9J	0.12	80.5J
YC-026-1	06/18/09	218J	**1210J**	**0.77**	**613J**
YC-026-2	06/18/09	262J	**495J**	**0.97**	**474J**
YC-026-3	06/18/09	133J	108J	**0.80**	221J
YC-026-4	06/18/09	135J	99.8J	0.45	219J
YC-026-5	06/18/09	64.1J	21.6J	0.084	73.6J
YC-027-1	06/18/09	132J	**491J**	0.67	355J
YC-027-2	06/18/09	244J	**545J**	**0.78**	**450J**
YC-027-3	06/18/09	197J	**219J**	0.65	331J
YC-027-4	06/18/09	64.0J	6.6J	0.061	61.5J
YC-027-5	06/18/09	70.7J	15.8J	0.078	71.9J
YC-028-1	06/17/09	118J	176J	0.53	253J
YC-028-2	06/17/09	245J	**620J**	**0.73**	**484J**
YC-028-3	06/17/09	232J	**347J**	**0.82**	394J
YC-028-4	06/17/09	141J	95.5J	0.48	215J
YC-028-5	06/17/09	60.5J	16.0J	0.12	60.6J
YC-029-1	07/06/09	121J	141J	0.62J	234J
YC-029-2	07/06/09	268J	**451J**	**0.91J**	**584J**
YC-029-3	07/06/09	300J	**709J**	**0.83J**	**519J**
YC-829-3	07/06/09	307J	**678J**	0.46J	**542J**
YC-029-4	07/06/09	245J	**289J**	0.66J	347J
YC-029-5	07/06/09	56.2J	35.9J	0.44J	81.2J
YC-030-1	07/06/09	139J	164J	0.58J	250J
YC-030-2	07/06/09	235J	**682J**	**0.74J**	**633J**
YC-030-3	07/06/09	267J	**453J**	0.55J	**445J**
YC-030-4	07/06/09	231J	201J	0.61J	338J
YC-030-5	07/06/09	83.7J	34.8J	0.30J	100J
YC-031-1	07/07/09	146J	**249J**	0.38J	321J
YC-031-2	07/07/09	247J	**567J**	0.57J	**559J**
YC-031-3	07/07/09	75.4J	102J	0.28J	147J
YC-831-3	07/07/09	81.5J	123J	0.15J	166J
YC-031-4	07/07/09	45.8J	16.7J	0.11J	47.9J
YC-031-5	07/07/09	38.5J	5.7J	<0.03	32.3J
YC-032-1	07/07/09	310J	**978J**	**0.97J**	**835J**
YC-032-2	07/07/09	**443J**	**882J**	**0.84J**	**828J**
YC-032-3	07/07/09	47.6J	56.6J	0.12J	68.0J
YC-032-4	07/07/09	47.0J	4.4J	0.042J	32.9J
YC-032-5	07/07/09	40.2J	3.5J	<0.03	45.8J
YC-033-1	07/08/09	95.4J	148J	0.46J	209J
YC-833-1	07/08/09	103J	179J	0.54J	247J
YC-033-2	07/08/09	185J	**912J**	**0.73J**	**540J**

Table B4 - Metals Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Franciso County, California

Analyte		**Chromium**	**Lead**	**Mercury**	**Zinc**
Analytical Method		6010B	6010B	7471A	6010B
ERM		370	218	0.71	410
Units		mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Date**				
YC-033-3	07/08/09	253J	**532J**	0.48J	**507J**
YC-033-4	07/08/09	179J	**343J**	0.62J	**453J**
YC-033-5	07/08/09	94.5J	58.5J	0.23J	132J
YC-034-1	07/08/09	117J	**221J**	0.56J	356J
YC-034-2	07/08/09	176J	**625J**	**0.85J**	**436J**
YC-034-3	07/08/09	360J	**578J**	**1.2J**	**564J**
YC-034-4	07/08/09	114J	104J	0.50J	201J
YC-034-5	07/08/09	61.9J	7.9J	0.063J	59.7J
YC-035-1	07/08/09	133J	**225J**	0.60J	302J
YC-035-2	07/08/09	160J	**484J**	0.65J	359J
YC-035-3	07/08/09	114J	**482J**	0.34J	257J
YC-035-4	07/08/09	116J	**243J**	0.47J	320J
YC-035-5	07/08/09	57.2J	22.7J	0.18J	64.1J
YC-036-1	07/09/09	189J	**396J**	**1.0J**	394J
YC-036-2	07/09/09	250J	**370J**	**0.74J**	296J
YC-036-3	07/09/09	252J	**382J**	0.25J	300J
YC-836-3	07/09/09	116J	**219J**	0.28J	253J
YC-036-4	07/09/09	38.4J	5.7J	0.087J	37.3J

Notes:

mg/kg = milligrams per kilogram

ERM = National Oceanic and Atmospheric Administration (NOAA) effects range median (ERM) levels for marine sediment (Buchman 2008, Screening Quick Reference Tables [SQuiRTs])

J = Data validation qualifier indicating concentration is estimated.

<X = not detected above method detection limit of X

Concentrations exceeding ERMs are shaded and bold.

Table B5 - Total Petroleum Hydrocarbons (TPH) Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		Bunker C	Diesel Fuel	Fuel Oil 4 & 5	Gasoline	Hydraulic Fluid	Jet A	JP4	JP5	JP8	Kerosene	Mineral Spirits	Motor Oil
Analytical Method		8015B-e	8015B-e	8015B-e	8015	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e
ESL		NA	180	NA	180,000	NA	NA	NA	NA	NA	NA	NA	2,500
Units		mg/kg	mg/kg	mg/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Date**												
YC-001-1	07/01/09	<4.90	<0.89	<4.90	<510.0	<4.90	<5.00	<4.90	<4.90	<4.90	<4.90	<4.90	<5.20
YC-001-2	07/01/09	<4.90	<0.89	<4.90	<440.0	<4.90	<5.00	<4.90	<4.90	<4.90	<4.90	<4.90	<5.20
YC-001-3	07/01/09	<6.30	<1.10	<6.30	<650.0	<6.30	<6.30	<6.30	<6.30	<6.30	<6.30	<6.30	<6.70
YC-001-4	07/01/09	<7.20	<1.30	<7.20	<740.0	<7.20	<7.20	<7.20	<7.20	<7.20	<7.20	<7.20	<7.60
YC-002-1	07/01/09	<7.90	140J	<7.90	<810.0	<7.90	<7.90	<7.90	<7.90	<7.90	<7.90	<7.90	430J
YC-002-2	07/01/09	<59.00	**640J**	<59.00	<600.0	<59.00	<59.00	<59.00	<59.00	<59.00	<59.00	<59.00	850J
YC-002-3	07/01/09	<4.30	41J	<4.30	<440.0	<4.30	<4.40	<4.30	<4.30	<4.30	<4.30	<4.30	110J
YC-802-3	07/01/09	<4.40	32J	<4.40	460	<4.40	<4.40	<4.40	<4.40	<4.40	<4.40	<4.40	79J
YC-002-4	07/01/09	<5.20	16J	<5.20	<530.0	<5.20	<5.20	<5.20	<5.20	<5.20	<5.20	<5.20	27J
YC-002-5	07/01/09	<4.90	<0.89	<4.90	<510.0	<4.90	<5.00	<4.90	<4.90	<4.90	<4.90	<4.90	<5.20
YC-003-1	06/29/09	<100.00	**680J**	<100.00	<520.0	<100.00	<100.00	<100.00	<100.00	<100.00	<100.00	<100.00	1700J
YC-003-2	06/29/09	<6.60	30J	<6.60	<680.0	<6.60	<6.70	<6.60	<6.60	<6.60	<6.60	<6.60	84J
YC-803-2	06/29/09	<6.50	<1.20	<6.50	<670.0	<6.50	<6.50	<6.50	<6.50	<6.50	<6.50	<6.50	<6.80
YC-003-3	06/29/09	<5.00	<0.92	<5.00	<520.0	<5.00	<5.10	<5.00	<5.00	<5.00	<5.00	<5.00	<5.40
YC-003-4	06/29/09	<4.20	<0.76	<4.20	<430.0	<4.20	<4.20	<4.20	<4.20	<4.20	<4.20	<4.20	<4.40
YC-003-5	06/29/09	<6.10	<1.10	<6.10	<630.0	<6.10	<6.20	<6.10	<6.10	<6.10	<6.10	<6.10	<6.50
YC-004-1	07/02/09	<44.00	**640**	<44.00	<910.0	<44.00	<45.00	<44.00	<44.00	<44.00	<44.00	<44.00	2400
YC-004-2	07/02/09	<140.00	**1100**	<140.00	5600J	<140.00	<140.00	<140.00	<140.00	<140.00	<140.00	<140.00	**3000**
YC-004-3	07/02/09	<4.40	<0.80	<4.40	<460.0	<4.40	<4.50	<4.40	<4.40	<4.40	<4.40	<4.40	<4.70
YC-005-1	07/07/09	<96.00	**340J**	<96.00	<500.0	<96.00	<97.00	<96.00	<96.00	<96.00	<96.00	<96.00	1100J
YC-005-2	07/07/09	<260.00	**3100J**	<260.00	710J	<260.00	<270.00	<260.00	<260.00	<260.00	<260.00	<260.00	**9100J**
YC-805-2	07/07/09	<520.00	**1100J**	<520.00	3900J	<520.00	<520.00	<520.00	<520.00	<520.00	<520.00	<520.00	**3400J**
YC-005-3	07/07/09	<42.00	96J	<42.00	2200J	<42.00	<43.00	<42.00	<42.00	<42.00	<42.00	<42.00	280J
YC-005-4	07/07/09	<4.70	26J	<4.70	<480.0	<4.70	<4.70	<4.70	<4.70	<4.70	<4.70	<4.70	47J
YC-005-5	07/07/09	<5.40	<0.99	<5.40	<560.0	<5.40	<5.50	<5.40	<5.40	<5.40	<5.40	<5.40	<5.80
YC-006-1	06/24/09	<7.80	15J	<7.80	<810.0	<7.80	<7.90	<7.80	<7.80	<7.80	<7.80	<7.80	54J
YC-006-2	06/24/09	<6.20	51J	<6.20	<640.0	<6.20	<6.30	<6.20	<6.20	<6.20	<6.20	<6.20	160J
YC-006-3	06/24/09	<4.60	10J	<4.60	<480.0	<4.60	<4.70	<4.60	<4.60	<4.60	<4.60	<4.60	26J
YC-006-4	06/24/09	<4.20	<0.76	<4.20	<430.0	<4.20	<4.20	<4.20	<4.20	<4.20	<4.20	<4.20	<4.40
YC-006-5	06/24/09	<4.10	<0.74	<4.10	<420.0	<4.10	<4.10	<4.10	<4.10	<4.10	<4.10	<4.10	<4.30
YC-007-1	07/07/09	<690.00	**400J**	<690.00	<710.0	<690.00	<700.00	<690.00	<690.00	<690.00	<690.00	<690.00	1800J
YC-007-2	07/07/09	<4.40UJ	82J	<4.40UJ	<460.0	<4.40UJ	<4.50UJ	<4.40UJ	<4.40UJ	<4.40UJ	<4.40UJ	<4.40UJ	350J
YC-007-3	07/07/09	<5.10UJ	20J	<5.10UJ	<520.0	<5.10UJ	<5.10UJ	<5.10UJ	<5.10UJ	<5.10UJ	<5.10UJ	<5.10UJ	42J
YC-807-3	07/07/09	<4.60UJ	13J	<4.60UJ	<470.0	<4.60UJ	<4.60UJ	<4.60UJ	<4.60UJ	<4.60UJ	<4.60UJ	<4.60UJ	28J
YC-007-4	07/07/09	<4.00UJ	16J	<4.00UJ	<420.0	<4.00UJ	<4.10UJ	<4.00UJ	<4.00UJ	<4.00UJ	<4.00UJ	<4.00UJ	34J
YC-007-5	07/07/09	<3.90	<0.72	<3.90	<410.0	<3.90	<4.00	<3.90	<3.90	<3.90	<3.90	<3.90	<4.20
YC-008-1	07/02/09	<29.00	86J	<29.00	<600.0	<29.00	<29.00	<29.00	<29.00	<29.00	<29.00	<29.00	260J
YC-008-2	07/02/09	<75.00	**430J**	<75.00	1100J	<75.00	<76.00	<75.00	<75.00	<75.00	<75.00	<75.00	1400J
YC-008-3	07/02/09	<69.00	**460J**	<69.00	18000J	<69.00	<70.00	<69.00	<69.00	<69.00	<69.00	<69.00	1200J
YC-008-4	07/02/09	<72.00	**510J**	<72.00	11000J	<72.00	<73.00	<72.00	<72.00	<72.00	<72.00	<72.00	1600J
YC-008-5	07/02/09	<52.00	**380J**	<52.00	9200J	<52.00	<52.00	<52.00	<52.00	<52.00	<52.00	<52.00	960J

Table B5 - Total Petroleum Hydrocarbons (TPH) Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		Bunker C	Diesel Fuel	Fuel Oil 4 & 5	Gasoline	Hydraulic Fluid	Jet A	JP4	JP5	JP8	Kerosene	Mineral Spirits	Motor Oil
Analytical Method		8015B-e	8015B-e	8015B-e	8015	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e
ESL		NA	180	NA	180,000	NA	NA	NA	NA	NA	NA	NA	2,500
Units		mg/kg	mg/kg	mg/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Date**												
YC-009-1	06/25/09	<7.40	<1.40	<7.40	<770.0	<7.40	<7.50	<7.40	<7.40	<7.40	<7.40	<7.40	<7.90
YC-009-2	06/25/09	<5.60	17J	<5.60	<580.0	<5.60	<5.70	<5.60	<5.60	<5.60	<5.60	<5.60	56J
YC-009-3	06/25/09	<4.40	9.0J	<4.40	<450.0	<4.40	<4.40	<4.40	<4.40	<4.40	<4.40	<4.40	21J
YC-009-4	06/25/09	<4.00	<0.72	<4.00	<410.0	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.20
YC-009-5	06/25/09	<5.20	10J	<5.20	<530.0	<5.20	<5.20	<5.20	<5.20	<5.20	<5.20	<5.20	25J
YC-010-1	07/09/09	<130.00	**970**	<130.00	<680.0	<130.00	<130.00	<130.00	<130.00	<130.00	<130.00	<130.00	**3100**
YC-010-2	07/09/09	<44.00	46	<44.00	<460.0	<44.00	<45.00	<44.00	<44.00	<44.00	<44.00	<44.00	240
YC-010-3	07/09/09	<4.10	38	<4.10	<430.0	<4.10	<4.20	<4.10	<4.10	<4.10	<4.10	<4.10	71
YC-810-3	07/09/09	<4.40	35	<4.40	<460.0	<4.40	<4.50	<4.40	<4.40	<4.40	<4.40	<4.40	66
YC-010-4	07/09/09	<4.00	<0.73	<4.00	<410.0	<4.00	<4.10	<4.00	<4.00	<4.00	<4.00	<4.00	<4.30
YC-011-1	06/25/09	<6.70	67J	<6.70	<690.0	<6.70	<6.80	<6.70	<6.70	<6.70	<6.70	<6.70	130J
YC-011-2	06/25/09	<31.00	**190J**	<31.00	<630.0	<31.00	<31.00	<31.00	<31.00	<31.00	<31.00	<31.00	380J
YC-811-2	06/25/09	<32.00	96J	<32.00	1100	<32.00	<32.00	<32.00	<32.00	<32.00	<32.00	<32.00	190J
YC-011-3	06/25/09	<630.00	**5900J**	<630.00	23000J	<630.00	<630.00	<630.00	<630.00	<630.00	<630.00	<630.00	<660.00
YC-011-4	06/25/09	<4.30	26J	<4.30	<440.0	<4.30	<4.30	<4.30	<4.30	<4.30	<4.30	<4.30	<4.60
YC-011-5	06/25/09	<4.10	<0.75	<4.10	<430.0	<4.10	<4.20	<4.10	<4.10	<4.10	<4.10	<4.10	<4.40
YC-012-1	06/25/09	<7.00	72J	<7.00	<720.0	<7.00	<7.10	<7.00	<7.00	<7.00	<7.00	<7.00	170J
YC-012-2	06/25/09	<26.00	110J	<26.00	<540.0	<26.00	<27.00	<26.00	<26.00	<26.00	<26.00	<26.00	210J
YC-012-3	06/25/09	<9.80	51J	<9.80	<510.0	<9.80	<9.90	<9.80	<9.80	<9.80	<9.80	<9.80	83J
YC-012-4	06/25/09	<4.30	16J	<4.30	<440.0	<4.30	<4.30	<4.30	<4.30	<4.30	<4.30	<4.30	29J
YC-012-5	06/25/09	<4.10	<0.75	<4.10	<420.0	<4.10	<4.10	<4.10	<4.10	<4.10	<4.10	<4.10	<4.30
YC-013-1	06/24/09	<5.90	32J	<5.90	<610.0	<5.90	<6.00	<5.90	<5.90	<5.90	<5.90	<5.90	120J
YC-013-2	06/24/09	<26.00	130J	<26.00	<530.0	<26.00	<26.00	<26.00	<26.00	<26.00	<26.00	<26.00	200J
YC-013-3	06/24/09	<4.00	47J	<4.00	<420.0	<4.00	<4.10	<4.00	<4.00	<4.00	<4.00	<4.00	120J
YC-013-4	06/24/09	<4.20	13J	<4.20	<440.0	<4.20	<4.30	<4.20	<4.20	<4.20	<4.20	<4.20	45J
YC-813-4	06/24/09	<4.30	8.5J	<4.30	<440.0	<4.30	<4.30	<4.30	<4.30	<4.30	<4.30	<4.30	29J
YC-013-5	06/24/09	<4.60	<0.84	<4.60	<480.0	<4.60	<4.70	<4.60	<4.60	<4.60	<4.60	<4.60	<4.90
YC-014-1	06/25/09	<6.90	56J	<6.90	<710.0	<6.90	<6.90	<6.90	<6.90	<6.90	<6.90	<6.90	130J
YC-014-2	06/25/09	<6.00	25J	<6.00	<610.0	<6.00	<6.00	<6.00	<6.00	<6.00	<6.00	<6.00	51J
YC-014-3	06/25/09	<24.00	130J	<24.00	1300J	<24.00	<25.00	<24.00	<24.00	<24.00	<24.00	<24.00	250J
YC-014-4	06/25/09	<4.30	22J	<4.30	<450.0	<4.30	<4.40	<4.30	<4.30	<4.30	<4.30	<4.30	35J
YC-814-4	06/25/09	<4.40	15J	<4.40	<450.0	<4.40	<4.40	<4.40	<4.40	<4.40	<4.40	<4.40	22J
YC-014-5	06/25/09	<4.60	<0.83	<4.60	<470.0	<4.60	<4.60	<4.60	<4.60	<4.60	<4.60	<4.60	<4.80
YC-015-1	07/07/09	<110.00	**710J**	<110.00	<590.0	<110.00	<120.00	<110.00	<110.00	<110.00	<110.00	<110.00	2400J
YC-015-2	07/07/09	<290.00	**2300J**	<290.00	730J	<290.00	<290.00	<290.00	<290.00	<290.00	<290.00	<290.00	**6100J**
YC-015-3	07/07/09	<22.00	130J	<22.00	550J	<22.00	<22.00	<22.00	<22.00	<22.00	<22.00	<22.00	400J
YC-015-4	07/07/09	<4.20	14J	<4.20	<440.0	<4.20	<4.30	<4.20	<4.20	<4.20	<4.20	<4.20	27J
YC-015-5	07/07/09	<5.70	<1.00	<5.70	<590.0UJ	<5.70	<5.80	<5.70	<5.70	<5.70	<5.70	<5.70	<6.10
YC-016-1	07/01/09	<26.00	67J	<26.00	<530.0	<26.00	<26.00	<26.00	<26.00	<26.00	<26.00	<26.00	140J
YC-016-2	07/01/09	<53.00	**570J**	<53.00	3200J	<53.00	<53.00	<53.00	<53.00	<53.00	<53.00	<53.00	1000J
YC-016-3	07/01/09	<4.70	47J	<4.70	<480.0	<4.70	<4.70	<4.70	<4.70	<4.70	<4.70	<4.70	120J
YC-017-1	06/23/09	<6.80	29J	<6.80	<700.0	<6.80	<6.90	<6.80	<6.80	<6.80	<6.80	<6.80	95J

Table B5 - Total Petroleum Hydrocarbons (TPH) Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		Bunker C	Diesel Fuel	Fuel Oil 4 & 5	Gasoline	Hydraulic Fluid	Jet A	JP4	JP5	JP8	Kerosene	Mineral Spirits	Motor Oil
Analytical Method		8015B-e	8015B-e	8015B-e	8015	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e
ESL		NA	180	NA	180,000	NA	NA	NA	NA	NA	NA	NA	2,500
Units		mg/kg	mg/kg	mg/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Date**												
YC-817-1	06/23/09	<34.00	170J	<34.00	<690.0	<34.00	<34.00	<34.00	<34.00	<34.00	<34.00	<34.00	510J
YC-017-2	06/23/09	<6.00	80J	<6.00	<620.0	<6.00	<6.10	<6.00	<6.00	<6.00	<6.00	<6.00	150J
YC-017-3	06/23/09	<5.50	68J	<5.50	<570.0	<5.50	<5.60	<5.50	<5.50	<5.50	<5.50	<5.50	150J
YC-017-4	06/23/09	<4.90	13J	<4.90	<510.0	<4.90	<5.00	<4.90	<4.90	<4.90	<4.90	<4.90	21J
YC-017-5	06/23/09	<4.40	<0.79	<4.40	<450.0	<4.40	<4.40	<4.40	<4.40	<4.40	<4.40	<4.40	<4.60
YC-018-1	06/23/09	<5.70	55J	<5.70	<580.0	<5.70	<5.70	<5.70	<5.70	<5.70	<5.70	<5.70	87J
YC-018-2	06/23/09	<29.00	**210J**	<29.00	<600.0	<29.00	<30.00	<29.00	<29.00	<29.00	<29.00	<29.00	690J
YC-018-3	06/23/09	<30.00	**200J**	<30.00	<630.0	<30.00	<31.00	<30.00	<30.00	<30.00	<30.00	<30.00	520J
YC-018-4	06/23/09	<110.00	**440J**	<110.00	7200J	<110.00	<120.00	<110.00	<110.00	<110.00	<110.00	<110.00	920J
YC-818-4	06/23/09	<57.00	**440J**	<57.00	9200J	<57.00	<58.00	<57.00	<57.00	<57.00	<57.00	<57.00	1100J
YC-018-5	06/23/09	<51.00	**360J**	<51.00	11000	<51.00	<51.00	<51.00	<51.00	<51.00	<51.00	<51.00	1000J
YC-019-1	06/22/09	<6.10	76J	<6.10	<630.0	<6.10	<6.20	<6.10	<6.10	<6.10	<6.10	<6.10	120J
YC-019-2	06/22/09	<29.00	**250J**	<29.00	12000J	<29.00	<30.00	<29.00	<29.00	<29.00	<29.00	<29.00	440J
YC-019-3	06/22/09	<28.00	150J	<28.00	3900	<28.00	<28.00	<28.00	<28.00	<28.00	<28.00	<28.00	220J
YC-019-4	06/22/09	<5.30	27J	<5.30	<550.0	<5.30	<5.40	<5.30	<5.30	<5.30	<5.30	<5.30	43J
YC-019-5	06/22/09	<5.10	<0.93	<5.10	<530.0	<5.10	<5.20	<5.10	<5.10	<5.10	<5.10	<5.10	<5.50
YC-020-1	06/22/09	<6.60	26J	<6.60	<680.0	<6.60	<6.70	<6.60	<6.60	<6.60	<6.60	<6.60	38J
YC-820-1	06/22/09	<6.40	19J	<6.40	<660.0	<6.40	<6.50	<6.40	<6.40	<6.40	<6.40	<6.40	62J
YC-020-2	06/22/09	<24.00	**270J**	<24.00	<500.0	<24.00	<25.00	<24.00	<24.00	<24.00	<24.00	<24.00	**4900J**
YC-020-3	06/22/09	<30.00	**200J**	<30.00	<630.0	<30.00	<31.00	<30.00	<30.00	<30.00	<30.00	<30.00	410J
YC-020-4	06/22/09	<29.00	170J	<29.00	6900	<29.00	<29.00	<29.00	<29.00	<29.00	<29.00	<29.00	310J
YC-020-5	06/22/09	<4.50	54J	<4.50	3600	<4.50	<4.50	<4.50	<4.50	<4.50	<4.50	<4.50	99J
YC-021-1	06/22/09	<5.10	39J	<5.10	<530.0	<5.10	<5.20	<5.10	<5.10	<5.10	<5.10	<5.10	140J
YC-021-2	06/22/09	<4.80	44J	<4.80	1800J	<4.80	<4.80	<4.80	<4.80	<4.80	<4.80	<4.80	96J
YC-021-3	06/22/09	<32.00	73J	<32.00	2500	<32.00	<32.00	<32.00	<32.00	<32.00	<32.00	<32.00	250J
YC-021-4	06/22/09	<30.00	**220J**	<30.00	6100	<30.00	<31.00	<30.00	<30.00	<30.00	<30.00	<30.00	530J
YC-021-5	06/22/09	<33.00	99J	<33.00	2300	<33.00	<33.00	<33.00	<33.00	<33.00	<33.00	<33.00	340J
YC-022-1	06/22/09	<5.20	42J	<5.20	<530.0	<5.20	<5.20	<5.20	<5.20	<5.20	<5.20	<5.20	64J
YC-022-2	06/22/09	<44.00	**230J**	<44.00	650	<44.00	<45.00	<44.00	<44.00	<44.00	<44.00	<44.00	350J
YC-022-3	06/22/09	<6.10	31J	<6.10	<630.0	<6.10	<6.10	<6.10	<6.10	<6.10	<6.10	<6.10	50J
YC-022-4	06/22/09	<27.00	80J	<27.00	1800J	<27.00	<27.00	<27.00	<27.00	<27.00	<27.00	<27.00	140J
YC-022-5	06/22/09	<25.00	**200J**	<25.00	8200	<25.00	<25.00	<25.00	<25.00	<25.00	<25.00	<25.00	400J
YC-023-1	06/18/09	<4.70	25J	<4.70	<470.0	<4.70	<4.70	<4.70	<4.70	<4.70	<4.70	<4.70	57J
YC-023-2	06/18/09	<7.00	61J	<7.00	<720.0	<7.00	<7.10	<7.00	<7.00	<7.00	<7.00	<7.00	140J
YC-023-3	06/18/09	<6.50	95J	<6.50	<670	<6.50	<6.60	<6.50	<6.50	<6.50	<6.50	<6.50	270J
YC-023-4	06/18/09	<5.00	20J	<5.00	<510.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	40J
YC-023-5	06/18/09	<5.60	<1.00	<5.60	<580.0	5.6	<5.70	<5.60	<5.60	<5.60	<5.60	<5.60	<6.00
YC-823-5	06/18/09	<5.40	<0.98	<5.40	<550.0	<5.40	<5.40	<5.40	<5.40	<5.40	<5.40	<5.40	<5.70
YC-024-1	06/22/09	<28.00	140J	<28.00	<590.0	<28.00	<29.00	<28.00	28	<28.00	<28.00	<28.00	190J
YC-024-2	06/22/09	<26.00	74J	<26.00	1900	<26.00	<26.00	<26.00	<26.00	<26.00	<26.00	<26.00	93J
YC-024-3	06/22/09	<33.00	**220J**	<33.00	8600	<33.00	<33.00	<33.00	<33.00	<33.00	<33.00	<33.00	270J

Table B5 - Total Petroleum Hydrocarbons (TPH) Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		Bunker C	Diesel Fuel	Fuel Oil 4 & 5	Gasoline	Hydraulic Fluid	Jet A	JP4	JP5	JP8	Kerosene	Mineral Spirits	Motor Oil
Analytical Method		8015B-e	8015B-e	8015B-e	8015	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e
ESL		NA	180	NA	180,000	NA	NA	NA	NA	NA	NA	NA	2,500
Units		mg/kg	mg/kg	mg/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Date**												
YC-824-3	06/22/09	<31.00	97J	<31.00	8900	<31.00	<32.00	<31.00	<31.00	<31.00	<31.00	<31.00	340J
YC-024-4	06/22/09	<6.90	69J	<6.90	950	<6.90	<6.90	<6.90	<6.90	<6.90	<6.90	<6.90	110J
YC-024-5	06/22/09	<6.00	<1.10	<6.00	<620.0	<6.00	<6.00	<6.00	<6.00	<6.00	<6.00	<6.00	<6.40
YC-025-1	06/18/09	<5.00	52J	<5.00	<520.0	<5.00	<5.10	<5.00	<5.00	<5.00	<5.00	<5.00	140J
YC-025-2	06/18/09	<5.50	68J	<5.50	<560.0	<5.50	<5.50	<5.50	<5.50	<5.50	<5.50	<5.50	180J
YC-025-3	06/18/09	<6.30	63J	<6.30	1300J	<6.30	<6.40	<6.30	<6.30	<6.30	<6.30	<6.30	140J
YC-825-3	06/18/09	<6.10	**270J**	<11.00	2100J	<630.0	<6.10	<6.10	<6.10	<6.10	<6.10	<6.10	290J
YC-025-4	06/18/09	<6.30	38J	<6.30	<650.0	<6.30	<6.30	<6.30	<6.30	<6.30	<6.30	<6.30	91J
YC-025-5	06/18/09	<5.90	11J	<5.90	<610.0	<5.90	<6.00	<5.90	<5.90	<5.90	<5.90	<5.90	22J
YC-026-1	06/18/09	<5.50	120J	<5.50	<570.0	<5.50	<5.60	<5.50	<5.50	<5.50	<5.50	<5.50	450J
YC-026-2	06/18/09	<6.80	62J	<6.80	2100J	<6.80	<6.90	<6.80	<6.80	<6.80	<6.80	<6.80	140J
YC-026-3	06/18/09	<7.10	33J	<7.10	<740.0	<7.10	<7.20	<7.10	<7.10	<7.10	<7.10	<7.10	85J
YC-026-4	06/18/09	<7.00	12J	<7.00	<720.0	<7.00	<7.10	<7.00	<7.00	<7.00	<7.00	<7.00	28J
YC-026-5	06/18/09	<5.70	<1.00	<5.70	<590.0	<5.70	<5.70	<5.70	<5.70	<5.70	<5.70	<5.70	<6.00
YC-027-1	06/18/09	<5.20	45J	<5.20	<530.0	<5.20	<5.20	<5.20	<5.20	<5.20	<5.20	<5.20	110J
YC-027-2	06/18/09	<64.00	95J	<64.00	2900J	<64.00	<65.00	<64.00	<64.00	<64.00	<64.00	<64.00	160J
YC-027-3	06/18/09	<6.70	21J	<6.70	<700.0	<6.70	<6.80	<6.70	<6.70	<6.70	<6.70	<6.70	51J
YC-027-4	06/18/09	<5.80	<1.00	<5.80	<590.0	<5.80	<5.80	<5.80	<5.80	<5.80	<5.80	<5.80	<6.10
YC-027-5	06/18/09	<5.70	<1.00	<5.70	<590.0	<5.70	<5.80	<5.70	<5.70	<5.70	<5.70	<5.70	<6.10
YC-028-1	06/17/09	<5.70	29J	<5.70	<590.0	<5.70	<5.70	<5.70	<5.70	<5.70	<5.70	<5.70	69J
YC-028-2	06/17/09	<6.30	62J	<6.30	<650.0	<6.30	<6.40	<6.30	<6.30	<6.30	<6.30	<6.30	160J
YC-028-3	06/17/09	<6.80	40J	<6.80	<700.0	<6.80	<6.80	<6.80	<6.80	<6.80	<6.80	<6.80	98J
YC-028-4	06/17/09	<6.80	16J	<6.80	<700.0	<6.80	<6.90	<6.80	<6.80	<6.80	<6.80	<6.80	41J
YC-028-5	06/17/09	<5.80	<1.10	<5.80	<600.0	<5.80	<5.90	<5.80	<5.80	<5.80	<5.80	<5.80	<6.20
YC-029-1	07/06/09	<33.00	76J	<33.00	<680.0	<33.00	<33.00	<33.00	<33.00	<33.00	<33.00	<33.00	230J
YC-029-2	07/06/09	<66.00	**250J**	<66.00	<680.0	<66.00	<67.00	<66.00	<66.00	<66.00	<66.00	<66.00	870J
YC-029-3	07/06/09	<360.00	**1100J**	<360.00	<740.0	<360.00	<360.00	<360.00	<360.00	<360.00	<360.00	<360.00	**3400J**
YC-829-3	07/06/09	<72.00	**1000J**	<72.00	<740.0	<72.00	<73.00	<72.00	<72.00	<72.00	<72.00	<72.00	**3100J**
YC-029-4	07/06/09	<73.00	**290J**	<73.00	3000J	<73.00	<74.00	<73.00	<73.00	<73.00	<73.00	<73.00	1000J
YC-029-5	07/06/09	<26.00	66J	26	<530.0	<26.00	<26.00	<26.00	<26.00	<26.00	<26.00	<26.00	230J
YC-030-1	07/06/09	<32.00	110J	<32.00	<650.0	<32.00	<32.00	<32.00	<32.00	<32.00	<32.00	<32.00	340J
YC-030-2	07/06/09	<64.00	**260J**	<64.00	<660.0	<64.00	<65.00	<64.00	<64.00	<64.00	<64.00	<64.00	920J
YC-030-3	07/06/09	<130.00	**470J**	<130.00	<640.0	<130.00	<130.00	<130.00	<130.00	<130.00	<130.00	<130.00	1500J
YC-030-4	07/06/09	<72.00	**340J**	<72.00	<740.0	<72.00	<73.00	<72.00	<72.00	<72.00	<72.00	<72.00	1200J
YC-030-5	07/06/09	<5.90	21J	<5.90	<600.0	<5.90	<5.90	<5.90	<5.90	<5.90	<5.90	<5.90	66J
YC-031-1	07/07/09	<55.00	**410J**	<55.00	<570.0	<55.00	<56.00	<55.00	<55.00	<55.00	<55.00	<55.00	1300J

Table B5 - Total Petroleum Hydrocarbons (TPH) Sediment Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		**Bunker C**	**Diesel Fuel**	**Fuel Oil 4 & 5**	**Gasoline**	**Hydraulic Fluid**	**Jet A**	**JP4**	**JP5**	**JP8**	**Kerosene**	**Mineral Spirits**	**Motor Oil**
Analytical Method		8015B-e	8015B-e	8015B-e	8015	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e
ESL		NA	180	NA	180,000	NA	NA	NA	NA	NA	NA	NA	2,500
Units		mg/kg	mg/kg	mg/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Sample Date**												
YC-031-2	07/07/09	<310.00	**1300J**	<310.00	<650.0	<310.00	<320.00	<310.00	<310.00	<310.00	<310.00	<310.00	**3700J**
YC-031-3	07/07/09	<25.00	**190J**	<25.00	<510.0	<25.00	<25.00	<25.00	<25.00	<25.00	<25.00	<25.00	630J
YC-831-3	07/07/09	<24.00	130J	<24.00	<500.0	<24.00	<25.00	<24.00	<24.00	<24.00	<24.00	<24.00	340J
YC-031-4	07/07/09	<4.70	21J	<4.70	<480.0	<4.70	<4.70	<4.70	<4.70	<4.70	<4.70	<4.70	36J
YC-031-5	07/07/09	<4.50	<0.81	<4.50	<460.0	<4.50	<4.50	<4.50	<4.50	<4.50	<4.50	<4.50	<4.70
YC-032-1	07/07/09	<130.00	**910J**	<130.00	860J	<130.00	<130.00	<130.00	<130.00	<130.00	<130.00	<130.00	**2600J**
YC-032-2	07/07/09	<130.00	**2800J**	<130.00	6200J	<130.00	<130.00	<130.00	<130.00	<130.00	<130.00	<130.00	**5000J**
YC-032-3	07/07/09	<4.20	88J	<4.20	710J	<4.20	<4.20	<4.20	<4.20	<4.20	<4.20	<4.20	290J
YC-032-4	07/07/09	<4.00	14J	<4.00	<420.0	<4.00	<4.10	<4.00	<4.00	<4.00	<4.00	<4.00	22J
YC-032-5	07/07/09	<4.30	<0.78	<4.30	<440.0	<4.30	<4.30	<4.30	<4.30	<4.30	<4.30	<4.30	<4.60
YC-033-1	07/08/09	<56.00	19J	<56.00	<580.0	<56.00	<57.00	<56.00	<56.00	<56.00	<56.00	<56.00	190J
YC-833-1	07/08/09	<5.70	57J	<5.70	<590.0	<5.70	<5.80	<5.70	<5.70	<5.70	<5.70	<5.70	140J
YC-033-2	07/08/09	<100.00	**650**	<100.00	1200	<100.00	<110.00	<100.00	<100.00	<100.00	<100.00	<100.00	1600
YC-033-3	07/08/09	<29.00	**210**	<29.00	3600J	<29.00	<29.00	<29.00	<29.00	<29.00	<29.00	<29.00	510
YC-033-4	07/08/09	<62.00	**410**	<62.00	2800	<62.00	<62.00	<62.00	<62.00	<62.00	<62.00	<62.00	900
YC-033-5	07/08/09	<5.80	25J	<5.80	<600.0	<5.80	<5.90	<5.80	<5.80	<5.80	<5.80	<5.80	52J
YC-034-1	07/08/09	<6.10	97	<6.10	<630.0	<6.10	<6.20	<6.10	<6.10	<6.10	<6.10	<6.10	330J
YC-034-2	07/08/09	<5.00	170J	<5.00	650J	<5.00	<5.10	<5.00	<5.00	<5.00	<5.00	<5.00	760J
YC-034-3	07/08/09	<6.60	**460J**	<6.60	16000J	<6.60	6.7	<6.60	<6.60	<6.60	<6.60	<6.60	1700J
YC-034-4	07/08/09	<5.90	55	<5.90	<600.0	<5.90	<5.90	<5.90	<5.90	<5.90	<5.90	<5.90	210J
YC-034-5	07/08/09	<5.30	7.2	<5.30	<550.0	<5.30	<5.40	<5.30	<5.30	<5.30	<5.30	<5.30	17
YC-035-1	07/08/09	<11.00	**260J**	<11.00	1700	<11.00	<11.00	<11.00	<11.00	<11.00	<11.00	<11.00	1300J
YC-035-2	07/08/09	<13.00	**180**	<13.00	<670.0	<13.00	<13.00	<13.00	<13.00	<13.00	<13.00	<13.00	710J
YC-035-3	07/08/09	<47.00	**190**	<47.00	730	<47.00	<47.00	<47.00	<47.00	<47.00	<47.00	<47.00	780
YC-035-4	07/08/09	<51.00	99	<51.00	<520.0	<51.00	<51.00	<51.00	<51.00	<51.00	<51.00	<51.00	540
YC-035-5	07/08/09	<4.90	27	<4.90	<510.0	<4.90	<5.00	<4.90	<4.90	<4.90	<4.90	<4.90	57
YC-036-1	07/09/09	<63.00	**180**	<63.00	<650.0	<63.00	<64.00	<63.00	<63.00	<63.00	<63.00	<63.00	830
YC-036-2	07/09/09	<54.00	**290**	<54.00	<560.0	<54.00	<55.00	<54.00	<54.00	<54.00	<54.00	<54.00	1400
YC-036-3	07/09/09	<44.00	140	<44.00	<450.0	<44.00	<44.00	<44.00	<44.00	<44.00	<44.00	<44.00	680
YC-836-3	07/09/09	<45.00	150	<45.00	<470.0	<45.00	<46.00	<45.00	<45.00	<45.00	<45.00	<45.00	750
YC-036-4	07/09/09	<4.10	23	<4.10	<420.0	<4.10	<4.10	<4.10	<4.10	<4.10	<4.10	<4.10	42

Notes:

mg/kg = milligrams per kilogram

ug/kg = micrograms per kilogram

ESL = San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs)

J = Data validation qualifier indicating concentration is estimated.

UJ = Data validation qualifier incicating concentration is estimated and non-detect.

<X = not detected above method detection limit of X

Concentrations exceeding ESLs are shaded and bold.

Table B6 - Rinse Blank PCBs Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
Analytical Method		8081A /8082	8081A /8082	8081A /8082	8081A /8082	8081A /8082	8081A /8082	8081A /8082
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sample ID	**Sample Date**							
YC-061809-RB	06/18/09	<0.120	<0.080	<0.120	<0.120	<0.090	<0.200	<0.090
YC-062209-RB	06/22/09	<0.120	<0.080	<0.120	<0.120	<0.090	<0.200	<0.090
YC-062309-RB	06/23/09	<0.120	<0.080	<0.120	<0.120	<0.090	<0.200	<0.090
YC-062409-RB	06/25/09	<0.120	<0.080	<0.120	<0.120	<0.090	<0.200	<0.090
YC-062509-RB	06/26/09	<0.120	<0.080	<0.120	<0.120	<0.090	<0.200	<0.090
YC-070109-RB	07/01/09	<0.120	<0.080	<0.120	<0.120	<0.090	<0.200	<0.090
YC-070609-RB	07/06/09	<0.120	<0.080	<0.120	<0.120	<0.090	<0.200	<0.090
YC-070709-RB	07/07/09	<0.120	<0.080	<0.120	<0.120	<0.090	<0.200	<0.090
YC-070809-RB	07/08/09	<0.120	<0.080	<0.120	<0.120	<0.090	<0.200	<0.090
YC-070909-RB	07/09/09	<0.120	<0.080	<0.120	<0.120	<0.090	<0.200	<0.090

Notes:

PCBs = Polychlorinated Biphenyls

ug/L = micrograms per liter

<X = not detected above method detection limit of X

Table B7 - Rinse Blank Pesticides Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

		Total DDT			Total Chlordane		
Analyte		**4,4'-DDE**	**4,4'-DDT**	**4,4'-TDE/DDD**	**alpha-Chlordane**	**gamma-Chlordane**	**Dieldrin**
Analytical Method		8081A /8082	8081A /8082	8081A /8082	8081A /8082	8081A /8082	8081A /8082
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sample ID	**Sample Date**						
YC-061809-RB	06/18/09	<0.004	<0.007	<0.003	<0.007	<0.006	<0.005
YC-062209-RB	06/22/09	<0.004	<0.007	<0.003	<0.007	<0.006	<0.005
YC-062309-RB	06/23/09	<0.004	<0.007	<0.003	<0.007	<0.006	<0.005
YC-062409-RB	06/25/09	<0.004	<0.007	<0.003	<0.007	<0.006	<0.005
YC-062509-RB	06/26/09	<0.004	<0.007	<0.003	<0.007	<0.006	<0.005
YC-070109-RB	07/01/09	<0.004	<0.007	<0.003	<0.007	<0.006	<0.005
YC-070609-RB	07/06/09	<0.004	<0.007	<0.003	<0.007	<0.006	<0.005
YC-070709-RB	07/07/09	<0.004	<0.007	<0.003	<0.007	<0.006	<0.005
YC-070809-RB	07/08/09	<0.004	<0.007	<0.003	<0.007	<0.006	<0.005
YC-070909-RB	07/09/09	<0.004	<0.007	<0.003	<0.007	<0.006	<0.005

Notes:

DDE = dichlorodiphenyldichloroethylene

DDT = dichlorodiphenyltrichloroethane

TDE/DDD = dichlorodiphenyldichloroethane

ug/L = micrograms per liter

<X = not detected above method detection limit of X

Table B8 - Rinse Blank Metals Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Franciso County, California

Analyte		**Chromium**	**Lead**	**Mercury**	**Zinc**
Analytical Method		6010B	6010B	7470A	6010B
Units		ug/L	ug/L	ug/L	ug/L
Sample ID	**Sample Date**				
YC-061809-RB	06/18/09	<1.37	<1.58	<0.06	2.7J
YC-062209-RB	06/22/09	<1.37	<1.58	<0.06	<2.30
YC-062309-RB	06/23/09	<1.37	<1.58	<0.06	3.0J
YC-062409-RB	06/25/09	<1.37	<1.58	<0.06	12.1J
YC-062509-RB	06/26/09	<1.37	<1.58	<0.06	5.1J
YC-070109-RB	07/01/09	<1.37	2.3J	<0.06	<2.30
YC-070609-RB	07/06/09	<1.37	<1.58	<0.06	7.9J
YC-070709-RB	07/07/09	<1.37	<1.58	<0.06	4.2J
YC-070809-RB	07/08/09	<1.37	<1.58	<0.02	2.7J
YC-070909-RB	07/09/09	<1.37	<1.58	<0.06	<2.30

Notes:

ug/L = micrograms per liter

J = Data validation qualifier indicating concentration is estimated.

<X = not detected above method detection limit of X

Table B9 - Rinse Blank Total Petroleum Hydrocarbons (TPH) Analytical Results
Yosemite Creek Sediment Removal Assessment
San Francisco, San Francisco County, California

Analyte		Bunker C	Diesel Fuel	Fuel Oil 4 & 5	Gasoline	Hydraulic Fluid	Jet A	JP4	JP5	JP8	Kerosene	Mineral Spirits	Motor Oil
Analytical Method		8015B-e	8015B-e	8015B-e	8015	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e	8015B-e
Units		mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample ID	**Sample Date**												
YC-061809-RB	06/18/09	<0.11	<0.040	<0.03	<8.60	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
YC-062209-RB	06/22/09	<0.11	<0.040	<0.03	<8.60	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
YC-062309-RB	06/23/09	<0.11	<0.040	<0.03	<8.60	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
YC-062409-RB	06/25/09	<0.11	<0.040	<0.03	<8.60	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
YC-062509-RB	06/26/09	<0.11	<0.040	<0.03	<8.60	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
YC-070109-RB	07/01/09	<0.11	<0.040	<0.03	<8.60	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
YC-070609-RB	07/06/09	<0.11	<0.040	<0.03	<8.60	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
YC-070709-RB	07/07/09	<0.11	<0.040	<0.03	<8.60	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
YC-070809-RB	07/08/09	<0.11	<0.040	<0.03	<8.60	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
YC-070909-RB	07/09/09	<0.11	<0.040	<0.03	<8.60	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11

Notes:
mg/L = milligrams per liter
ug/L = micrograms per liter
<X = not detected above method detection limit of X

C

Laboratory Analytical Reports (on CD)

D

Data Validation Summary Reports (on CD)