

February 3, 2010

Mr. Steven Plunkett
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Results of Additional Soil Investigation
Magnolia Terrace at 4001 Adeline Street, Emeryville, California

Dear Mr. Plunkett:

On behalf of the City of Emeryville Redevelopment Agency (the Agency), OTG EnviroEngineering Solutions, Inc. (OTG) is pleased to submit this report presenting results of additional soil investigation conducted at Magnolia Terrace, which is located at 4001 Adeline Street, Emeryville, California (the Site, Figure 1). The work was performed in accordance with the scope of work and methodologies outlined in *Review of Environmental Site Conditions and Work Plan for Soil Investigation and Remediation at Magnolia Terrace* (OTG, July 30, 2009), which was approved by the Alameda County Environmental Health (ACEH) in a November 16, 2009 letter to the Agency. The report included site background information, a summary of previous investigation data (groundwater, soil, and soil gas), and rationale for the additional soil investigation.

INVESTIGATION PROGRAM

Field sampling was conducted on January 14, 2010. Soil samples were collected from two depths (0 to 6 inches and 2.5 to 3.0 feet) from each of the three locations (Figure 2). Specific details of the soil investigation program were as follows:

- Alameda County Public Works Agency Water Resources Division was contacted for drilling permit, which responded in a January 4, 2010 email that a drilling permit was not required due to the maximum drilling depth of only 3 feet. Underground Service Alert was notified the drilling activity on January 5, 2010.
- The surface soil samples (0-6" bgs) were collected by using a pre-cleaned stainless steel hand trowel to first remove surface vegetation and then to collect soil sample within an approximately 4-inch diameter and 6-inch deep hole into a pre-cleaned stainless steel container. Gravels larger than ¼-inch diameter were removed. The soil sample was well mixed inside the container and then transferred with the trowel into an 8-oz glass jar.

- The sub-surface soil samples (2.5-3.0' bgs) were collected by first hand augering to 2.5 feet bgs and then advancing a new stainless steel sleeve (2-inch diameter by 6-inch long) to collect a soil sample from the interval of 2.5 to 3.0 feet bgs. The soil sample was then extruded into a pre-cleaned stainless steel container for visual examination. The soil sample was then well mixed and transferred with a pre-cleaned stainless steel trowel into an 8-oz glass jar.
- The seven soil samples (two from each sampling location plus a duplicate surface soil sample from the location of OTG-SB-6) were labeled, sealed in Ziploc™ plastic bags individually, and then placed in an iced cooler immediately. The samples were submitted to ESC Lab Sciences, a State of California certified environmental analytical laboratory, under chain-of-custody protocol for analysis of California Title 22 metals (CAM 17 metals). The two soil samples collected from OTG-SB-6 were also analyzed for hexavalent Chromium by EPA Method 3060A.
- After the completion of sample collection, all boreholes were backfilled with neat cement from total depth to land surface.
- All hand tools and sampling equipment were cleaned on-site before and between sample collections by first hand-brushing in a 5-gallon bucket with tap water, again hand-brushing in another 5-gallon bucket with Liquinox™ detergent solution and then triple-rinsed with de-ionized water.

Field sampling logs are included in Appendix A and laboratory analytical reports are contained in Appendix B. The analytical data received from the laboratory is found to be of acceptable quality with qualifications as noted in the laboratory reports.

RESULTS OF INVESTIGATION

Table 1 presents current and historic soil heavy metal data, along with residential shallow soil Environmental Screening Levels (ESLs) developed by the San Francisco Bay Regional Water Quality Control Board (RWQCB, May 2008 Interim Final) and background metal concentrations provided by the Lawrence Berkeley National Laboratory (LBNL, April 2009). Residential shallow soil ESLs as presented in Table B of the RWQCB Document are the lowest ESLs among several exposure pathways evaluated by the RWQCB, including ecological exposure pathways. Some plant and animal species are more sensitive than human to the exposure of heavy metals. However, such sensitive plant and animal species may not present in the urban environment, where the Site is located. Therefore, the ESLs derived from human direct exposure of residential shallow soil (Table B-1 of the RWQCB Document) should provide a better guidance to the planned land use of the Site. ESLs from both Tables B and B-1 are included in Table 1.

LBNL scientists conducted statistical analysis of thousands of background metals concentrations and calculated the 99th percentile concentration for each metal evaluated, which

is defined as the maximum LBNL background level. As stated by the LBNL scientists that “*The selected maximum LBNL background level is the concentration value against which site concentration data are compared to determine whether the data represent site contamination. Sample concentrations greater than the maximum background levels are categorized as likely site contamination, whereas sample concentrations less than or equal to the maximum background levels are categorized as ambient conditions*” (page 12 of the LBNL Document, April 2009). The maximum LBNL background level (99th percentile concentration) and the range of background concentrations reported by the LBNL are included in Table 1.

As summarized in Table 1, although concentrations of arsenic, cadmium, lead, and vanadium from several samples exceeded their respective ESLs for residential shallow soil for human direct exposure, only lead concentration exceeded its maximum LBNL background level (43 mg/kg). In addition, several soil samples had their zinc concentration exceeded its maximum LBNL background level (140 mg/kg), but were still significantly below its ESL (4,700 mg/kg).

In summary, lead in surface soil appears to be the only metal of potential concern. The follow samples had concentrations of lead exceed its ESL (260 mg/kg): OTG-SB-3-1 (340 mg/kg), OTG-SB-4-1 (320 mg/kg), and OTG-SB7-0 (370 mg/kg). These three soil samples were collected from the depth of zero to six inches below ground surface. None of the deeper soil samples had lead concentrations exceed its maximum LBNL background level (43 mg/kg).

PROPOSED REMEDIATION PROGRAM

In accordance with the remediation plan outlined in the *Review of Environmental Site Conditions and Work Plan for Soil Investigation and Remediation at Magnolia Terrace* (OTG, July 30, 2009), which was approved by ACEH, the top two feet of surface soil within the planned vegetation area will be removed and replaced with commercially available garden soil. The excavation will be conducted under the supervision of the City of Emeryville’s arborist to the extent deemed safe to an existing mature Magnolia tree. The excavated soil will be transported to a landfill for proper disposal.

CERTIFICATION

“I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Please feel free to contact Xinggang Tong of OTG at (510) 465-8982 or Markus Niebanck of City of Emeryville Redevelopment Agency at (510) 596-4356 if you have questions or comments.

Sincerely,

OTG EnviroEngineering Solutions, Inc.



Xinggang Tong, PhD, PE
Project Manager



cc: Mr. Markus Niebanck, City of Emeryville Redevelopment Agency
Ms. Amy Hiestand, City of Emeryville
Ms. Brianne Steinhauser, Housing Consortium of the East Bay

Attachments:

Table 1	Current and Historical Soil Heavy Metal Data
Figure 1	Site Location Map
Figure 2	Site Plan with Identification of Sampling Locations
Figure 3	Historic Sampling Locations
Appendix A	Field Sampling Logs
Appendix B	Laboratory Analytical Reports

REFERENCES

California Regional Water Quality Control Board – San Francisco Bay Region, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, Interim Final, May 2008.

Lawrence Berkeley National Laboratory Environmental Restoration Program, *Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory*, June 2002, revised April 2009.

The San Joaquin Company, Inc., *Remediation Report, Oak Walk Redevelopment Site, Emeryville, CA*, July 2009.

OTG EnviroEngineering Solutions, Inc., *Review of Environmental Site Conditions and Work Plan for Soil Investigation and Remediation, Magnolia Terrace at 4001 Adeline Street, Emeryville, CA*, July 30, 2009.

The San Joaquin Company, Inc., *Environmental Site Characterization, Oak Walk Redevelopment Site, Emeryville, CA*, April 2005.

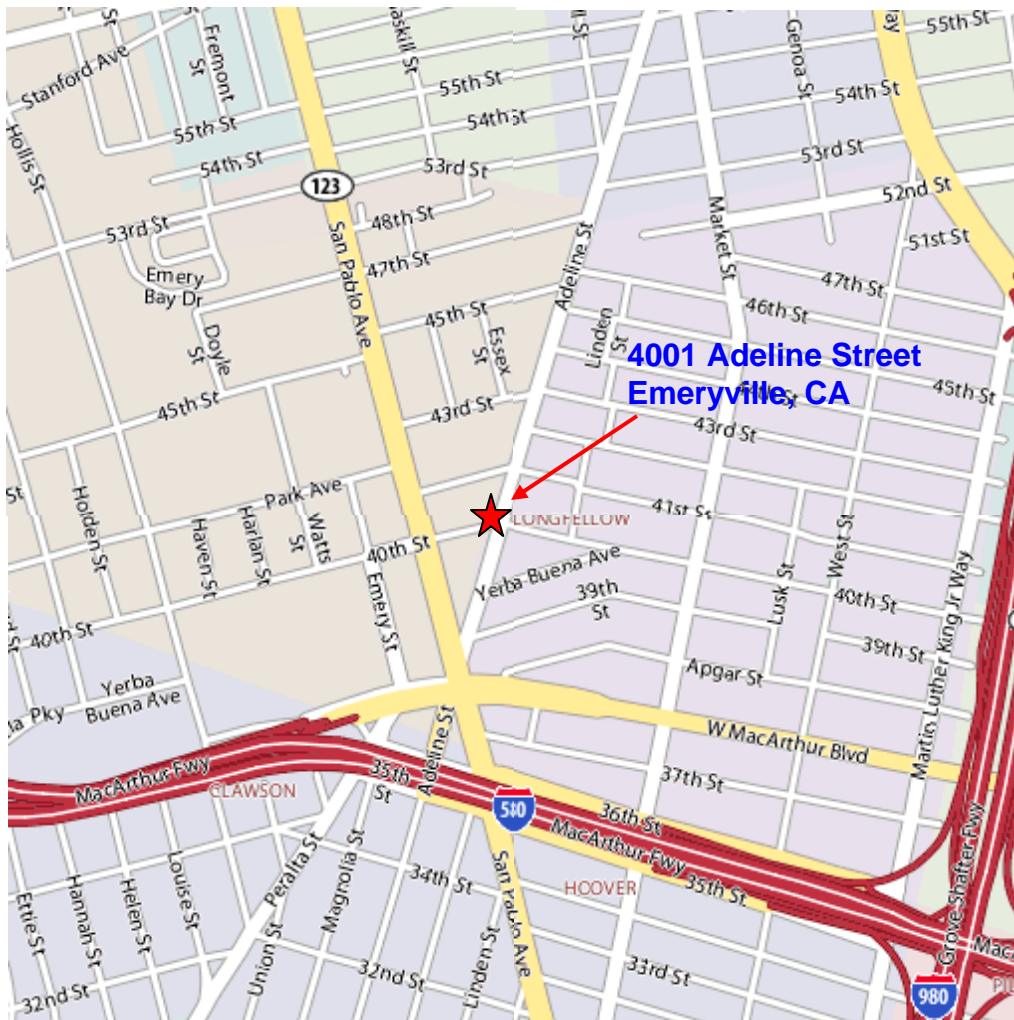
URS Corporation, *House Relocation, Phase II, Emeryville, CA – Soil and Soil Gas Sample Report*, May 17, 2006.

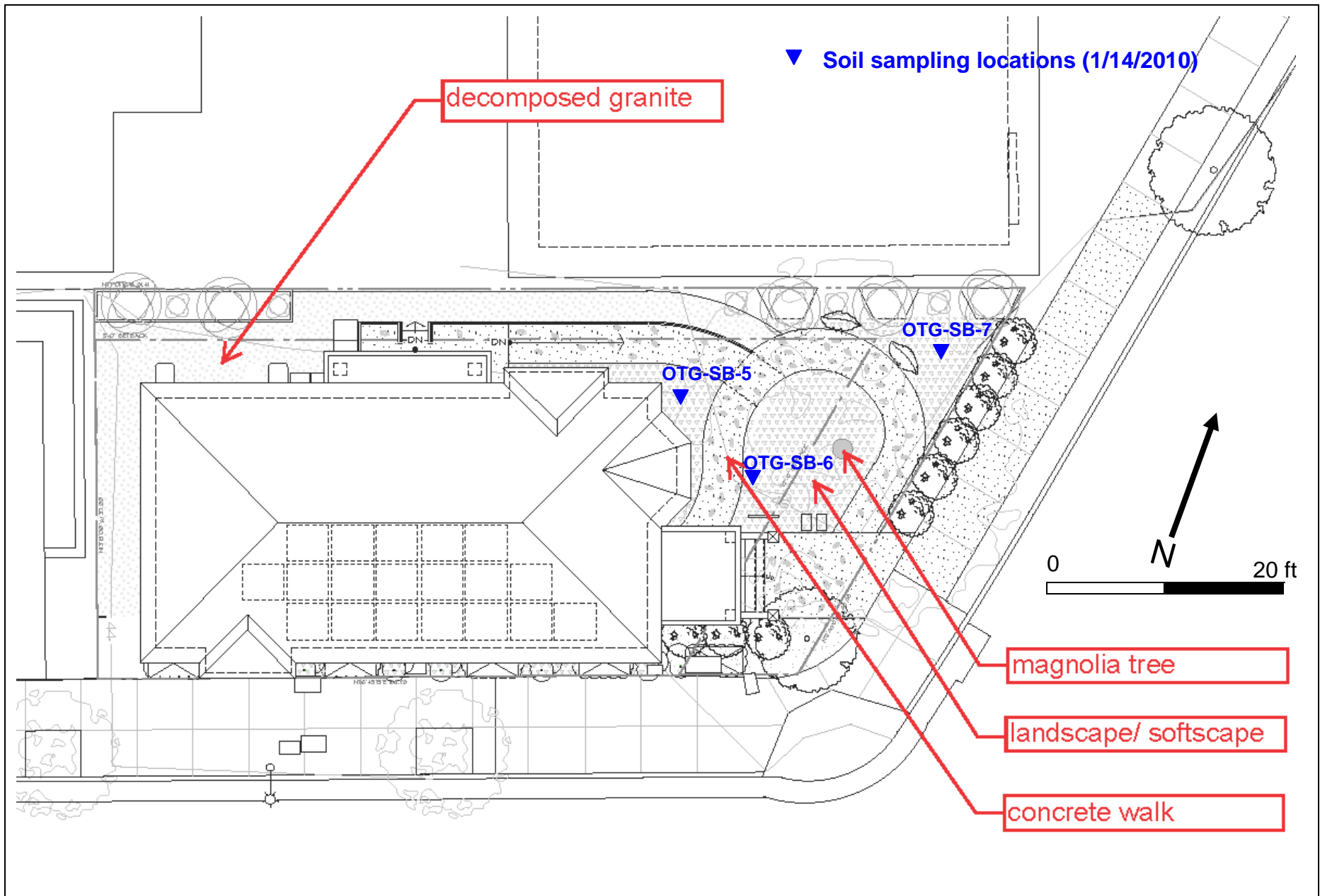
**Table 1. Current and Historic Soil Heavy Metal Data
Magnolia Terrace at 4001 Adeline St., Emeryville, CA**

		ESLs (Table B)	ESLs(Table B-1)	Background Conc	OTG-SB-5-0	OTG-SB-5-2.5	OTG-SB-6-0	OTG-SB-6-0-d	OTG-SB-6-2.5	OTG-SB-7-0
Metals	Unit	residential shallow soil	human direct exposure residential shallow soil	99th percentile conc & range of detection	(0"-6" bgs) 1/14/2010	(2.5'-3' bgs) 1/14/2010	(0"-6" bgs) 1/14/2010	(0"-6" bgs) 1/14/2010	(2.5'-3' bgs) 1/14/2010	(0"-6" bgs) 1/14/2010
Antimony	mg/kg	6.3	6.3	6.0 (0.7 to 22)	ND (6.6)	ND (6.6)	ND (6.6)	ND (16)	ND (6.6)	ND (6.6)
Arsenic	mg/kg	0.39	0.39	28 (0.3 to 42)	5.8	3.1	6.3	2.4	2	15
Barium	mg/kg	750 (note 1)	3000	410 (1.7 to 490)	160	130	160	130	160	180
Beryllium	mg/kg	4 (note 1)	31	1.0 (0.06 to 1.2)	0.54	0.54	0.5	0.51	0.6	0.62
Cadmium	mg/kg	1.7	1.7	5.6 (0.05 to 7.5)	1.8	1.0	2	2	1.2	2
Chromium, total	mg/kg			120 (1.7 to 144)	49	46	32	31	52	40
Chromium III	mg/kg	750 (note 1)	23000				30.7		44.9	
Chromium VI	mg/kg	8 (note 1)	9.4				1.3		7.1	
Cobalt	mg/kg	41 (note 1)	280	25 (0.92 to 29)	16	6.7	11	9.9	15	11
Copper	mg/kg	230 (note 1)	6300	63 (2.2 to 69)	32	21	49	48	21	51
Lead	mg/kg	200 (note 1)	260	43 (0.66 to 84)	74	18	110	160	9.5	370
Mercury	mg/kg	1.3	1.3	0.42 (0.023 to 0.82)	0.14	0.11	0.52	0.27	0.067	0.22
Molybdenum	mg/kg	40 (note 1)	78	4.8 (0.26 to 14)	0.49	0.29	0.88	0.67	0.48	0.68
Nickel	mg/kg	150 (note 1)	300	272 (6.0 to 380)	60	45	36	38	60	50
Selenium	mg/kg	10 (note 1)	78	4.9 (0.25 to 9.1)	ND (16)	ND (16)	ND (16)	ND (16)	ND (16)	ND (16)
Silver	mg/kg	20 (note 1)	78	2.9 (0.2 to 7.7)	0.32	ND (0.16)	0.2	ND (0.16)	ND (0.16)	ND (0.82)
Thallium	mg/kg	1.3	1.3	10 (0.16 to 20)	ND (0.4)	ND (2.0)	ND (0.4)	ND (2.0)	ND (2.0)	ND (2.0)
Vanadium	mg/kg	16	16	90 (0.79 to 120)	47	43	56	43	48	42
Zinc	mg/kg	600 (note 1)	4700	140 (3.8 to 190)	140	60	150	200	50	340
Source of Data:		RWQCB (may 08)	RWQCB (may 08)	LBNL (April 09)	This report	This report	This report	This report	This report	This report
Notes:										
bgs = below ground surface										
OTG-SB-4-1 is a field duplicate of OTG-SB-1-1										
ESL = Environmental Screening Level by RWQCB (May 2008 Interim Final).										
Note 1 - the ESL is based on urban area ecotoxicity criteria.										
Background metal concentrations are from "Analysis of Background Distribution of Metals in the Soil at Lawrence Berkeley National Laboratory (April 2009).										
The first number is the 99th percentile concentration, followed by the range of back ground concentrations in parenthesis.										

**Table 1. Current and Historic Soil Heavy Metal Data
Magnolia Terrace at 4001 Adeline St., Emeryville, CA**

		ESLs (Table B)	ESLs(Table B-1)	Background Conc	OTG-SB-7-2.5	OTG-SB-1-1	OTG-SB-2-1	OTG-SB-3-1	OTG-SB-4-1	BE-3-19.5
Metals	Unit	residential shallow soil	human direct exposure residential shallow soil	99th percentile conc & range of detection	(2.5'-3' bgs) 1/14/2010	(0"-6" bgs) 10/19/2005	(0"-6" bgs) 10/19/2005	(0"-6" bgs) 10/19/2005	(0"-6" bgs) 10/19/2005	19.5 ft bgs 4/2/2004
Antimony	mg/kg	6.3	6.3	6.0 (0.7 to 22)	ND (3.3)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND
Arsenic	mg/kg	0.39	0.39	28 (0.3 to 42)	0.68	8.4	4.6	26	12	2.1
Barium	mg/kg	750 (note 1)	3000	410 (1.7 to 490)	140	140	140	120	270	150
Beryllium	mg/kg	4 (note 1)	31	1.0 (0.06 to 1.2)	0.67	ND (2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND
Cadmium	mg/kg	1.7	1.7	5.6 (0.05 to 7.5)	0.91	1.2	ND(1.0)	2.5	1.5	ND
Chromium, total	mg/kg			120 (1.7 to 144)	58	58	38	37	35	
Chromium III	mg/kg	750 (note 1)	23000							30
Chromium VI	mg/kg	8 (note 1)	9.4							n/a
Cobalt	mg/kg	41 (note 1)	280	25 (0.92 to 29)	6.3	8.3	9.4	11	9.4	6.9
Copper	mg/kg	230 (note 1)	6300	63 (2.2 to 69)	23	30	15	56	40	19
Lead	mg/kg	200 (note 1)	260	43 (0.66 to 84)	9.8	220	15	340	320	5.4
Mercury	mg/kg	1.3	1.3	0.42 (0.023 to 0.82)	0.07	0.37	0.12	0.27	0.45	ND
Molybdenum	mg/kg	40 (note 1)	78	4.8 (0.26 to 14)	0.23	ND (5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND
Nickel	mg/kg	150 (note 1)	300	272 (6.0 to 380)	59	33	40	36	31	26
Selenium	mg/kg	10 (note 1)	78	4.9 (0.25 to 9.1)	ND (16)	ND (1.0)	ND(1.0)	1.2	ND(1.0)	ND
Silver	mg/kg	20 (note 1)	78	2.9 (0.2 to 7.7)	ND (0.16)	ND (1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND
Thallium	mg/kg	1.3	1.3	10 (0.16 to 20)	ND (4.0)	ND (5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND
Vanadium	mg/kg	16	16	90 (0.79 to 120)	51	30	38	37	39	25
Zinc	mg/kg	600 (note 1)	4700	140 (3.8 to 190)	55	240	43	280	300	32
Source of Data:		RWQCB (may 08)	RWQCB (may 08)	LBNL (April 09)	This report	URS (5/17/06)	URS (5/17/06)	URS (5/17/06)	URS (5/17/06)	SJC (4/05)
Notes:										
bgs = below ground surface										
OTG-SB-4-1 is a field duplicate of OTG-SB-1-1										
ESL = Environmental Screening Level by RWQCB (May 2008 Interim Final).										
Note 1 - the ESL is based on urban area ecotoxicity criteria.										
Background metal concentrations are from "Analysis of Background Distribution of Met										
The first number is the 99th percentile concentration, followed by the range of back g										





	10EMV05.1000 February 1, 2010	<p>Figure 2. Site Plan with Identification of Soil Sampling Locations 4001 Adeline Street, Emeryville, California (Parcel APN 049-1025-26-03)</p>
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**Building Location
4001 Adeline St**

Existing Single Family House

Original Parcel APN 049-1025-26-03

APPENDIX A

Field Sampling Logs, January 14, 2010

DAILY FIELD LOG

OTG EnviroEngineering Solutions, Inc.

Project # 10EMV05	Date: January 14, 2010
Task # 1000	Weather: Partial cloud, Calm
Proj Name Magnolia Terrace	OTG employees on site:
Location: 4001 Adeline St, Emeryville	Xi Yigang Tong
Purpose of Field Work:	
Collect soil samples at locations of SB-5, SB-6 & SB-7	
Subcontractors	
Field Log	
8:30-10:30, purchase supplies, loading & travel to site	
Arrived at site at 10:30, setup decon station	
SB-5: stripped surface grass, moist	
SB-5-0 (0" to 6" hgs): fill material, dark brown, Gravel-sand-silt mixture (GM), transferred the soil with a precleaned SS hand trowel to a precleaned SS container, picked out most large gravels & roots, mixed well, & transferred to 4-oz glass jars (2 jars filled), labeled, put in a ziplock plastic bag & immediately in an iced cooler.	
SB-5-2.5: hand augered down to 2.5 ft, then use slide hammer collected a soil sample with 2"x6" SS sleeve, extruded the soil into a SS container, mixed well & then pick picked out large gravels, transferred into 2 4-oz glass jars, labeled, packed in a zip lock bag & then stored in the iced cooler	
Soil type: appears fill material, dark brown Contain some gravels (GrC, gravel, sand, clay mixture)	
SB-6: removed top 2" tree barks	
SB-6-0: non-native, brown, gravel (30%), sand, silt mixture (GM) picked out most large gravels	
SB-6-2.5, hand augered to 2.5', GM soil to 18" 18" to 3': dark brown, stiff silty clay with some sand & Gravels (CL)	
SB-6-0 & -2.5 collected the same way as SB-5.	

Logged by (print) Xi Yigang Tong


Signature: 

DAILY FIELD LOG

OTG EnviroEngineering Solutions, Inc.

Project # 10EMV05	Date: 1/14/2010
Task #	Weather:
Proj Name	OTG employees on site:
Location: 4001 Adeline st., Emeryville	Xinggang Tong
Purpose of Field Work:	
Subcontractors	
Field Log	
SB-7: removed top 2" tree bark landscaping material	
SB-7-0 (0" to 6" sqs): ~50% gravels, brown (GM)	
SB-7-2.5: hand augered to 2.5', dark brown, relatively dry, material: ML	
Samples collected the same way as SB-5.	
The hand trowel, ss container, hand auger head were all hand brushed, tripple rinsed with Alconox solution, then tripple rinse with D.I. water before each use.	
Left site at 3:00 pm.	

Logged by (print) Xinggang Tong

Signature 

APPENDIX B

Laboratory Analytical Reports for
January 14, 2010 Soil Samples

Quality Control Summary

SDG: L440475

For: OTG EnviroEngineering Solutions
Project: 4001 Adeline St Site
January 22, 2010

Sample Receiving and Handling

All sample aliquots were received at the correct temperature, in the proper containers, and with the appropriate preservatives. All method specified holding times were met.

Chromium, Hexavalent by Method 3060A/7196A

Laboratory Control Sample

Samples L440475-03 and 05 were analyzed in analytical batch WG459267. The laboratory control sample associated with these samples was within the laboratory control limits.

Sample Duplicate Analysis

For analytical batch WG459267 sample duplicate analysis was performed on sample L440475-05. The relative percent differences were within the method limits.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG459267, matrix spike/matrix spike duplicate analysis was performed on sample L440570-01. The spike recoveries and relative percent differences were within laboratory control limits.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

pH by Method 9045D

Laboratory Control Sample

Samples L440475-05 and 03 were analyzed in analytical batch WG459269. The laboratory control sample associated with these samples was within the laboratory control limits.

Sample Duplicate Analysis

For analytical batch WG459269 sample duplicate analysis was performed on sample L440437-01. The relative percent differences were within the method limits.

Matrix Spike/Matrix Spike Duplicate

Precision for batch WG459269 was evaluated using the LCS / LCSD. The RPDs were within method limits.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Total Solids by Method 2540G

Laboratory Control Sample

Sample L440475-01 was analyzed in analytical batch WG459430. The laboratory control sample associated with this sample was within the laboratory control limits.

Samples L440475-03, -04, -07, -02, -05, and -06 were analyzed in analytical batch WG459431. The laboratory control sample associated with these samples was within the laboratory control limits.



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Est. 1970

YOUR LAB OF CHOICE

Quality Control Summary SDG: L440475

For: OTG EnviroEngineering Solutions
Project: 4001 Adeline St Site
January 22, 2010

Sample Duplicate Analysis

For analytical batch WG459430 sample duplicate analysis was performed on sample L440475-01. The relative percent differences were within the method limits.

For analytical batch WG459431 sample duplicate analysis was performed on sample L440484-03. The relative percent differences were within the method limits.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

ORP by Method 2580

Laboratory Control Sample

Samples L440475-03 and 05 were analyzed in analytical batch WG459439. The laboratory control sample associated with these samples was within the laboratory control limits.

Sample Duplicate Analysis

For analytical batch WG459439 sample duplicate analysis was performed on sample L440239-01. The relative percent differences were within the method limits.

For analytical batch WG459439 sample duplicate analysis was performed on sample L440684-01. The relative percent differences were within the method limits.

Matrix Spike/Matrix Spike Duplicate

Precision for batch WG459439 was evaluated using the LCS / LCSD. The RPDs were within method limits.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Mercury by Method 7471

Laboratory Control Sample

Samples L440475-03, -05, -07, -06, -01, -04, and -02 were analyzed in analytical batch WG459212. The laboratory control sample associated with these samples was within the laboratory control limits.

Sample Duplicate Analysis

For analytical batch WG459212 sample duplicate analysis was performed on sample L440475-01. The relative percent differences were within the method limits.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG459212, matrix spike/matrix spike duplicate analysis was performed on sample L440475-01. The spike recoveries and relative percent differences were within laboratory control limits.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Quality Control Summary

SDG: L440475

For: OTG EnviroEngineering Solutions

Project: 4001 Adeline St Site

January 22, 2010

Trace Metals by Method 6010B

Laboratory Control Sample

Samples L440475-01, -02, -03, -04, and -05 were analyzed in analytical batch WG459400. The laboratory control sample associated with these samples was within the laboratory control limits for all compounds.

Samples L440475-06 and 07 were analyzed in analytical batch WG459401. The laboratory control sample associated with these samples was within the laboratory control limits for all compounds.

Sample Duplicate Analysis

For analytical batch WG459400 sample duplicate analysis was performed on sample L440475-04. The relative percent difference exceeded the method limits for Arsenic.

For analytical batch WG459401 sample duplicate analysis was performed on sample L440475-07. The relative percent difference exceeded the method limits for Arsenic, Lead, and Molybdenum.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG459400 matrix spike/matrix spike duplicate analysis was performed on sample L440475-04. The matrix spike recoveries were below laboratory control limits for Antimony, Barium, Chromium, Copper, Lead, Nickel, Selenium, Vanadium, and Zinc. The spike recoveries for the remaining target compounds were within limits. The relative percent difference exceeded laboratory limits for Antimony, Barium, Lead, Selenium, and Zinc. Post digestion spike recoveries were within the method limits.

For analytical batch WG459401 matrix spike/matrix spike duplicate analysis was performed on sample L440475-07. The matrix spike recoveries were below laboratory control limits for Antimony, Selenium, and Thallium. The spike recoveries for the remaining target compounds were within limits. The relative percent difference exceeded laboratory limits for Selenium. Post digestion spike recoveries were within the method limits.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Nancy F. Winters
ESC Representative
ESC Lab Sciences



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Est. 1970

Xinggang Tong
OTG EnviroEngineering Solutions
7700 Edgewater Dr., Ste. 260

Oakland, CA 94621

Report Summary

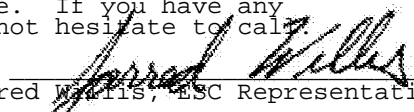
Wednesday January 27, 2010

Report Number: L440475
Samples Received: 01/15/10
Client Project: 10EMV05.1000

Description: 4001 Adeline St Site

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

This report may not be reproduced, except in full, without written approval from Environmental Science Corp.
Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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Est. 1970

REPORT OF ANALYSIS

Xinggang Tong
 OTG EnviroEngineering Solutions
 7700 Edgewater Dr., Ste. 260
 Oakland, CA 94621

January 27, 2010

Date Received : January 15, 2010
 Description : 4001 Adeline St Site
 Sample ID : OTG-SB-5-0
 Collected By : Xinggang Tong
 Collection Date : 01/14/10 11:30

ESC Sample # : L440475-01
 Site ID :
 Project # : 10EMV05.1000

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	81.7			%		2540G	01/19/10	1
Mercury	0.14	0.0025	0.020	mg/kg		7471	01/19/10	1
Antimony	U	6.6	20.	mg/kg	O	6010B	01/19/10	20
Arsenic	5.8	0.32	1.0	mg/kg		6010B	01/19/10	1
Barium	160	0.050	0.25	mg/kg		6010B	01/19/10	1
Beryllium	0.54	0.015	0.10	mg/kg		6010B	01/19/10	1
Cadmium	1.8	0.040	0.25	mg/kg		6010B	01/19/10	1
Chromium	49.	0.085	0.50	mg/kg		6010B	01/19/10	1
Cobalt	16.	0.085	0.50	mg/kg		6010B	01/19/10	1
Copper	32.	0.21	1.0	mg/kg		6010B	01/19/10	1
Lead	74.	0.090	0.25	mg/kg		6010B	01/19/10	1
Molybdenum	0.49	0.085	0.25	mg/kg		6010B	01/19/10	1
Nickel	60.	0.26	1.0	mg/kg		6010B	01/19/10	1
Selenium	U	16.	50.	mg/kg	O	6010B	01/19/10	50
Silver	0.32	0.16	0.50	mg/kg	J	6010B	01/19/10	1
Thallium	U	0.40	1.0	mg/kg		6010B	01/19/10	1
Vanadium	47.	0.11	0.50	mg/kg		6010B	01/19/10	1
Zinc	140	0.34	1.5	mg/kg		6010B	01/19/10	1

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Xinggang Tong
 OTG EnviroEngineering Solutions
 7700 Edgewater Dr., Ste. 260
 Oakland, CA 94621

January 27, 2010

Date Received : January 15, 2010
 Description : 4001 Adeline St Site
 Sample ID : OTG-SB-5-2.5
 Collected By : Xinggang Tong
 Collection Date : 01/14/10 13:05

ESC Sample # : L440475-02
 Site ID :
 Project # : 10EMV05.1000

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	83.6			%		2540G	01/19/10	1
Mercury	0.11	0.0025	0.020	mg/kg		7471	01/19/10	1
Antimony	U	6.6	20.	mg/kg	O	6010B	01/19/10	20
Arsenic	3.1	0.32	1.0	mg/kg		6010B	01/19/10	1
Barium	130	0.050	0.25	mg/kg		6010B	01/19/10	1
Beryllium	0.54	0.015	0.10	mg/kg		6010B	01/19/10	1
Cadmium	1.0	0.040	0.25	mg/kg		6010B	01/19/10	1
Chromium	46.	0.085	0.50	mg/kg		6010B	01/19/10	1
Cobalt	6.7	0.085	0.50	mg/kg		6010B	01/19/10	1
Copper	21.	0.21	1.0	mg/kg		6010B	01/19/10	1
Lead	18.	0.090	0.25	mg/kg		6010B	01/19/10	1
Molybdenum	0.29	0.085	0.25	mg/kg		6010B	01/19/10	1
Nickel	45.	0.26	1.0	mg/kg		6010B	01/19/10	1
Selenium	U	16.	50.	mg/kg	O	6010B	01/19/10	50
Silver	U	0.16	0.50	mg/kg		6010B	01/19/10	1
Thallium	U	2.0	5.0	mg/kg	O	6010B	01/19/10	5
Vanadium	43.	0.11	0.50	mg/kg		6010B	01/19/10	1
Zinc	60.	0.34	1.5	mg/kg		6010B	01/19/10	1

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 7700 Edgewater Dr., Ste. 260
 Oakland, CA 94621

January 27, 2010

Date Received : January 15, 2010
 Description : 4001 Adeline St Site
 Sample ID : OTG-SB-6-0
 Collected By : Xinggang Tong
 Collection Date : 01/14/10 11:50

ESC Sample # : L440475-03
 Site ID :
 Project # : 10EMV05.1000

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium,Hexavalent	1.3	1.0	20.	mg/kg	J	3060A/7	01/21/10	10
ORP	190			mV		2580	01/19/10	1
pH	7.6			su		9045D	01/16/10	1
Total Solids	92.1			%		2540G	01/19/10	1
Mercury	0.52	0.0025	0.020	mg/kg		7471	01/19/10	1
Antimony	U	6.6	20.	mg/kg	O	6010B	01/19/10	20
Arsenic	6.3	0.32	1.0	mg/kg		6010B	01/19/10	1
Barium	160	0.050	0.25	mg/kg		6010B	01/19/10	1
Beryllium	0.50	0.015	0.10	mg/kg		6010B	01/19/10	1
Cadmium	2.0	0.040	0.25	mg/kg		6010B	01/19/10	1
Chromium	32.	0.085	0.50	mg/kg		6010B	01/19/10	1
Cobalt	11.	0.085	0.50	mg/kg		6010B	01/19/10	1
Copper	49.	0.21	1.0	mg/kg		6010B	01/19/10	1
Lead	110	0.090	0.25	mg/kg		6010B	01/19/10	1
Molybdenum	0.88	0.085	0.25	mg/kg		6010B	01/19/10	1
Nickel	36.	0.26	1.0	mg/kg		6010B	01/19/10	1
Selenium	U	16.	50.	mg/kg	O	6010B	01/19/10	50
Silver	0.20	0.16	0.50	mg/kg	J	6010B	01/19/10	1
Thallium	U	0.40	1.0	mg/kg		6010B	01/19/10	1
Vanadium	56.	0.11	0.50	mg/kg		6010B	01/19/10	1
Zinc	150	0.34	1.5	mg/kg		6010B	01/19/10	1

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Reported: 01/22/10 09:12 Revised: 01/27/10 14:49
 L440475-03 (PH) - 7.6@17.1c



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REPORT OF ANALYSIS

Xinggang Tong
 OTG EnviroEngineering Solutions
 7700 Edgewater Dr., Ste. 260
 Oakland, CA 94621

January 27, 2010

Date Received : January 15, 2010
 Description : 4001 Adeline St Site
 Sample ID : OTG-SB-6-0-D
 Collected By : Xinggang Tong
 Collection Date : 01/14/10 11:58

ESC Sample # : L440475-04
 Site ID :
 Project # : 10EMV05.1000

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	93.2			%		2540G	01/19/10	1
Mercury	0.27	0.0025	0.020	mg/kg		7471	01/19/10	1
Antimony	U	16.	50.	mg/kg	OJ6J3	6010B	01/19/10	50
Arsenic	2.4	0.32	1.0	mg/kg	P1	6010B	01/19/10	1
Barium	130	0.050	0.25	mg/kg	J6J3	6010B	01/19/10	1
Beryllium	0.51	0.015	0.10	mg/kg		6010B	01/19/10	1
Cadmium	2.0	0.040	0.25	mg/kg		6010B	01/19/10	1
Chromium	31.	0.085	0.50	mg/kg	J6	6010B	01/19/10	1
Cobalt	9.9	0.085	0.50	mg/kg		6010B	01/19/10	1
Copper	48.	0.21	1.0	mg/kg	J6	6010B	01/19/10	1
Lead	160	0.090	0.25	mg/kg	J6J3	6010B	01/19/10	1
Molybdenum	0.67	0.085	0.25	mg/kg		6010B	01/19/10	1
Nickel	38.	0.26	1.0	mg/kg	J6	6010B	01/19/10	1
Selenium	U	16.	50.	mg/kg	OJ6J3	6010B	01/19/10	50
Silver	U	0.16	0.50	mg/kg		6010B	01/19/10	1
Thallium	U	2.0	5.0	mg/kg	O	6010B	01/19/10	5
Vanadium	43.	0.11	0.50	mg/kg	J6	6010B	01/19/10	1
Zinc	200	0.34	1.5	mg/kg	VJ3	6010B	01/19/10	1

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REPORT OF ANALYSIS

Xinggang Tong
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January 27, 2010

Date Received : January 15, 2010
 Description : 4001 Adeline St Site
 Sample ID : OTG-SB-6-2.5
 Collected By : Xinggang Tong
 Collection Date : 01/14/10 13:40

ESC Sample # : L440475-05
 Site ID :
 Project # : 10EMV05.1000

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chromium,Hexavalent	7.1	2.6	50.	mg/kg	J	3060A/7	01/21/10	25
ORP	180			mV		2580	01/19/10	1
pH	7.6			su		9045D	01/16/10	1
Total Solids	86.5			%		2540G	01/19/10	1
Mercury	0.067	0.0025	0.020	mg/kg		7471	01/19/10	1
Antimony	U	6.6	20.	mg/kg	O	6010B	01/19/10	20
Arsenic	2.0	0.32	1.0	mg/kg		6010B	01/19/10	1
Barium	160	0.050	0.25	mg/kg		6010B	01/19/10	1
Beryllium	0.60	0.015	0.10	mg/kg		6010B	01/19/10	1
Cadmium	1.2	0.040	0.25	mg/kg		6010B	01/19/10	1
Chromium	52.	0.085	0.50	mg/kg		6010B	01/19/10	1
Cobalt	15.	0.085	0.50	mg/kg		6010B	01/19/10	1
Copper	21.	0.21	1.0	mg/kg		6010B	01/19/10	1
Lead	9.5	0.090	0.25	mg/kg		6010B	01/19/10	1
Molybdenum	0.48	0.085	0.25	mg/kg		6010B	01/19/10	1
Nickel	60.	0.26	1.0	mg/kg		6010B	01/19/10	1
Selenium	U	16.	50.	mg/kg	O	6010B	01/19/10	50
Silver	U	0.16	0.50	mg/kg		6010B	01/19/10	1
Thallium	U	2.0	5.0	mg/kg	O	6010B	01/19/10	5
Vanadium	48.	0.11	0.50	mg/kg		6010B	01/19/10	1
Zinc	50.	0.34	1.5	mg/kg		6010B	01/19/10	1

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 L440475-05 (PH) - 7.6@16.8c



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REPORT OF ANALYSIS

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 7700 Edgewater Dr., Ste. 260
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January 27, 2010

Date Received : January 15, 2010
 Description : 4001 Adeline St Site
 Sample ID : OTG-SB-7-0
 Collected By : Xinggang Tong
 Collection Date : 01/14/10 12:15

ESC Sample # : L440475-06
 Site ID :
 Project # : 10EMV05.1000

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	91.2			%		2540G	01/19/10	1
Mercury	0.22	0.0025	0.020	mg/kg		7471	01/19/10	1
Antimony	U	6.6	20.	mg/kg	O	6010B	01/20/10	20
Arsenic	15.	0.32	1.0	mg/kg		6010B	01/20/10	1
Barium	180	0.050	0.25	mg/kg		6010B	01/20/10	1
Beryllium	0.62	0.015	0.10	mg/kg		6010B	01/20/10	1
Cadmium	2.0	0.040	0.25	mg/kg		6010B	01/20/10	1
Chromium	40.	0.085	0.50	mg/kg		6010B	01/20/10	1
Cobalt	11.	0.085	0.50	mg/kg		6010B	01/20/10	1
Copper	51.	0.21	1.0	mg/kg		6010B	01/20/10	1
Lead	370	0.090	0.25	mg/kg		6010B	01/20/10	1
Molybdenum	0.68	0.085	0.25	mg/kg		6010B	01/20/10	1
Nickel	50.	0.26	1.0	mg/kg		6010B	01/20/10	1
Selenium	U	16.	50.	mg/kg	O	6010B	01/21/10	50
Silver	U	0.82	2.5	mg/kg	O	6010B	01/20/10	5
Thallium	U	2.0	5.0	mg/kg	O	6010B	01/20/10	5
Vanadium	42.	0.11	0.50	mg/kg		6010B	01/20/10	1
Zinc	340	0.34	1.5	mg/kg		6010B	01/20/10	1

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REPORT OF ANALYSIS

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 7700 Edgewater Dr., Ste. 260
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January 27, 2010

Date Received : January 15, 2010
 Description : 4001 Adeline St Site
 Sample ID : OTG-SB-7-2.5
 Collected By : Xinggang Tong
 Collection Date : 01/14/10 14:15

ESC Sample # : L440475-07
 Site ID :
 Project # : 10EMV05.1000

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Total Solids	87.2			%		2540G	01/19/10	1
Mercury	0.070	0.0025	0.020	mg/kg		7471	01/19/10	1
Antimony	U	3.3	10.	mg/kg	OJ6	6010B	01/20/10	10
Arsenic	0.68	0.32	1.0	mg/kg	JP1	6010B	01/20/10	1
Barium	140	0.050	0.25	mg/kg		6010B	01/20/10	1
Beryllium	0.67	0.015	0.10	mg/kg		6010B	01/20/10	1
Cadmium	0.91	0.040	0.25	mg/kg		6010B	01/20/10	1
Chromium	58.	0.085	0.50	mg/kg		6010B	01/20/10	1
Cobalt	6.3	0.085	0.50	mg/kg		6010B	01/20/10	1
Copper	23.	0.21	1.0	mg/kg		6010B	01/20/10	1
Lead	9.8	0.090	0.25	mg/kg	J3	6010B	01/20/10	1
Molybdenum	0.23	0.085	0.25	mg/kg	JP1	6010B	01/20/10	1
Nickel	59.	0.26	1.0	mg/kg		6010B	01/20/10	1
Selenium	U	16.	50.	mg/kg	OJ3J6	6010B	01/21/10	50
Silver	U	0.16	0.50	mg/kg		6010B	01/20/10	1
Thallium	U	4.0	10.	mg/kg	OJ6	6010B	01/20/10	10
Vanadium	51.	0.11	0.50	mg/kg		6010B	01/20/10	1
Zinc	55.	0.34	1.5	mg/kg		6010B	01/20/10	1

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Reported: 01/22/10 09:12 Revised: 01/27/10 14:49

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier	
L440475-01	WG459400	SAMP	Antimony	R1079949	O	
	WG459400	SAMP	Selenium	R1079949	O	
	WG459400	SAMP	Silver	R1079948	J	
L440475-02	WG459400	SAMP	Antimony	R1079949	O	
	WG459400	SAMP	Selenium	R1079949	O	
	WG459400	SAMP	Thallium	R1079949	O	
L440475-03	WG459267	SAMP	Chromium,Hexavalent	R1082648	J	
	WG459400	SAMP	Antimony	R1079949	O	
	WG459400	SAMP	Selenium	R1079949	O	
L440475-04	WG459400	SAMP	Silver	R1079949	J	
	WG459400	SAMP	Antimony	R1079949	OJ6J3	
	WG459400	SAMP	Arsenic	R1079949	P1	
	WG459400	SAMP	Barium	R1079949	J6J3	
	WG459400	SAMP	Chromium	R1079949	J6	
	WG459400	SAMP	Copper	R1079949	J6	
	WG459400	SAMP	Lead	R1079949	J6J3	
	WG459400	SAMP	Nickel	R1079949	J6	
	WG459400	SAMP	Selenium	R1079949	OJ6J3	
	WG459400	SAMP	Thallium	R1079949	O	
	WG459400	SAMP	Vanadium	R1079949	J6	
	WG459400	SAMP	Zinc	R1079949	VJ3	
	L440475-05	WG459267	SAMP	Chromium,Hexavalent	R1082648	J
		WG459400	SAMP	Antimony	R1079949	O
WG459400		SAMP	Selenium	R1079949	O	
L440475-06	WG459400	SAMP	Thallium	R1079949	O	
	WG459401	SAMP	Antimony	R1082448	O	
	WG459401	SAMP	Selenium	R1082448	O	
L440475-07	WG459401	SAMP	Silver	R1082448	O	
	WG459401	SAMP	Thallium	R1082448	O	
	WG459401	SAMP	Antimony	R1082448	OJ6	
	WG459401	SAMP	Arsenic	R1082448	JP1	
	WG459401	SAMP	Lead	R1082448	J3	
	WG459401	SAMP	Molybdenum	R1082448	JP1	
	WG459401	SAMP	Selenium	R1082448	OJ3J6	
WG459401	SAMP	Thallium	R1082448	OJ6		

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
V	(ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
01/27/10 at 14:49:09

TSR Signing Reports: 358

Log all samples for QC2MODCN. Log all samples for EDD - Geotracker EDF. All samples get MDL/RDL reporting.

Sample: L440475-01 Account: OTGENVOCA Received: 01/15/10 09:00 Due Date: 01/22/10 00:00 RPT Date: 01/22/10 09:12
Sample: L440475-02 Account: OTGENVOCA Received: 01/15/10 09:00 Due Date: 01/22/10 00:00 RPT Date: 01/22/10 09:12
Sample: L440475-03 Account: OTGENVOCA Received: 01/15/10 09:00 Due Date: 01/22/10 00:00 RPT Date: 01/22/10 09:12
Sample: L440475-04 Account: OTGENVOCA Received: 01/15/10 09:00 Due Date: 01/22/10 00:00 RPT Date: 01/22/10 09:12
Sample: L440475-05 Account: OTGENVOCA Received: 01/15/10 09:00 Due Date: 01/22/10 00:00 RPT Date: 01/22/10 09:12
Sample: L440475-06 Account: OTGENVOCA Received: 01/15/10 09:00 Due Date: 01/22/10 00:00 RPT Date: 01/22/10 09:12
Sample: L440475-07 Account: OTGENVOCA Received: 01/15/10 09:00 Due Date: 01/22/10 00:00 RPT Date: 01/22/10 09:12

Quality Control Summary
SDG: L440475
OTG EnviroEngineering Solutions

Test:	Chromium,Hexavalent by Method 3060A/7196A		
Project No:	10EMV05.1000	Matrix:	Soil - mg/kg
Project:	4001 Adeline St Site	EPA ID:	TN00003
Collection Date:	1/14/2010	Analytic Batch:	WG459267
Analysis Date:	1/21/2010 11:39:00 AM	Analyst:	477
Instrument ID:	HACH 4000	Extraction Date:	1/15/2010
Sample Numbers:	L440475-03, -05		

Method Blank

Analyte	CAS	PQL	Qualifiers
Chromium,Hexavalent		<2.00	

Laboratory Control Sample (LCS)

Analyte	True Value	Found	Recovery %	Control Limits	Qualifiers
Chromium,Hexavalent	100	101	101	50 - 143	

Laboratory Control Sample Duplicate (LCSD)

Analyte	True Value	Found	Recovery %	Control Limits	Qualifiers
Chromium,Hexavalent	100	99.6	99.6	50 - 143	



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Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Chromium,Hexavalent by Method 3060A/7196A		
Project No:	10EMV05.1000	Matrix:	Soil - mg/kg
Project:	4001 Adeline St Site	EPA ID:	TN00003
Collection Date:	1/14/2010	Analytic Batch:	WG459267
Analysis Date:	1/21/2010 11:39:00 AM	Analyst:	477
Instrument ID:	HACH 4000	Extraction Date:	1/15/2010
Sample Numbers:	L440475-03, -05		

Laboratory Control Sample/ Laboratory Control Sample Duplicate

Analyte	Spike	LCS	% Rec		Control Limits	Qualifier	RPD	% Rec		Control Limits	Qualifier
			Rec	LCS				Rec	LCS		
Chromium,Hexavalent	100	101	101	99.6	50-143		1.4	20			

Sample Duplicate

L440475-05

Name	Sample Results	Duplic Results	%RPD	Limit	Qualifiers
Chromium,Hexavalent	7.10	6.12			

Matrix Spike/Matrix Spike Duplicate

L440570-01

Analyte	Spike Value	Sample	% Rec		MSD	% Rec	Control Limits	% Rec Qualifier	RPD	Control Limits	RPD Qual
			MS	Rec							
Chromium,Hexavalent	20.0	0.000	18.2	91.0	19.5	97.5	80-120		6.9	20	



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Quality Control Summary
SDG: L440475
OTG EnviroEngineering Solutions

Test:	ORP by Method 2580	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459439
Collection Date:	1/14/2010	Analyst:	397
Analysis Date:	1/19/2010 3:38:00 PM	Extraction Date:	1/18/2010
Instrument ID:	EXSTIK		
Sample Numbers:	L440475-03, -05		

Laboratory Control Sample (LCS)

Analyte	True Value	Found	Recovery %	Control Limits	Qualifiers
ORP	229	220	96.1	95.6 - 104.37	

Laboratory Control Sample Duplicate (LCSD)

Analyte	True Value	Found	Recovery %	Control Limits	Qualifiers
ORP	229	220	96.1	95.6 - 104.37	



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Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	ORP by Method 2580	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459439
Collection Date:	1/14/2010	Analyst:	397
Analysis Date:	1/19/2010 3:38:00 PM	Extraction Date:	1/18/2010
Instrument ID:	EXSTIK		
Sample Numbers:	L440475-03, -05		

Laboratory Control Sample/ Laboratory Control Sample Duplicate

Analyte	Spike	LCS	% Rec		Control Limits		Qualifier	% RPD		Control Limits	
			Rec	LCSD	Rec	LCSD		RPD	Qualifier	RPD	Qualifier
ORP	229	220	96.1	220	96.1	95.6-		0.0	20		

Sample Duplicate L440239-01

Name	Sample Results	Duplic Results	%RPD	Limit	Qualifiers
ORP	130	131	0.8	20	

Sample Duplicate L440684-01

Name	Sample Results	Duplic Results	%RPD	Limit	Qualifiers
ORP	130	129	0.8	20	



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Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Total Solids by Method 2540G		
Project No:	10EMV05.1000	Matrix:	Soil - mg/kg
Project:	4001 Adeline St Site	EPA ID:	TN00003
Collection Date:	1/14/2010	Analytic Batch:	WG459430
Analysis Date:	1/19/2010 11:09:00 AM	Analyst:	469
Instrument ID:	BAL	Extraction Date:	1/18/2010
Sample Numbers:	L440475-01		

Method Blank

Analyte	CAS	PQL	Qualifiers
Total Solids		<0.100	

Laboratory Control Sample (LCS)

Analyte	True Value	Found	Recovery %	Control Limits	Qualifiers
Total Solids	50.0	50.0	100.0	85 - 115	



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Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Total Solids by Method 2540G	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459431
Collection Date:	1/14/2010	Analyst:	469
Analysis Date:	1/19/2010 10:50:00 AM	Extraction Date:	1/18/2010
Instrument ID:	BAL		
Sample Numbers:	L440475-03, -04, -07, -02, -05, -06		

Method Blank

Analyte	CAS	PQL	Qualifiers
Total Solids		<0.100	

Laboratory Control Sample (LCS)

Analyte	True Value	Found	Recovery %	Control Limits	Qualifiers
Total Solids	50.0	50.0	100.0	85 - 115	



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Quality Control Summary
SDG: L440475
OTG EnviroEngineering Solutions

Test:	Total Solids by Method 2540G	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459430
Collection Date:	1/14/2010	Analyst:	469
Analysis Date:	1/19/2010 11:09:00 AM	Extraction Date:	1/18/2010
Instrument ID:	BAL		
Sample Numbers:	L440475-01		

Sample Duplicate
 L440475-01

Name	Sample Results	Duplic Results	%RPD	Limit	Qualifiers
Total Solids	81.7	82.8	1.4	5	



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Quality Control Summary
SDG: L440475
OTG EnviroEngineering Solutions

Test:	Total Solids by Method 2540G	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459431
Collection Date:	1/14/2010	Analyst:	469
Analysis Date:	1/19/2010 10:50:00 AM	Extraction Date:	1/18/2010
Instrument ID:	BAL		
Sample Numbers:	L440475-03, -04, -07, -02, -05, -06		

Sample Duplicate
 L440484-03

Name	Sample Results	Duplic Results	%RPD	Limit	Qualifiers
Total Solids	69.0	71.4	3.4	5	



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Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	pH by Method 9045D	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459269
Collection Date:	1/14/2010	Analyst:	477
Analysis Date:	1/16/2010 10:31:00 AM	Extraction Date:	1/15/2010
Instrument ID:	ACCUMET AB		
Sample Numbers:	L440475-05, -03		

Method Blank

Analyte	CAS	PQL	Qualifiers
pH		5.50	

Laboratory Control Sample (LCS)

Analyte	True Value	Found	Recovery %	Control Limits	Qualifiers
pH	9.63	9.70	101	97.9 - 100.8	

Laboratory Control Sample Duplicate (LCSD)

Analyte	True Value	Found	Recovery %	Control Limits	Qualifiers
pH	9.63	9.70	101	97.9 - 100.8	



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Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	pH by Method 9045D	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459269
Collection Date:	1/14/2010	Analyst:	477
Analysis Date:	1/16/2010 10:31:00 AM	Extraction Date:	1/15/2010
Instrument ID:	ACCUMET AB		
Sample Numbers:	L440475-05, -03		

Laboratory Control Sample/ Laboratory Control Sample Duplicate

Analyte	Spike	LCS	% Rec		Control Limits		Qualifier	% RPD		Control Limits	
			Rec	LCSD	Rec	Limits		RPD	Limits	Qualifier	
pH	9.63	9.70	101	9.70	101	97.9-100.8		0.0	20		

Sample Duplicate L440437-01

Name	Sample Results	Duplic Results	%RPD	Limit	Qualifiers
pH	4.20	4.20	0.0	1	



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Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Mercury by Method 7471	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459212
Collection Date:	1/14/2010	Analyst:	429
Analysis Date:	1/19/2010 10:02:00 AM	Extraction Date:	1/15/2010
Instrument ID:	CVAA3		
Sample Numbers:	L440475-03, -05, -07, -06, -01, -04, -02		

Method Blank

Analyte	CAS	PQL	Qualifiers
Mercury		<0.020	

Laboratory Control Sample (LCS)

Analyte	True Value	Found	Recovery %	Control Limits	Qualifiers
Mercury	8.77	8.61	98.2	71.6 - 127.7	



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Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Mercury by Method 7471	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459212
Collection Date:	1/14/2010	Analyst:	429
Analysis Date:	1/19/2010 10:02:00 AM	Extraction Date:	1/15/2010
Instrument ID:	CVAA3		
Sample Numbers:	L440475-03, -05, -07, -06, -01, -04, -02		

Sample Duplicate

L440475-01

Name	Sample Results	Duplic Results	%RPD	Limit	Qualifiers
Mercury	0.140	0.153	8.9	20	

Matrix Spike/Matrix Spike Duplicate

L440475-01

Analyte	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qualifier	% RPD	Control Limits	RPD Qual
Mercury	0.250	0.140	0.425	114	0.375	94.0	70-130		12	20	



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Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Trace Metals by Method 6010B	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459400
Collection Date:	1/14/2010	Analyst:	454
Analysis Date:	1/19/2010	Extraction Date:	1/18/2010
Instrument ID:	ICP7		
Sample Numbers:	L440475-01, -02, -03, -04, -05		

Method Blank

Analyte	CAS	PQL	Qualifiers
Antimony	7440-36-0	<1.00	
Arsenic	7440-38-2	<1.00	
Barium	7440-39-3	<0.250	
Beryllium	7440-41-7	<0.100	
Cadmium	7440-43-9	<0.250	
Chromium	7440-47-3	<0.500	
Cobalt	7440-48-4	<0.500	
Copper	7440-50-8	<1.00	
Lead	7439-92-1	<0.250	
Molybdenum	7439-98-7	<0.250	
Nickel	7440-02-0	<1.00	
Selenium	7782-49-2	<1.00	
Silver	7440-22-4	<0.500	
Thallium	7440-28-0	<1.00	
Vanadium	7440-62-2	<0.500	
Zinc	7440-66-6	<1.50	



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Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Trace Metals by Method 6010B	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459401
Collection Date:	1/14/2010	Analyst:	454
Analysis Date:	1/20/2010	Extraction Date:	1/18/2010
Instrument ID:	ICP7		
Sample Numbers:	L440475-06, -07		

Method Blank

Analyte	CAS	PQL	Qualifiers
Antimony	7440-36-0	<1.00	
Arsenic	7440-38-2	<1.00	
Barium	7440-39-3	<0.250	
Beryllium	7440-41-7	<0.100	
Cadmium	7440-43-9	<0.250	
Chromium	7440-47-3	<0.500	
Cobalt	7440-48-4	<0.500	
Copper	7440-50-8	<1.00	
Lead	7439-92-1	<0.250	
Molybdenum	7439-98-7	<0.250	
Nickel	7440-02-0	<1.00	
Selenium	7782-49-2	<1.00	
Silver	7440-22-4	<0.500	
Thallium	7440-28-0	<1.00	
Vanadium	7440-62-2	<0.500	
Zinc	7440-66-6	<1.50	

Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Trace Metals by Method 6010B	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459400
Collection Date:	1/14/2010	Analyst:	454
Analysis Date:	1/19/2010	Extraction Date:	1/18/2010
Instrument ID:	ICP7		
Sample Numbers:	L440475-01, -02, -03, -04, -05		

Laboratory Control Sample (LCS)

Analyte	True Value	Found	Recovery %	Control Limits	Qualifiers
Antimony	85.1	35.2	41.4	1.2 - 242.1	
Arsenic	192	165	85.9	78.6 - 120.8	
Barium	420	385	91.7	78.8 - 121.4	
Beryllium	69.3	63.5	91.6	79.8 - 120.1	
Cadmium	70.1	62.6	89.3	78.5 - 121.5	
Chromium	168	161	95.8	80.4 - 120.2	
Cobalt	111	108	97.3	80.2 - 119.8	
Copper	122	119	97.5	81.6 - 119.7	
Lead	113	102	90.3	77.3 - 122.1	
Molybdenum	129	122	94.6	78.3 - 120.9	
Nickel	74.1	80.0	108	78.8 - 121.2	
Selenium	176	134	76.1	75.6 - 125	
Silver	115	114	99.1	66 - 133.9	
Thallium	111	96.5	86.9	77.6 - 122.5	
Vanadium	86.0	84.7	98.5	72 - 127.9	
Zinc	437	392	89.7	78.5 - 121.7	

Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Trace Metals by Method 6010B	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459401
Collection Date:	1/14/2010	Analyst:	454
Analysis Date:	1/20/2010	Extraction Date:	1/18/2010
Instrument ID:	ICP7		
Sample Numbers:	L440475-06, -07		

Laboratory Control Sample (LCS)

Analyte	True Value	Found	Recovery %	Control Limits	Qualifiers
Antimony	85.1	34.7	40.8	1.2 - 242.1	
Arsenic	192	178	92.7	78.6 - 120.8	
Barium	420	403	96.0	78.8 - 121.4	
Beryllium	69.3	67.6	97.5	79.8 - 120.1	
Cadmium	70.1	64.9	92.6	78.5 - 121.5	
Chromium	168	166	98.8	80.4 - 120.2	
Cobalt	111	117	105	80.2 - 119.8	
Copper	122	126	103	81.6 - 119.7	
Lead	113	111	98.2	77.3 - 122.1	
Molybdenum	129	130	101	78.3 - 120.9	
Nickel	74.1	87.1	118	78.8 - 121.2	
Selenium	176	137	77.8	75.6 - 125	
Silver	115	122	106	66 - 133.9	
Thallium	111	103	92.8	77.6 - 122.5	
Vanadium	86.0	88.5	103	72 - 127.9	
Zinc	437	405	92.7	78.5 - 121.7	

Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Trace Metals by Method 6010B	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459400
Collection Date:	1/14/2010	Analyst:	454
Analysis Date:	1/19/2010	Extraction Date:	1/18/2010
Instrument ID:	ICP7		
Sample Numbers:	L440475-01, -02, -03, -04, -05		

Sample Duplicate

L440475-04

Name	Sample Results	Duplic Results	%RPD	Limit	Qualifiers
Antimony	0.000	0.000			
Arsenic	1.46	2.40	49	20	P1
Barium	127	130	2.3	20	
Beryllium	0.522	0.510	2.3	20	
Cadmium	2.36	2.00	17	20	
Chromium	25.9	31.0	18	20	
Cobalt	11.5	9.90	15	20	
Copper	55.6	48.0	15	20	
Lead	160	160	0.0	20	
Molybdenum	0.746	0.670	11	20	
Nickel	33.2	38.0	13	20	
Selenium	0.000	0.000			
Silver	0.000	0.000			
Thallium	0.000	0.000			
Vanadium	50.2	43.0	15	20	
Zinc	194	200	3.0	20	

Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Trace Metals by Method 6010B	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459400
Collection Date:	1/14/2010	Analyst:	454
Analysis Date:	1/19/2010	Extraction Date:	1/18/2010
Instrument ID:	ICP7		
Sample Numbers:	L440475-01, -02, -03, -04, -05		

Matrix Spike/Matrix Spike Duplicate

L440475-04

Analyte	Spike		% Rec			Control Limits	% Rec Qualifier	% RPD	Control Limits	RPD Qual	
	Value	Sample	MS	Rec	MSD						
Antimony	50.0	0.000	-61.830	-123.7	-28.200	-56.4	75-125	J6	75	20	J3
Arsenic	50.0	2.40	44.3	83.8	41.6	78.4	75-125		6.3	20	
Barium	50.0	130	176	92.0	138	16.0	75-125	J6	24	20	J3
Beryllium	50.0	0.510	43.8	86.6	43.5	86.0	75-125		0.7	20	
Cadmium	50.0	2.00	45.5	87.0	45.5	87.0	75-125		0.0	20	
Chromium	50.0	31.0	69.9	77.8	60.6	59.2	75-125	J6	14	20	
Cobalt	50.0	9.90	56.0	92.2	52.9	86.0	75-125		5.7	20	
Copper	50.0	48.0	86.4	76.8	71.9	47.8	75-125	J6	18	20	
Lead	50.0	160	201	82.0	148	-24.0	75-125	J6	30	20	J3
Molybdenum	50.0	0.670	41.6	81.9	42.2	83.1	75-125		1.4	20	
Nickel	50.0	38.0	74.9	73.8	65.0	54.0	75-125	J6	14	20	
Selenium	50.0	0.000	-34.350	-68.7	-54.720	-109.4	75-125	J6	76	20	J3
Silver	50.0	0.000	45.6	91.2	45.9	91.8	75-125		0.7	20	
Thallium	50.0	0.000	50.2	100	55.1	110	75-125		9.3	20	
Vanadium	50.0	43.0	94.3	103	79.5	73.0	75-125	J6	17	20	
Zinc	50.0	200	239	78.0	189	-22.0	75-125	V	23	20	J3



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Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Trace Metals by Method 6010B	Matrix:	Soil - mg/kg
Project No:	10EMV05.1000	EPA ID:	TN00003
Project:	4001 Adeline St Site	Analytic Batch:	WG459401
Collection Date:	1/14/2010	Analyst:	454
Analysis Date:	1/20/2010	Extraction Date:	1/18/2010
Instrument ID:	ICP7		
Sample Numbers:	L440475-06, -07		

Sample Duplicate

L440475-07

Name	Sample Results	Duplic Results	%RPD	Limit	Qualifiers
Antimony	0.000	0.000			
Arsenic	0.000	0.680	200	20	P1
Barium	144	140	2.8	20	
Beryllium	0.682	0.670	1.8	20	
Cadmium	0.865	0.910	5.1	20	
Chromium	57.5	58.0	0.9	20	
Cobalt	5.96	6.30	5.5	20	
Copper	22.1	23.0	4.0	20	
Lead	6.55	9.80	40	20	J3
Molybdenum	0.348	0.230	41	20	P1
Nickel	57.4	59.0	2.7	20	
Selenium	0.000	0.000			
Silver	0.000	0.000			
Thallium	0.000	0.000			
Vanadium	50.4	51.0	1.2	20	
Zinc	51.4	55.0	6.8	20	



12065 Lebanon Rd
 Mt. Juliet, TN 37122
 (615) 758-5858
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 Tax I.D 62-0814289
 Est. 1970

YOUR LAB OF CHOICE

Quality Control Summary

SDG: L440475

OTG EnviroEngineering Solutions

Test:	Trace Metals by Method 6010B		
Project No:	10EMV05.1000	Matrix:	Soil - mg/kg
Project:	4001 Adeline St Site	EPA ID:	TN00003
Collection Date:	1/14/2010	Analytic Batch:	WG459401
Analysis Date:	1/20/2010	Analyst:	454
Instrument ID:	ICP7	Extraction Date:	1/18/2010
Sample Numbers:	L440475-06, -07		

Matrix Spike/Matrix Spike Duplicate

L440475-07

Analyte	Spike Value	Sample	%		% Rec	Control Limits	% Rec Qualifier	% RPD	Control Limits	RPD Qual
			MS	MSD						
Antimony	50.0	0.000	-5.797	-11.6	-6.382	-12.8	75-125	J6	9.6	20
Arsenic	50.0	0.680	45.0	88.6	47.7	94.0	75-125		5.8	20
Barium	50.0	140	190	100	191	102	75-125		0.5	20
Beryllium	50.0	0.670	47.8	94.3	49.5	97.7	75-125		3.5	20
Cadmium	50.0	0.910	44.4	87.0	47.2	92.6	75-125		6.1	20
Chromium	50.0	58.0	106	96.0	108	100	75-125		1.9	20
Cobalt	50.0	6.30	54.6	96.6	56.4	100	75-125		3.2	20
Copper	50.0	23.0	72.0	98.0	75.0	104	75-125		4.1	20
Lead	50.0	9.80	52.4	85.2	54.6	89.6	75-125		4.1	20
Molybdenum	50.0	0.000	41.2	82.4	43.8	87.6	75-125		6.1	20
Nickel	50.0	59.0	106	94.0	108	98.0	75-125		1.9	20
Selenium	50.0	0.000	29.5	59.0	54.5	109	75-125	J6	60	20
Silver	50.0	0.000	49.9	99.8	52.5	105	75-125		5.1	20
Thallium	100	0.000	46.9	46.9	53.5	53.5	75-125	J6	13	20
Vanadium	50.0	51.0	99.1	96.2	102	102	75-125		2.9	20
Zinc	50.0	55.0	96.7	83.4	99.1	88.2	75-125		2.5	20

Company Name/Address:
 OTG EnviroEngineering Solutions, Inc
 7700 Edgewater Dr., Suite 260
 Oakland, CA 94621

Billing Information:

Analysis/Container/Preservative

Chain of Custody
 Page 1 of 1

ESC
 L.A.B S.C.I.E.N.C.E.S

12065 Lebanon Road
 Mt. Juliet, TN 37122

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 Phone: (615) 758-5858
 Fax: (615) 758-5859

C087

Report to: Xinggang Tong

Email to: xtong@otgenv.com

Project Description: 4001 Adeline St. Site

City/State Collected: Emeryville, CA

Phone: (510) 465-8982
 FAX:

Client Project #: 10EMV05.1000

ESC Key:

Collected by: (print) Xinggang Tong

Site/Facility ID#:

P.O.#:

Collected by (signature):
 Immediately Packed on Ice N (Y)

Rush? (Lab MUST Be Notified)
 Same Day..... 200%
 Next Day..... 100%
 Two Day..... 50%
 Three Day..... 25%

Date Results Needed:
 Email? No Yes
 FAX? No Yes

No. of Cntrs

CoCode (lab use only)
 Template/Prelogin
 Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs
OTG-SB-5-0	Grab	Soil	0'	1/14/10	11:30	2
OTG-SB-5-2.5			2.5'	1/14/10	13:05	2
OTG-SB-6-0			0'	1/14/10	11:50	1
OTG-SB-6-0-d			0'	1/14/10	11:58	1
OTG-SB-6-2.5			2.5'	1/14/10	13:40	2
OTG-SB-7-0			0'	1/14/10	12:15	2
OTG-SB-7-2.5			2.5'	1/14/10	14:15	2

California Title 22 (CAM17) metals
 Chromium (Hexavalent)

Remarks/Contaminant	Sample # (lab only)
	1440475-01
	02
	03
	04
	05
	06
	07

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: email EDF file for California GeoTracker upload. Global ID: T10000001166
Logcode: OTGO

pH _____ Temp _____
 Flow _____ Other _____

Relinquished by: (Signature) <u>[Signature]</u>	Date: <u>1/14/10</u>	Time: <u>16:18</u>	Received by: (Signature) <u>[Signature]</u>	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> _____	Condition: <u>[Signature]</u> (lab use only)
Relinquished by: (Signature) <u>[Signature]</u>	Date:	Time:	Received by: (Signature)	Temp: <u>3.9°C</u>	Bottles Received: <u>12</u>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <u>David Bland</u>	Date: <u>01/15/10</u>	Time: <u>0900</u>

CoC Seals Intact Y N NA
 pH Checked: _____ NCF: _____
 35 of 35