APPENDIX E

SEDIMENT CHARACTERIZATION STUDY
BIG TUJUNGA DAM AND RESERVOIR SEDIMENT REMOVAL PROJECT

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
GEOTECHNCIAL AND MATERIALS ENGINEERING DIVISION

February 4, 2013

TO: Christopher Stone
Water Resources Division

Attention Kavita Mahulikar

FROM: Greg Kelley NGD for GK
Geotechnical and Materials Engineering Division

SEDIMENT CHARACTERIZATION STUDY
BIG TUJUNGA DAM AND RESERVOIR SEDIMENT REMOVAL PROJECT
PROJECT ID WRDD000028 (PCA HF00710003)

In response to your August 18, 2011, and August 27, 2012, requests, we conducted a sediment characterization for the subject project. Our findings and conclusions are included in the attached report.

If you have any questions regarding this matter, please contact Olga Cruz or Geir Mathisen at Extension 4923.

OC:kw
P:\gmepub\Secretarial\soilsrvw\REPORTS\Reservoir Sediment Characterization Study Report_011513.docx

Attach.

SEDIMENT CHARACTERIZATION STUDY

BIG TUJUNGA DAM AND RESERVOIR SEDIMENT REMOVAL PROJECT

ANGELES NATIONAL FOREST
UNINCORPORATED LOS ANGELES COUNTY

Prepared for

County of Los Angeles
Department of Public Works
Water Resources Division

Prepared by

County of Los Angeles
Department of Public Works
Geotechnical and Materials Engineering Division

January 15, 2013

TABLE OF CONTENTS

PAGE

INTRODUCTION 1

SUBSURFACE EXPLORATION 1

DATA AND TEST RESULTS 2

Sediment Characterization Test Results 2

Environmental Test Results 4

DISCUSSION AND CONCLUSIONS 4

LIMITATIONS 6

REFERENCES 7

FIGURES

Figure 1 – Site Location Map
Figure 2 – Underwater Sample and Test Pit Location Map

TABLES

Table 1 – Summary of Sediment Characterization Test Results

PLATE

Plate 1 – Underwater Sample and Test Pit Station Map

APPENDICES

Appendix A – Geotechnical Laboratory Data
Appendix B – Environmental Analytical Results
Appendix C – Vulcan Developed Soil Concentration Levels and California Human Health Screening Levels

INTRODUCTION

As requested by Water Resources Division (WRD), Geotechnical and Materials Engineering Division conducted a characterization study of the sediment materials in Big Tujunga Reservoir. The work was completed as part of the sediment removal program to clean out the reservoir. The project area is located in the Angeles National Forest, unincorporated Los Angeles County (see Figure 1). This report presents our findings and conclusions from this study.

SUBSURFACE EXPLORATION

Our investigation was divided into two categories: 1) underwater sampling within submerged portions of the reservoir, and 2) sampling within the dry portions of the reservoir. Logistical constraints around Big Tujunga Reservoir prevented the use of conventional subsurface investigation methods. There were no feasible access points into the reservoir for heavy equipment such as excavators and the foot path behind the reservoir was considered hazardous and unsafe. We determined that the only way to travel to different areas within the reservoir was by boat. The dam operator volunteered the use of his small motor-operated boat to transport our team; however, the weight limit of the small boat would only allow light-weight equipment that can be carried and operated by hand.

For underwater sampling within submerged portions of the reservoir, two options were discussed with WRD. The first option was to sample the reservoir bottom using a mud rotary drill rig from a barge. This option has the advantage of deep, continuous sampling that provides a comprehensive subsurface profile of the reservoir bottom. The second option was to use a 12-inch by 6-inch ponar grab sampler dropped by hand from a boat. The ponar sampling would be less expensive than barge drilling because it can be conducted using the dam operator's small boat; however, this would only provide sampling of approximately 6 inches of the reservoir bottom. At WRD's request, only ponar sampling was conducted within the submerged areas. Sampling locations (see Figure 2) were selected based on water levels at the time of investigation, directions from WRD, and the dam operator’s availability.

Initially, multiple sampling locations were selected within the dry areas around the reservoir. However, rainfall and fluctuations in the reservoir's water level made many of these locations either inaccessible by boat or unsafe for landing. The scope of our sampling program within dry areas was reduced to one test pit, denoted as B-10 on Figure 2. This test pit was excavated by hand using picks and shovels down to a depth

of approximately 9 feet. Geotechnical testing was performed at a mobile laboratory set up adjacent to the location of the test pit, immediately upstream of water level at the time of exploration.

DATA AND TEST RESULTS

Sediment Characterization Test Results

Sieve analyses and organic content tests were performed on samples collected. The test results are provided in Appendix B and are summarized in the following Table 1.

Table 1

Summary of Sediment Characterization Test Results

Approximate Station	Sampling Location/ Test Pit Location (*)	% Gravel	% Sand	% Fines (Silts and Clays)	% Organic Content
3+00	B-9	0	2.1	97.9	6.65
8+00	B-8	0	2	98.0	6.74
11+00	B-7	3.2	3.2	93.6	7.07
14+50	B-6	0	5.2	94.8	6.24
17+50	B-5	0	5.8	94.2	5.86
20+50	B-4	0	4.5	95.5	6.78
24+00	B-3	0.8	6.3	92.9	6.24
31+00	B-2	3.1	54.4	42.5	3.01
37+00	B-1	1.3	93.9	4.8	.77
44+50	B-16	0.3	75.3	24.4	6.5
53+00	B-15	0.2	7.2	92.6	10.2
60+50	B-14	13	72.2	14.8	5.6
67+00	B-13	1.1	27.2	71.7	1.2
72+50	B-12	3.3	58.2	38.5	6.7
77+00	B-11	2.4	44.8	52.8	2.9
95+00	B-10*	60.6	36.7	2.7	0.46

With the exception of a test pit (*) all samples were collected underwater to a depth of approximately 6 inches.

Environmental Test Results

Sixteen locations were sampled and submitted for testing. Locations were chosen to closely represent the conditions throughout the reservoir. Due to access constraints the samples were primarily collected in underwater conditions using a ponar sampler. Locations where samples were collected are shown on sampling location map (see Figure 2) and reservoir plan on Plate 1.

The following analytical tests were performed: California Code of Regulations (CCR) Title 22 Metals including mercury, volatile organic compounds including fuel oxygenates, semivolatile organic compounds, organochlorine pesticides, chlorinated herbicides, polynuclear aromatic hydrocarbons, polychlorinated biphenyls, and 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). The analytical test results are provided in Appendix C and are summarized in Table 2.

DISCUSSION AND CONCLUSIONS

1. Sediments in the reservoir range from silt and clay (fine soils) size particles up to cobble sizes.

2. Underwater sampling showed that areas from approximately Station 0+00 to 30+00 appear to have the greatest silt and clay content. This may correspond to a topographic drop in the natural ground as observed in the profile plans. One test pit excavated in the upper area of the reservoir at approximately Stations 95+00 showed significant gravel content.

3. In the wet areas of the reservoir, organic material was observed on the water surface. Sediments generally appeared to contain negligible organic materials in dry areas; except for localized deposits found along the stream banks of what appears to be forest fire-derived debris. Due to fluctuating water levels, forest-fire-derived debris deposits may be expected to be washed down into the lower reservoir.

4. Based on the analytical results listed in Table 2, semivolatile organic compounds, organochlorine pesticides, chlorinated herbicides, polynuclear aromatic hydrocarbons, polychlorinated biphenyls, carbofurans, 1,4 Dioxane and 2,3,7,8-TCDD were not detected in any of the samples analyzed.

5. Based on the analytical results listed in Table 2, the concentrations of detected metals and volatile organic compounds do not indicate significant contamination or hazardous conditions and are below the applicable Vulcan Developed Soil Concentration Levels and the California Human Health Screening Levels listed in Appendix D. The low levels of volatile organic compounds in the soils samples are most likely cross-contamination from the boat engine.

6. Special provisions for health and safety and for the handling or disposal of excavated soils in Big Tujunga Reservoir are not required.

7. Sediments may be processed for use as aggregates or placed at a Sediment Placement Site as follows:

   (a) If crushed to suitable sizes, gravels and cobbles from the middle and upper reservoir areas and part of the lower reservoir area may be used as aggregates.

   (b) Most of the sediments from the lower reservoir area and part of the middle reservoir will not likely be suitable for use as aggregate.

   (c) Sediments with high organic contents should be blended with other sediments so that organic content does not exceed 3 percent prior to placement at a Sediment Placement Site and/or stockpiled for landscaping purposes.

   (d) Sediments with high moisture contents should be dried out or blended with other sediments so that moisture content is low prior to transportation.

LIMITATIONS

This report has been prepared for the exclusive use of Public Works for the specific site discussed herein and should not be considered transferable to other sites or projects. This study was conducted according to generally accepted geotechnical engineering practice for projects of this magnitude. Our findings and conclusions are based on the data and equipment available and our interpretation of the data based on our experience and background. The findings and conclusions found in this report are professional opinions and are not meant to be a control of nature; therefore, no warranty is herein expressed or implied.

The environmental testing component of this study is representative of a small portion of the site and does not preclude the occurrence of hazardous materials or conditions at other portions of the site. Although hazardous materials or conditions have not been identified during this assessment, the absence of such conditions at the site should not be assumed.

If you have any questions regarding the content of this report, please contact Olga Cruz or Geir Mathisen at (626) 458-4925.

Prepared by:

Olga Cruz
Principal Civil Engineering Assistant

Geir Mathisen
Engineering Geologist

Reviewed by:

William Man
Associate Civil Engineer

Charles Nestle
Supervising Engineering Geologist II

REFERENCES

1. California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3 (Characteristics of Hazardous Waste), §66261.24 (Characteristic of Toxicity), September 2009.

2. U.S. Environmental Protection Agency, Region 9, "Regional Screening Levels for Chemical Contaminants at Superfund Sites," on-line reference: http://www.epa.gov/region09/superfund/prg/, April 2009.

3. Request for Services for Big Tujunga Reservoir Sediment Characterization Program, prepared by County of Los Angeles Department of Public Works, Water Resources Division, August 18, 2011.

4. California Test Method 202, California Department of Transportation, Division of Engineering Services, Materials Engineering and Testing Services, June 2008.

5. Soil and Rock Logging, Classification, and Presentation Manual, California Department of Transportation, Division of Engineering Services, Geotechnical Services, June 2007.

6. California Environmental Protection Agency, Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties, January 2005.

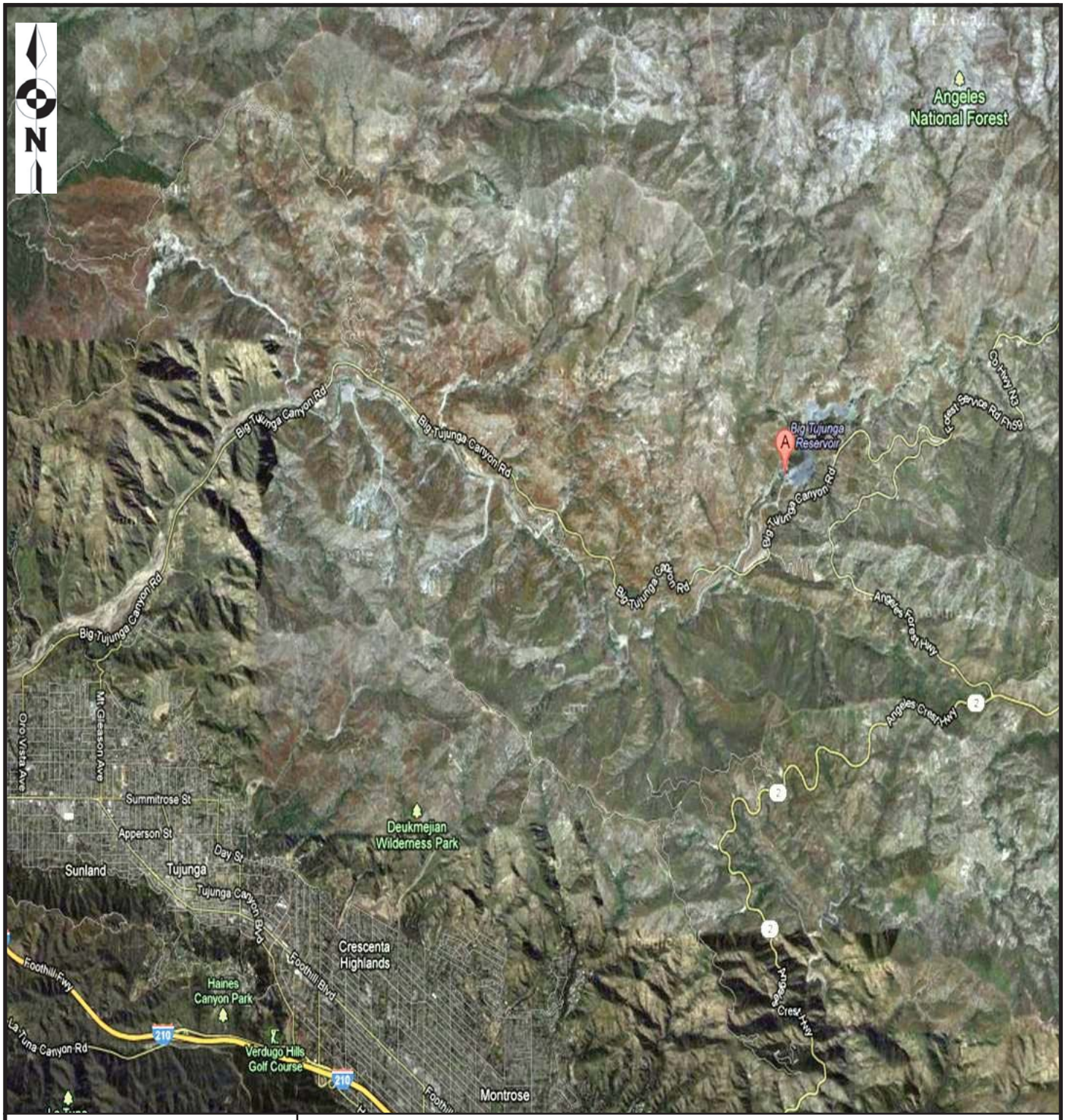
7. Draft Cooperative Agreement between the Los Angeles County Flood Control District and Vulcan Materials Company, regarding exchange of excavated material for sediment placement rights, undated.

8. Design Plans dated March 21, 1994. Big Tujunga Dam and Reservoir Maple Canyon Sediment Placement Site, County of Los Angeles Department of Public Works.

9. As-built Plans dated August 12, 1991. Big Tujunga Dam and Reservoir Maple Canyon Sediment Placement Site, County of Los Angeles Department of Public Works.

10. Draft Concept Design Plans, undated. Big Tujunga Dam and Reservoir Postfire Sediment Removal. County of Los Angeles Department of Public Works.

11. Big Tujunga Reservoir Cleanout Work Plan Map Dated April 07, 2011. Water Resources Division.



GEOLOGY INVESTIGATIONS

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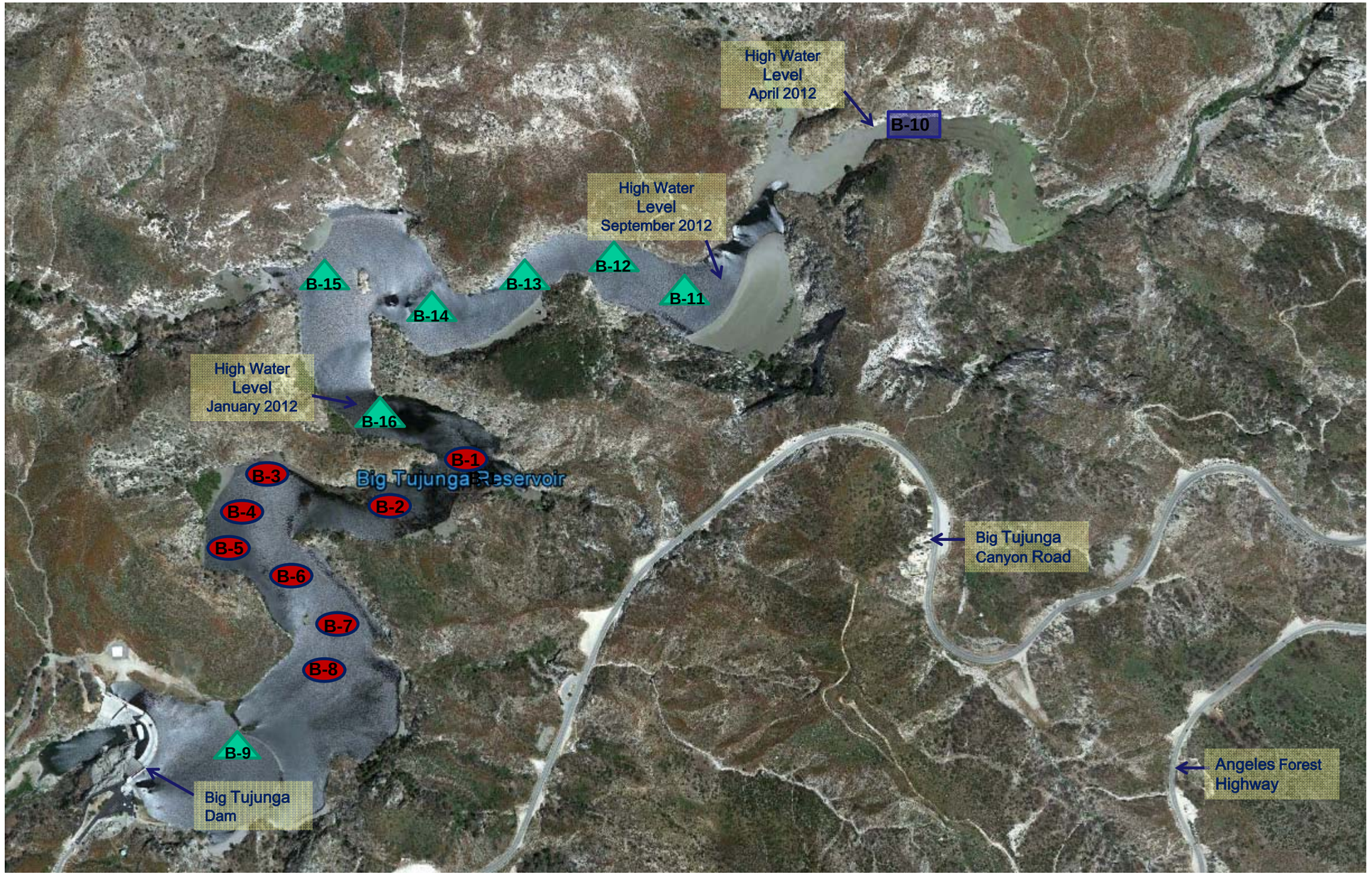
GEOLOGY INVESTIGATIONS

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

SITE LOCATION MAP
BIG TUJUNGA DAM AND RESERVOIR
SEDIMENT REMOVAL PROJECT

Date: 06.05.12	Drafted by: GRM	Scale: NTS	FIGURE 1



North
(Scale 1 in = 550 ft)

Legend

Location	Sample Type
B-7	Geotechnical ponar samples
B-7	Geotechnical test pit
B-7	Environmental and Geotechnical ponar samples

SOILS INVESTIGATIONS

GEOLOGIC AND GEOTECHNICAL ENGINEERING SECTION
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION
LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS

Big Tujunga Reservoir
Sediment Characterization Study, Angeles National Forest

UNDERWATER SAMPLE AND TEST PIT LOCATION MAP

Prepared By: OMC

Date: September 2012

FIGURE 2

DRAFT

CONTROL LINE COORDINATES			
POINT	STATION	NORTHING	EASTING
POB ( )	0+00.00	1929385.33	6509117.43
PI (A)	4+56.02	1929063.97	6509440.97
PI (B)	7+05.87	1929094.70	6509688.93
PI (C)	13+56.62	1929602.07	6510096.41
PI (D)	16+70.37	1929914.78	6509070.75
PI (E)	23+10.36	1930310.18	6505567.53
PI (F)	25+09.06	1930508.54	6505555.87
PI (G)	25+75.25	1930553.17	6505604.75
PI (H)	32+74.43	1930428.48	6506292.73
PI (I)	37+48.41	1930660.60	6506705.98
PI (J)	39+14.90	1930826.29	6506689.65
PI (K)	44+72.13	1930959.31	6506148.53

NOTES
1 FINISH CONTOURS ARE SCHEMATIC ONLY.

CONCEPT ONLY

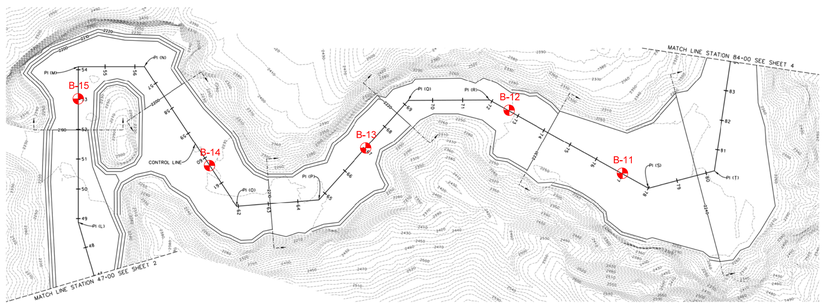
PLAN SCALE
1" = 100'
0 100 200 300

DATE	BY	DESCRIPTION
REVISIONS		

PROJECT ENGINEER ____ DATE ____

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
BIG TUJUNGA DAM AND RESERVOIR
POSTFIRE SEDIMENT REMOVAL
BIG TUJUNGA RESERVOIR
PLAN
STATION 0+00 TO STATION 47+00
JOB WF0710003 DWG SHEET 2 OF 13

DRAFT



CONTROL LINE COORDINATES			
POINT	STATION	NORTHING	EASTING
PI (L)	49+87.48	1931357.77	6506031.33
PI (M)	54+10.21	1931880.51	6506031.33
PI (N)	56+31.79	1931880.51	6506252.91
PI (O)	61+94.15	1931411.45	6506563.12
PI (P)	64+70.50	1931434.08	6506838.54
PI (Q)	69+17.80	1931766.88	6507137.42
PI (R)	71+91.03	1931768.21	6507410.65
PI (S)	78+00.23	1931472.84	6507943.44
PI (T)	80+28.63	1931530.85	6508164.36

NOTES
1 FINISH CONTOURS ARE SCHEMATIC ONLY.

CONCEPT ONLY

PLAN SCALE
1" = 100'
0 100 200 300

DATE	BY	DESCRIPTION
REVISIONS		

PROJECT ENGINEER ____ DATE ____

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
BIG TUJUNGA DAM AND RESERVOIR
POSTFIRE SEDIMENT REMOVAL
BIG TUJUNGA RESERVOIR
PLAN
STATION 47+00 TO STATION 84+00
JOB WF0710003 DWG SHEET 3 OF 13

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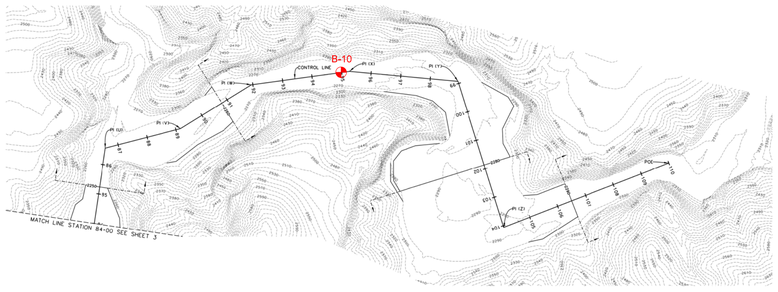

CONTROL LINE COORDINATES			
POINT	STATION	NORTHING	EASTING
PI (U)	86+55.54	1932150.92	6508256.65
PI (V)	89+15.78	1932216.27	6508508.56
PI (W)	91+95.13	1932363.18	6508746.15
PI (X)	95+27.47	1932408.00	6509075.46
PI (Y)	98+92.85	1932374.67	6509439.32
PI (Z)	104+05.69	1931885.27	6509592.59
POE ( )	110+00.00	1932101.10	6510146.32

NOTES
1 FINISH CONTOURS ARE SCHEMATIC ONLY.

CONCEPT ONLY

PLAN SCALE
1" = 100'
0 100 200 300

DATE	BY	DESCRIPTION
REVISIONS		

PROJECT ENGINEER ____ DATE ____

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
BIG TUJUNGA DAM AND RESERVOIR
POSTFIRE SEDIMENT REMOVAL
BIG TUJUNGA RESERVOIR
PLAN
STATION 84+00 TO STATION 110+00
JOB WF0710003 DWG SHEET 4 OF 13

LEGEND

B-1 APPROXIMATE BORING LOCATION

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

SOIL INVESTIGATIONS UNIT

BIG TUJUNGA DAM AND RESERVOIR
POST FIRE SEDIMENT REMOVAL

UNDERWATER SAMPLE AND
TEST PIT STATION MAP

PREPARED BY:	DATE:	SCALE	PLATE
EDDIE LY	SEPTEMBER 2012	NOT TO SCALE	PLATE 1

APPENDIX A
GEOTECHNICAL LABORATORY DATA

SUMMARY OF LABORATORY TEST RESULTS

Geotechnical Laboratory

PROJECT NAME: Big Tujunga Reservoir Cleanout
TECHNICIAN: HA
PCA: HF00710003

ENGINEER: Olga Cruz
DATE: 02/15/2012
PAGE: 1 **OF** 1

updated 6-29-12
updated 1-9-13

BORING/ SAMPLE	DEPTH	UNIFIED SOIL CLASSIFICATION					MOISTURE AND DRY DENSITY				DIRECT SHEAR				CHEMICAL				Organic Content
		Class.	ATTERBERG LIMITS		#4	#200	γd_{field}	m.c.$_{field}$	$\gamma d_{maximum}$	m.c.$_{optimum}$	$N_{ultimate}$	$c_{ultimate}$	$N_{maximum}$	$c_{maximum}$	pH	Min. Resistivity	Cl	SO_4	
B - S	(ft)		LL	PI	% Pass	% Pass	pcf	%	pcf	%	Degree	psf	Degree	psf		(K ohm-cm)	(ppm)	(ppm)	
B-1	n/a	SP			98.7	4.8		31.6											0.77
B-2	n/a	SM			96.9	42.5		47.7											3.01
B-3	n/a				99.2	92.9		99.2											6.24
B-4	n/a				100.0	95.5		74.2											6.78
B-5	n/a				100.0	94.2		69.5											5.86
B-6	n/a				100.0	94.8		89.4											6.24
B-7	n/a				96.8	93.6		107.5											7.07
B-8	n/a				100.0	98.0		111.4											6.74
B-9	n/a				100.0	97.9		86.6											6.65
B10	n/a	GP			39.4	2.7		6.3											0.46

SUMMARY OF LABORATORY TEST RESULTS

Geotechnical Laboratory

PROJECT NAME: Big Tujunga Reservoir Cleanout
TECHNICIAN: HA-EH
PCA: HF00710003

ENGINEER: Olga Cruz
DATE: 09/24/2012
PAGE: 1 **OF** 1

updated 1-9-13

BORING/ SAMPLE	DEPTH	UNIFIED SOIL CLASSIFICATION					MOISTURE AND DRY DENSITY				DIRECT SHEAR				CHEMICAL				Organic Content
		Class.	ATTERBERG LIMITS		#4	#200	Saturated	$m.c._{field}$	$\gamma_{d_{maximum}}$	$m.c._{optimum}$	$N_{ultimate}$	$c_{ultimate}$	$N_{maximum}$	$c_{maximum}$	pH	Min. Resistivity	Cl	SO_4	
B - S	(ft)		LL	PI	% Pass	% Pass	Moisture	%	pcf	%	Degree	psf	Degree	psf		(K ohm-cm)	(ppm)	(ppm)	
B-11		ML			97.6	52.8	61.1												6.5
B-12		SM			96.7	38.5	55.7												10.2
B-13		ML			98.9	71.7	78.7												5.6
B-14		SM				14.8	24.2												1.2
B-15		ML			99.8	92.6	87.1												6.7
B-16		SM			99.7	24.4	40.8												2.9

LOS ANGELES COUNTY DEPARTMETN OF PUBLIC WORKS
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION
ORGNAIC CONTENT / ASTM D2974

Project Name:	Big Tujunga Reservoir Cleanout	Checked By:	EH
PCA:	HF00710003	Date Checked:	02/02/2012
Tested By:	HA		
Date Tested:	01/31/2012		

	Lab. #	Sample	Cup	Wet Wt. + Tare	Dry Wt. + Tare	Tare	Moisture Content	Ash + Tare	Ash Content	Average Ash Content	Orgnaic Content	Average Organic Content
1	6095	B-1	#3	198.810	169.620	63.560	27.522	168.830	99.255	99.23	0.745	0.77
			#1B	191.700	165.510	66.460	26.441	164.730	99.213		0.787	
2	6096	B-2	#3	156.420	146.310	73.510	13.887	144.080	96.937	96.99	3.063	3.01
			#6	160.170	148.570	63.770	13.679	146.070	97.052		2.948	
3	6097	B-3	#2	141.430	131.310	69.990	16.504	127.640	94.015	93.76	5.985	6.24
			5#1	136.710	125.880	60.180	16.484	121.610	93.501		6.499	
4	6098	B-4	#4	143.280	128.540	61.450	21.970	124.080	93.352	93.22	6.648	6.78
			#9	208.580	189.510	100.860	21.512	183.380	93.085		6.915	
5	6099	B-5	5#1	146.910	122.510	60.180	39.146	119.000	94.369	94.14	5.631	5.86
			#2	166.250	139.220	69.980	39.038	135.000	93.905		6.095	
6	6100	B-6	#3	150.200	112.020	73.530	99.195	109.630	93.791	93.76	6.209	6.24
			#6	143.200	103.810	63.780	98.401	101.300	93.730		6.270	
7	6101	B-7	#5	143.700	100.250	60.180	108.435	97.410	92.912	92.93	7.088	7.07
			#2	202.500	133.790	69.990	107.696	129.290	92.947		7.053	
8	6102	B-8	#4	175.300	116.390	61.460	107.246	111.690	91.444	91.26	8.556	8.74
			#9	203.310	150.210	100.870	107.621	145.810	91.082		8.918	
9	6103	B-9	#1B	182.900	125.780	66.450	96.275	121.820	93.325	93.35	6.675	6.65
			#3R	196.800	130.930	63.560	97.773	126.470	93.380		6.620	
10	6314	B-10	#1	220.000	219.750	66.460	0.163	219.000	99.511	99.54	0.489	0.46
			#3	215.000	214.750	73.500	0.177	214.150	99.575		0.425	
11												
12												
13												

REMARKS:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
Geotechnical and Materials Engineering Division
Geotechnical Laboratory - ASTM D2487, D6913, C117, C136

SIEVE ANALYSIS WORKSHEET

PROJECT NAME: Big Tujunga Reservoir Cleanout
LAB. ID: 6095
CLASSIFICATION: SP
TESTED BY: HA
CHECKED BY: EH
Cu / Cc: 4.0 0.9

PCA: HF00710003
BORING / SAMPLE: B-1
DEPTH (FT): N/A
DATE TESTED: 1/31/12
DATE CHECKED: 2/2/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 < 50%, SILT, SAND or DUAL

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (lb)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*					
3/8"	*9.52*				100.0	
No. 4	*4.76*	0.07	1.3	1.3	98.7	
PAN	*0*	5.87				
TOTAL FRACTIONS		5.94				
OVEN-DRY FINES		5.39				
*** TOTAL OVEN-DRY**		5.46				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	91.80
MOISTURE (%)	8.9

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	275.40
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	279.03

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	20.60	7.4	8.7	91.3	
20	*0.85*	70.26	25.2	33.9	66.1	
40	*0.425*	90.48	32.4	66.3	33.7	
60	*0.25*	47.03	16.9	83.1	16.9	
140	*0.106*	27.07	9.7	92.8	7.2	
200	*0.074*	6.43	2.3	95.2	4.8	
PAN	*0*	0.91	0.3			
TOTAL FRACTIONS		262.78	94.2			
TOTAL DRY WEIGHT AFTER WET SEIVING		262.80	94.2			
SIEVE LOSS-GAIN		0.02	0.0			

Atterberg Test

Liquid Limit	n/a
Plastic Limit	n/a
Plastic Index	n/a

SOIL DESCRIP. / REMARKS: Non-Plastic Sand W/Trace of Organic,

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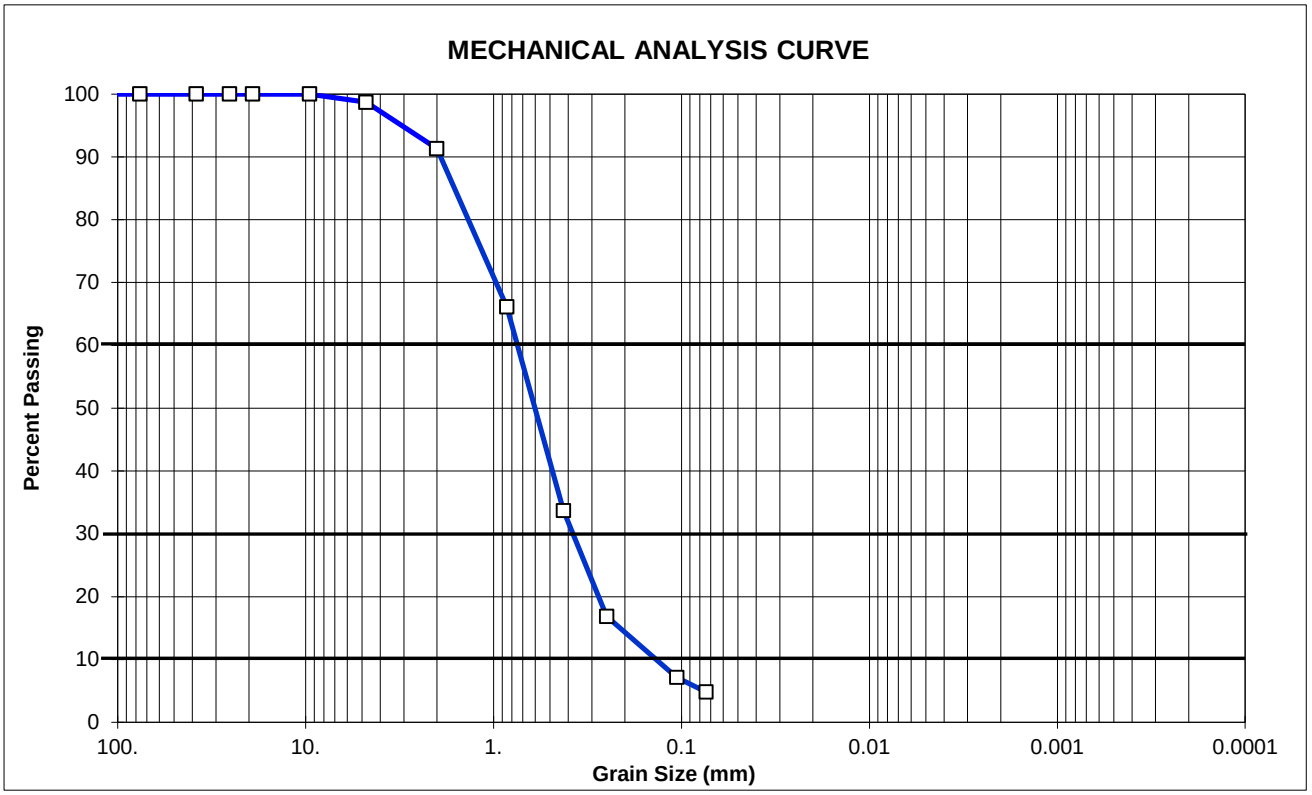
PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga Reservoir Cleanout **PCA:** HF00710003

CLASSIFICATION: SP **BORING/SAMPLE:** B-1



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	1.3	7.4	57.6	28.9	4.8	
TOTAL	_	= 1.3		=		93.9	#N/A	#N/A
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270
	V 1st# passing	V 2nd# retaining						

Avg. Organic Content
n/a %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)		
% Retained #200 =	*95.2*	D_{10} =	*0.15*	$C_u = D_{60} / D_{10}$ =	*4.00*
% Retained # 4 =	*1.3*	D_{30} =	*0.28*	$C_c = D_{30}^2 / (D_{10}*D_{60})$ =	*0.87111*
% #4 / % #200 =	*1.4*	D_{60} =	*0.60*		

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SIEVE ANALYSIS WORKSHEET

PROJECT NAME: Big Tujunga Reservoir Cleanout
LAB. ID: 6096
CLASSIFICATION: SM
TESTED BY: HA
CHECKED BY: EH

PCA: HF00710003
BORING / SAMPLE: B-2
DEPTH (FT): N/A
DATE TESTED: 1/31/12
DATE CHECKED: 2/2/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 < 50%, SILT, SAND or DUAL

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (lb)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*				100.0	
3/8"	*9.52*	0.02	0.6	0.6	99.4	
No. 4	*4.76*	0.06	2.5	3.1	96.9	
PAN	*0*	2.65				
TOTAL FRACTIONS		2.73				
OVEN-DRY FINES		2.35				
*** TOTAL OVEN-DRY**		2.42				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	88.50
MOISTURE (%)	13.0

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	265.50
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	273.99

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	7.32	2.7	5.8	94.2	
20	*0.85*	13.06	4.8	10.5	89.5	
40	*0.425*	16.35	6.0	16.5	83.5	
60	*0.25*	19.69	7.2	23.7	76.3	
140	*0.106*	50.99	18.6	42.3	57.7	
200	*0.074*	41.58	15.2	57.5	42.5	
PAN	*0*	21.48	7.8			
TOTAL FRACTIONS		170.47	62.2			
TOTAL DRY WEIGHT AFTER WET SEIVING		170.60	62.3			
SIEVE LOSS-GAIN		0.13	0.0			

Atterberg Test

Liquid Limit	n/a
Plastic Limit	n/a
Plastic Index	n/a

SOIL DESCRIP. / REMARKS: Dark Gray Silty Sand W/Trace of Organic, Non-plastic,

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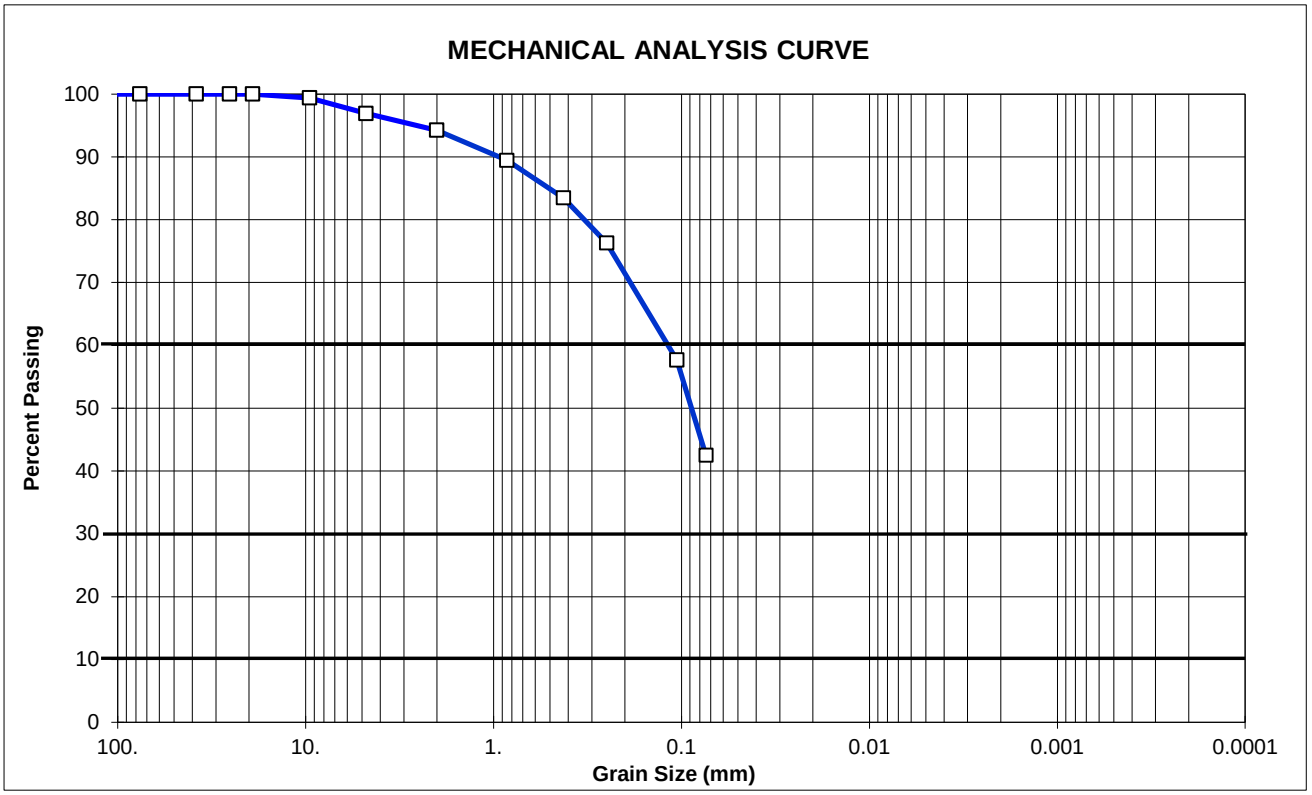
Geotechnical Laboratory

PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga Reservoir Cleanout **PCA:** HF00710003

CLASSIFICATION: SM **BORING/SAMPLE:** B-2



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	3.1	2.7	10.7	41.0	42.5	
TOTAL	-	= 3.1			=	54.4	#N/A	#N/A
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270

V 1st# passing

V 2nd# retaining

Avg. Organic Content

n/a %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)	
% Retained #200 =	*57.5*	D_{10} =		C_u = D_{60} / D_{10} =
% Retained # 4 =	*3.1*	D_{30} =		C_c = D_{30}^2 / (D_{10}*D_{60}) =
% #4 / % #200 =	*5.4*	D_{60} =		

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SIEVE ANALYSIS WORKSHEET

PROJECT NAME: Big Tujunga Reservoir Cleanout
LAB. ID: 6097
CLASSIFICATION: N/A
TESTED BY: HA
CHECKED BY: EH

PCA: HF00710003
BORING / SAMPLE: B-3
DEPTH (FT): N/A
DATE TESTED: 1/31/12
DATE CHECKED: 2/2/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 > 50%, CLAY or SILT

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (lb)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*				100.0	
3/8"	*9.52*	0.01	0.4	0.4	99.6	
No. 4	*4.76*	0.01	0.4	0.8	99.2	
PAN	*0*	1.39				
TOTAL FRACTIONS		1.40				
OVEN-DRY FINES		1.20				
*** TOTAL OVEN-DRY**		1.21				

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	85.80
MOISTURE (%)	16.6

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	257.40
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	259.55

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	1.03	0.4	1.2	98.8	
20	*0.85*	2.34	0.9	2.1	97.9	
40	*0.425*	1.30	0.5	2.6	97.4	
60	*0.25*	0.97	0.4	3.0	97.0	
140	*0.106*	4.58	1.8	4.8	95.2	
200	*0.074*	6.03	2.3	7.1	92.9	
PAN	*0*	5.10	2.0			
TOTAL FRACTIONS		21.35	8.2			
TOTAL DRY WEIGHT AFTER WET SEIVING		21.39	8.2			
SIEVE LOSS-GAIN		0.04	0.0			

Atterberg Test

Liquid Limit	n/a
Plastic Limit	n/a
Plastic Index	n/a

SOIL DESCRIP. / REMARKS: Dark Gray Silt W/Few Fine Sand W/Few Organic, Slitly Plastic,

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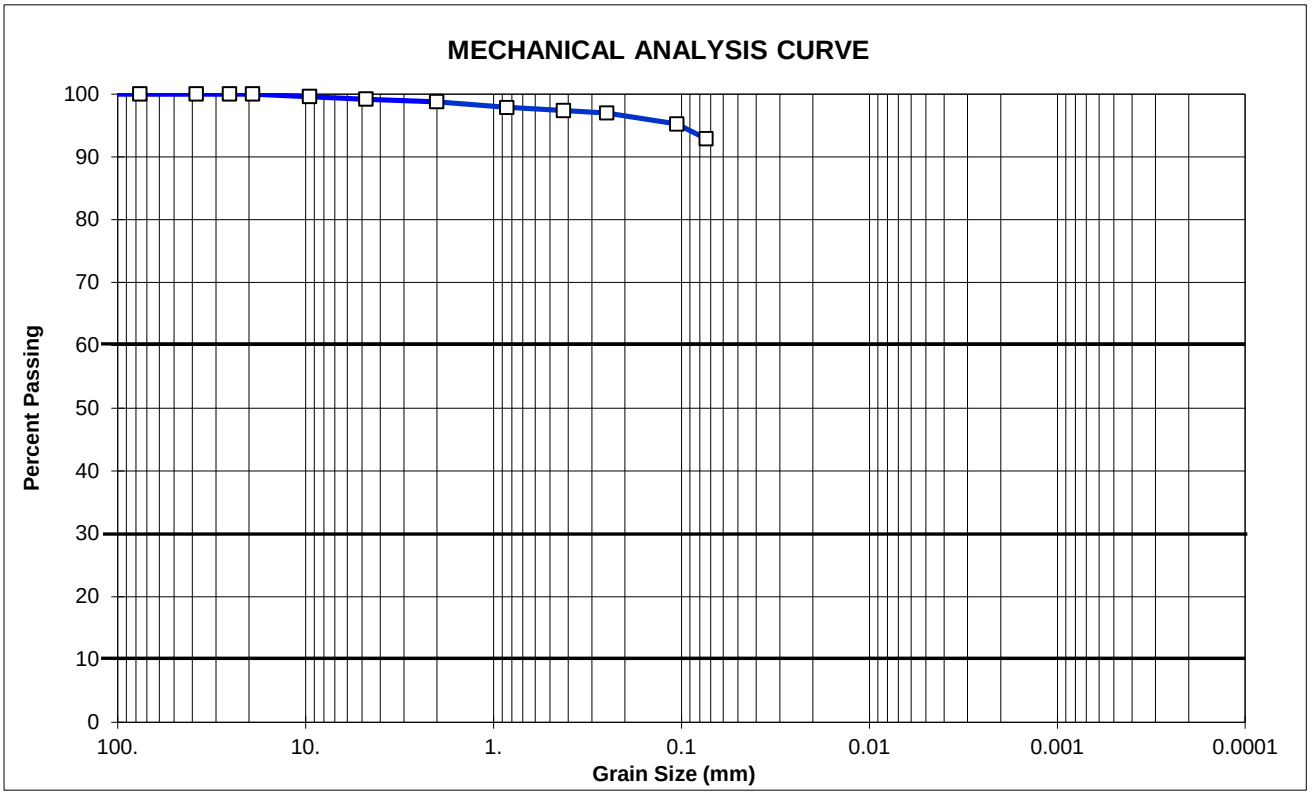
PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga Reservoir Cleanout **PCA:** HF00710003

CLASSIFICATION: N/A **BORING/SAMPLE:** B-3



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	0.8	0.4	1.4	4.5	92.9	
TOTAL	_	= 0.8		= 6.3			#N/A	#N/A
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270
	V 1st# passing	V 2nd# retaining						

Avg. Organic Content
n/a %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)	
% Retained #200 =	*7.1*	D_{10} =		C_u = D_{60} / D_{10} =
% Retained # 4 =	*0.8*	D_{30} =		C_c = D_{30}^2 / (D_{10}*D_{60}) =
% #4 / % #200 =	*11.7*	D_{60} =		

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SIEVE ANALYSIS WORKSHEET

PROJECT NAME:	**Big Tujunga Reservoir Cleanout**	**PCA:**	HF00710003
LAB. ID:	6098	**BORING / SAMPLE:**	B-4
CLASSIFICATION:	**N/A**	**DEPTH (FT):**	N/A
TESTED BY:	HA	**DATE TESTED:**	1/31/12
CHECKED BY:	**EH**	**DATE CHECKED:**	2/1/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel

If % Passing #200 > 50%, CLAY or SILT

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (lb)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*					
3/8"	*9.52*				100.0	
No. 4	*4.76*	0.00	0.0	0.0	100.0	
PAN	*0*	5.48				
TOTAL FRACTIONS		5.48				
OVEN-DRY FINES		4.52				
*** TOTAL OVEN-DRY**		4.52				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	82.50
MOISTURE (%)	21.2

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	247.50
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	247.50

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	0.52	0.2	0.2	99.8	
20	*0.85*	1.32	0.5	0.7	99.3	
40	*0.425*	0.94	0.4	1.1	98.9	
60	*0.25*	0.70	0.3	1.4	98.6	
140	*0.106*	3.07	1.2	2.6	97.4	
200	*0.074*	4.47	1.8	4.5	95.5	
PAN	*0*	2.12	0.9			
TOTAL FRACTIONS		13.14	5.3			
TOTAL DRY WEIGHT AFTER WET SEIVING		13.20	5.3			
SIEVE LOSS-GAIN		0.06	0.0			

Atterberg Test

Liquid **L**imit	n/a
Plastic Limit	n/a
Plastic **I**ndex	n/a

SOIL DESCRIP. / REMARKS: Dark Gray Silt W/Few Organic W/Trace of Clay,Plastic soil,

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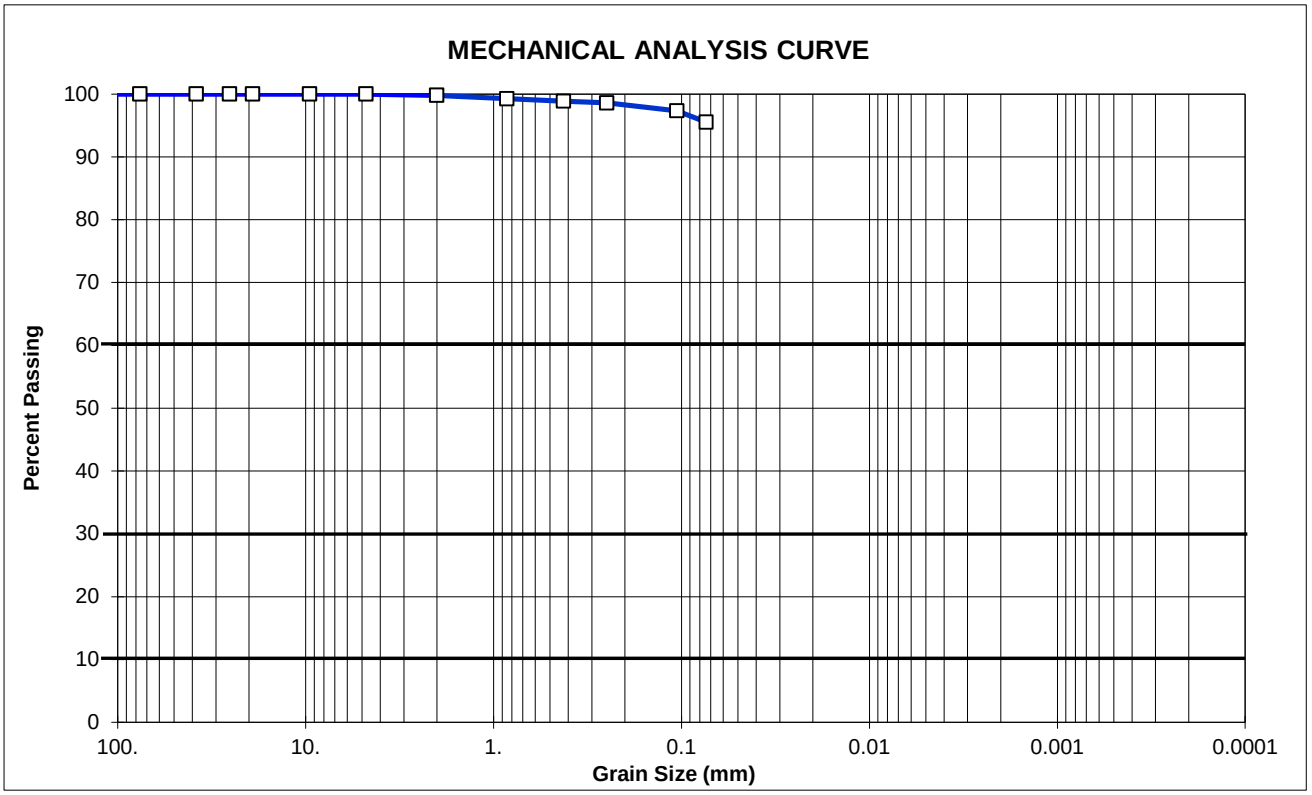
PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga Reservoir Cleanout **PCA:** HF00710003

CLASSIFICATION: N/A **BORING/SAMPLE:** B-4



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	0.0	0.2	0.9	3.3	95.5	
TOTAL		= 0.0			=	4.5	#N/A	#N/A
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270
	V 1st# passing	V 2nd# retaining						

Avg. Organic Content
n/a %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)
% Retained #200 =	*4.5*	D_{10} =	
% Retained # 4 =	*0.0*	D_{30} =	
% #4 / % #200 =	*0.0*	D_{60} =	

$C_u = D_{60} / D_{10} =$

$C_c = D_{30}^2 / (D_{10} * D_{60}) =$

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SIEVE ANALYSIS WORKSHEET

PROJECT NAME:	**Big Tujunga Reservoir Cleanout**	**PCA:**	HF00710003
LAB. ID:	6099	**BORING / SAMPLE:**	B-5
CLASSIFICATION:	**N/A**	**DEPTH (FT):**	N/A
TESTED BY:	HA	**DATE TESTED:**	1/30/12
CHECKED BY:	**EH**	**DATE CHECKED:**	2/2/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel

If % Passing #200 > 50%, CLAY or SILT

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (lb)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*					
3/8"	*9.52*				100.0	
No. 4	*4.76*	0.00	0.0	0.0	100.0	
PAN	*0*	3.45				
TOTAL FRACTIONS		3.45				
OVEN-DRY FINES		2.47				
*** TOTAL OVEN-DRY**		2.47				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	71.70
MOISTURE (%)	39.5

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	215.10
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	215.10

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	0.24	0.1	0.1	99.9	
20	*0.85*	0.73	0.3	0.5	99.5	
40	*0.425*	0.65	0.3	0.8	99.2	
60	*0.25*	0.49	0.2	1.0	99.0	
140	*0.106*	3.03	1.4	2.4	97.6	
200	*0.074*	7.37	3.4	5.8	94.2	
PAN	*0*	5.12	2.4			
TOTAL FRACTIONS		17.63	8.2			
TOTAL DRY WEIGHT AFTER WET SEIVING		17.64	8.2			
SIEVE LOSS-GAIN		0.01	0.0			

Atterberg Test

Liquid **L**imit	n/a
Plastic Limit	n/a
Plastic **I**ndex	n/a

SOIL DESCRIP. / REMARKS: Dark Gray Silt W/Trace of Clay W/Few Organic, Low plastic,

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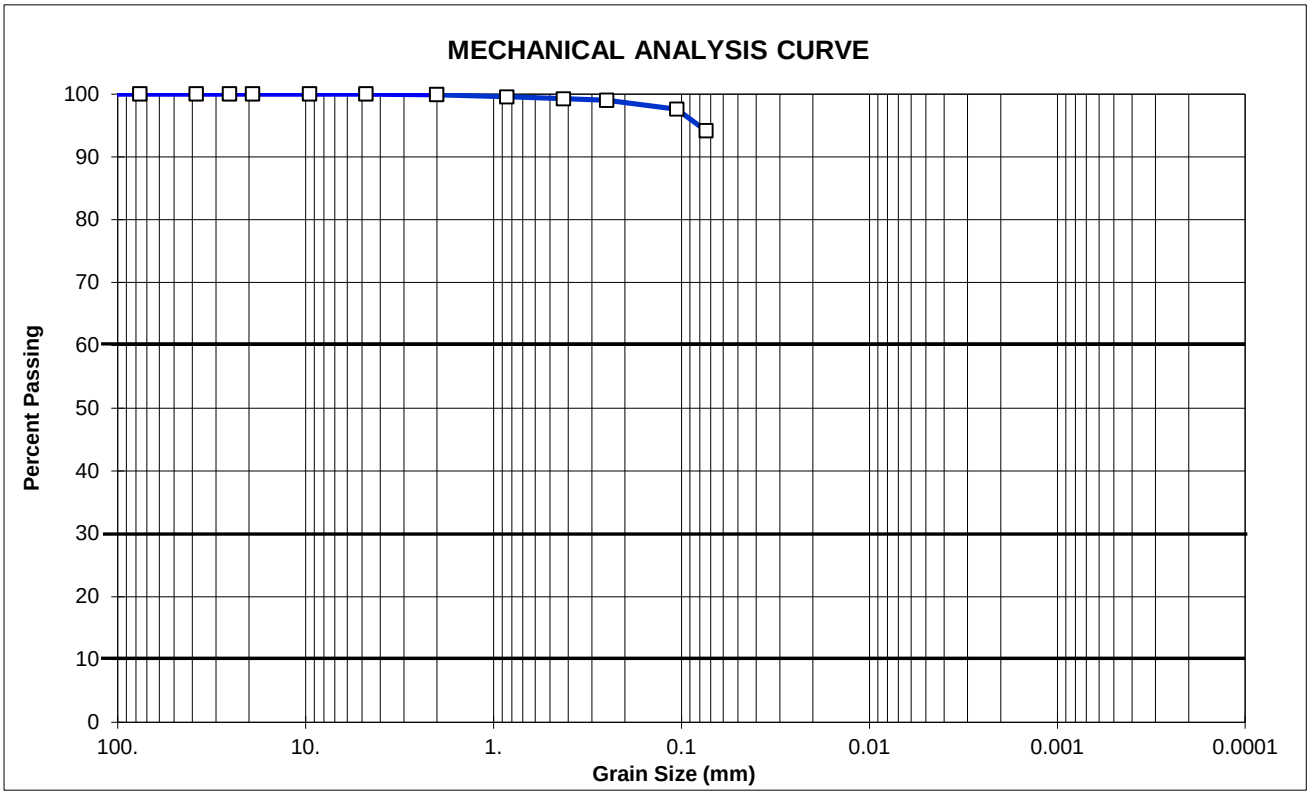
Geotechnical Laboratory

PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga Reservoir Cleanout **PCA:** HF00710003

CLASSIFICATION: N/A **BORING/SAMPLE:** B-5



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	0.0	0.1	0.6	5.1	94.2	
TOTAL	_	= 0.0		=		5.8	#N/A	#N/A
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270

1st# passing *2nd# retaining*

Avg. Organic Content
n/a %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)
% Retained #200 =	*5.8*	D_{10} =	
% Retained # 4 =	*0.0*	D_{30} =	
% #4 / % #200 =	*0.0*	D_{60} =	

$C_u = D_{60} / D_{10} =$

$C_c = D_{30}^2 / (D_{10} * D_{60}) =$

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Geotechnical Laboratory - ASTM D2487, D6913, C117, C136

SIEVE ANALYSIS WORKSHEET

PROJECT NAME:	**Big Tujunga Reservoir Cleanout**	**PCA:**	HF00710003
LAB. ID:	6100	**BORING / SAMPLE:**	B-6
CLASSIFICATION:	**N/A**	**DEPTH (FT):**	N/A
TESTED BY:	HA	**DATE TESTED:**	1/31/12
CHECKED BY:	**EH**	**DATE CHECKED:**	2/2/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel

If % Passing #200 > 50%, CLAY or SILT

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (lb)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*					
3/8"	*9.52*				100.0	
No. 4	*4.76*	0.00	0.0	0.0	100.0	
PAN	*0*	2.24				
TOTAL FRACTIONS		2.24				
OVEN-DRY FINES		1.63				
*** TOTAL OVEN-DRY**		1.63				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	72.70
MOISTURE (%)	37.6

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	218.10
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	218.10

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	0.41	0.2	0.2	99.8	
20	*0.85*	0.92	0.4	0.6	99.4	
40	*0.425*	0.80	0.4	1.0	99.0	
60	*0.25*	0.57	0.3	1.2	98.8	
140	*0.106*	2.63	1.2	2.4	97.6	
200	*0.074*	5.96	2.7	5.2	94.8	
PAN	*0*	8.15	3.7			
TOTAL FRACTIONS		19.44	8.9			
TOTAL DRY WEIGHT AFTER WET SEIVING		19.48	8.9			
SIEVE LOSS-GAIN		0.04	0.0			

Atterberg Test

Liquid **L**imit	n/a
Plastic Limit	n/a
Plastic **I**ndex	n/a

SOIL DESCRIP. / REMARKS: Dark Gray Silt W/Few Sand ,W/Trace of Clay , W/Few Organic, Low plastic,

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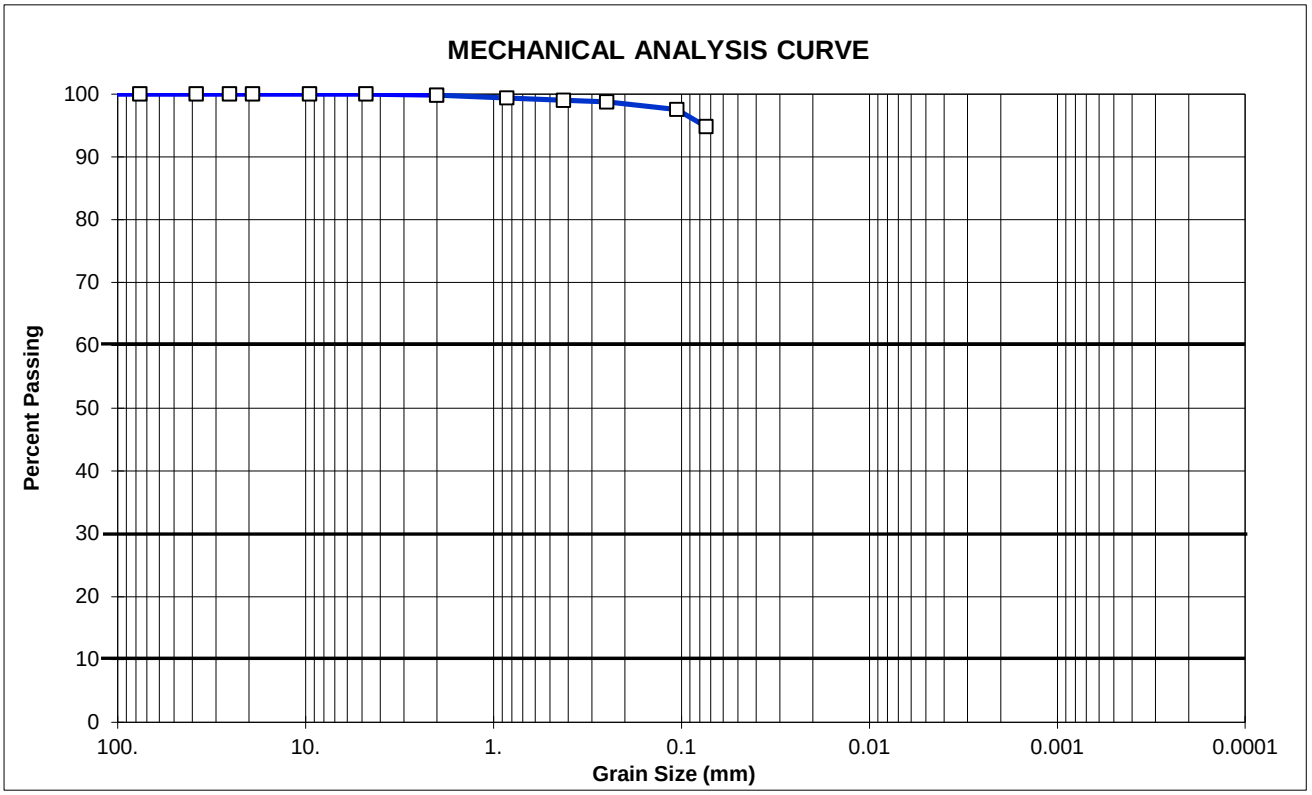
PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga Reservoir Cleanout **PCA:** HF00710003

CLASSIFICATION: N/A **BORING/SAMPLE:** B-6



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	0.0	0.2	0.8	4.2	94.8	
TOTAL	_	= 0.0			=	5.2	#N/A	#N/A
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270
	V 1st# passing	V 2nd# retaining						

Avg. Organic Content
n/a %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)
% Retained #200 =	*5.2*	D_{10} =	
% Retained # 4 =	*0.0*	D_{30} =	
% #4 / % #200 =	*0.0*	D_{60} =	

$C_u = D_{60} / D_{10} =$

$C_c = D_{30}^2 / (D_{10} * D_{60}) =$

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SIEVE ANALYSIS WORKSHEET

PROJECT NAME: Big Tujunga Reservoir Cleanout
LAB. ID: 6101
CLASSIFICATION: N/A
TESTED BY: HA
CHECKED BY: EH

PCA: HF00710003
BORING / SAMPLE: B-7
DEPTH (FT): N/A
DATE TESTED: 1/31/12
DATE CHECKED: 2/2/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 > 50%, CLAY or SILT

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (lb)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*				100.0	
3/4"	*19.1*	0.01	0.8	0.8	99.2	
3/8"	*9.52*	0.01	0.8	1.6	98.4	
No. 4	*4.76*	0.02	1.6	3.2	96.8	
PAN	*0*	1.46				
TOTAL FRACTIONS		1.50				
OVEN-DRY FINES		1.22				
*** TOTAL OVEN-DRY**		1.26				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	83.70
MOISTURE (%)	19.5

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	251.10
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	259.32

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	1.35	0.5	3.7	96.3	
20	*0.85*	2.10	0.8	4.5	95.5	
40	*0.425*	1.12	0.4	4.9	95.1	
60	*0.25*	0.63	0.2	5.2	94.8	
140	*0.106*	1.92	0.7	5.9	94.1	
200	*0.074*	1.20	0.5	6.4	93.6	
PAN	*0*	0.96	0.4			
TOTAL FRACTIONS		9.28	3.6			
TOTAL DRY WEIGHT AFTER WET SEIVING		9.30	3.6			
SIEVE LOSS-GAIN		0.02	0.0			

Atterberg Test

Liquid Limit	n/a
Plastic Limit	n/a
Plastic Index	n/a

SOIL DESCRIP. / REMARKS: Dark Gray Silt W/Few Organic W/Trace Of Clay W/Trace of fine sand ,Low Plastic,

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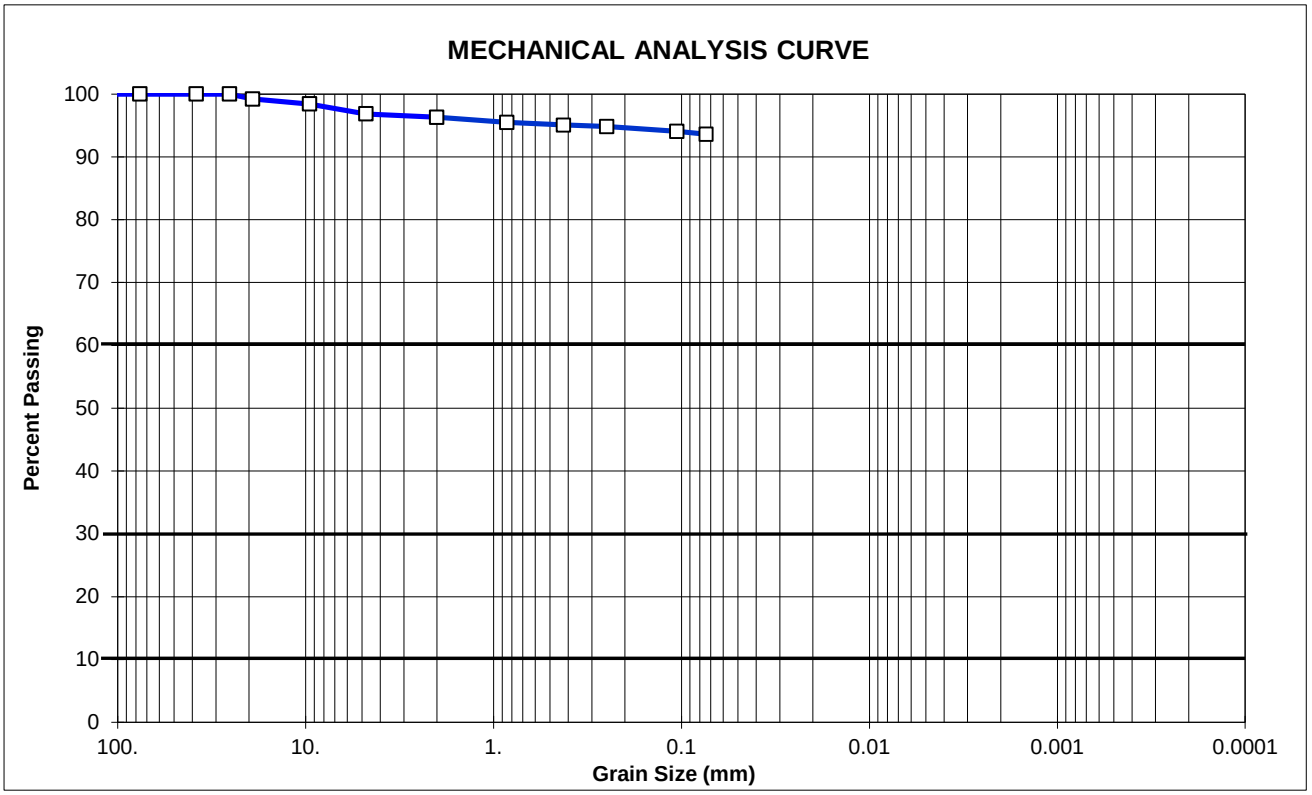
PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga Reservoir Cleanout **PCA:** HF00710003

CLASSIFICATION: N/A **BORING/SAMPLE:** B-7



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.8	2.4	0.5	1.2	1.4	93.6	
TOTAL	-	= 3.2		=		3.2	#N/A	#N/A
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270
	V 1st# passing	V 2nd# retaining						

Avg. Organic Content
n/a %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

(mm)

% Retained #200 =	*6.4*	D_{10} =	
% Retained # 4 =	*3.2*	D_{30} =	
% #4 / % #200 =	*49.7*	D_{60} =	

$C_u = D_{60} / D_{10} =$

$C_c = D_{30}^2 / (D_{10} * D_{60}) =$

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SIEVE ANALYSIS WORKSHEET

PROJECT NAME: Big Tujunga Reservoir Cleanout
LAB. ID: 6102
CLASSIFICATION: N/A
TESTED BY: HA
CHECKED BY: EH

PCA: HF00710003
BORING / SAMPLE: B-8
DEPTH (FT): N/A
DATE TESTED: 1/31/12
DATE CHECKED: 2/2/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 > 50%, CLAY or SILT

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (lb)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*					
3/8"	*9.52*				100.0	
No. 4	*4.76*	0.00	0.0	0.0	100.0	
PAN	*0*	4.37				
TOTAL FRACTIONS		4.37				
OVEN-DRY FINES		3.69				
*** TOTAL OVEN-DRY**		3.69				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	84.50
MOISTURE (%)	18.3

* Cobbles not included in total oven-dry weight
• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	253.50
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	253.50

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	1.00	0.4	0.4	99.6	
20	*0.85*	2.07	0.8	1.2	98.8	
40	*0.425*	0.93	0.4	1.6	98.4	
60	*0.25*	0.30	0.1	1.7	98.3	
140	*0.106*	0.46	0.2	1.9	98.1	
200	*0.074*	0.38	0.1	2.0	98.0	
PAN	*0*	0.19	0.1			
TOTAL FRACTIONS		5.33	2.1			
TOTAL DRY WEIGHT AFTER WET SEIVING		5.37	2.1			
SIEVE LOSS-GAIN		0.04	0.0			

Atterberg Test

Liquid Limit	n/a
Plastic Limit	n/a
Plastic Index	n/a

SOIL DESCRIP. / REMARKS: Dark Gray Silt W/Few Organic, Low Plastic,

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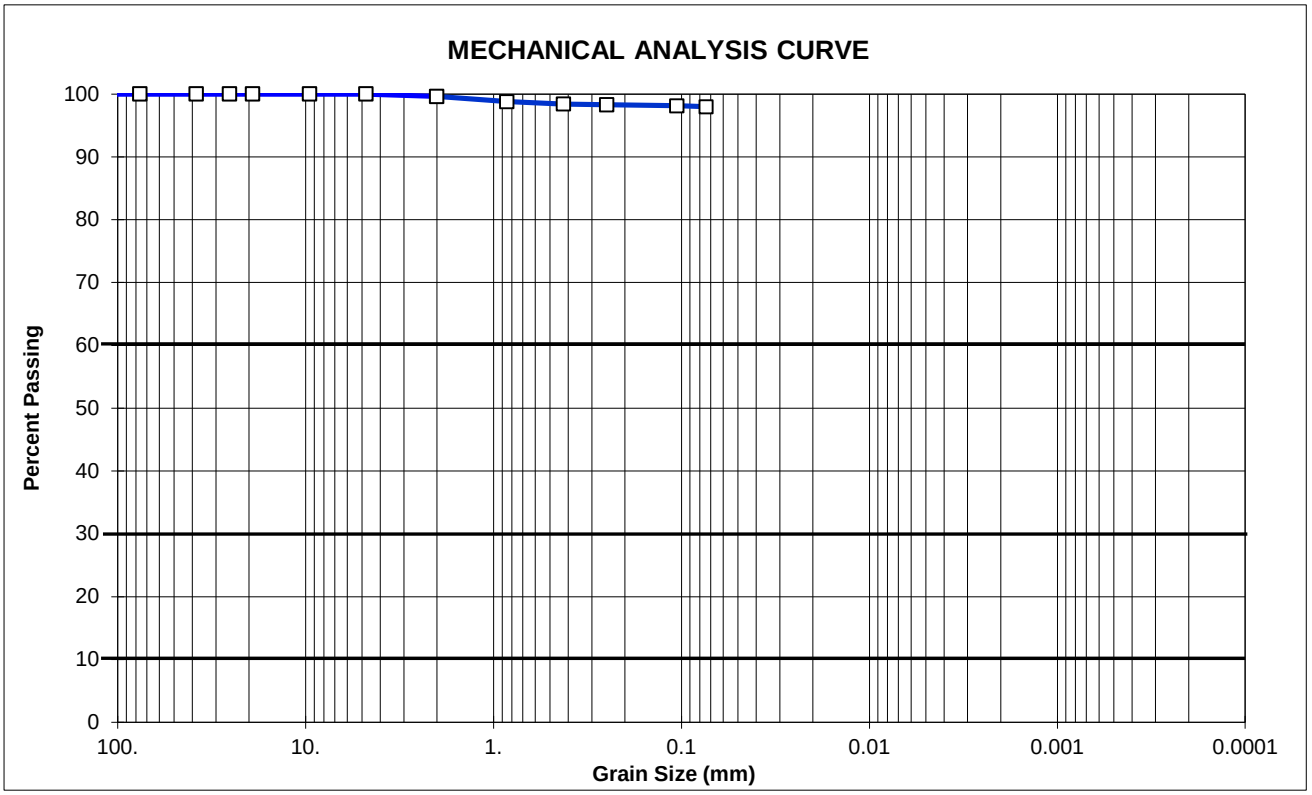
PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga Reservoir Cleanout **PCA:** HF00710003

CLASSIFICATION: N/A **BORING/SAMPLE:** B-8



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	0.0	0.4	1.2	0.4	98.0	
TOTAL	_	= 0.0		= 2.0			#N/A	#N/A
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270
	V 1st# passing	V 2nd# retaining						

Avg. Organic Content
n/a %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)	
% Retained #200 =	*2.0*	D_{10} =		C_u = D_{60} / D_{10} =
% Retained # 4 =	*0.0*	D_{30} =		C_c = D_{30}^2 / (D_{10}*D_{60}) =
% #4 / % #200 =	*0.0*	D_{60} =		

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SIEVE ANALYSIS WORKSHEET

PROJECT NAME:	**Big Tujunga Reservoir Cleanout**	**PCA:**	HF00710003
LAB. ID:	6103	**BORING / SAMPLE:**	B-9
CLASSIFICATION:	**N/A**	**DEPTH (FT):**	N/A
TESTED BY:	HA	**DATE TESTED:**	1/30/12
CHECKED BY:	**EH**	**DATE CHECKED:**	2/2/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel

If % Passing #200 > 50%, CLAY or SILT

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (lb)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*					
3/8"	*9.52*				100.0	
No. 4	*4.76*	0.00	0.0	0.0	100.0	
PAN	*0*	3.57				
TOTAL FRACTIONS		3.57				
OVEN-DRY FINES		2.48				
*** TOTAL OVEN-DRY**		2.48				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	69.60
MOISTURE (%)	43.7

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	208.80
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	208.80

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	0.55	0.3	0.3	99.7	
20	*0.85*	1.59	0.8	1.0	99.0	
40	*0.425*	1.08	0.5	1.5	98.5	
60	*0.25*	0.43	0.2	1.7	98.3	
140	*0.106*	0.48	0.2	2.0	98.0	
200	*0.074*	0.23	0.1	2.1	97.9	
PAN	*0*	0.09	0.0			
TOTAL FRACTIONS		4.45	2.1			
TOTAL DRY WEIGHT AFTER WET SEIVING		4.47	2.1			
SIEVE LOSS-GAIN		0.02	0.0			

Atterberg Test

Liquid **L**imit	n/a
Plastic Limit	n/a
Plastic **I**ndex	n/a

SOIL DESCRIP. / REMARKS: Dark Gray Silt W/Few Organic, Low Plastic,

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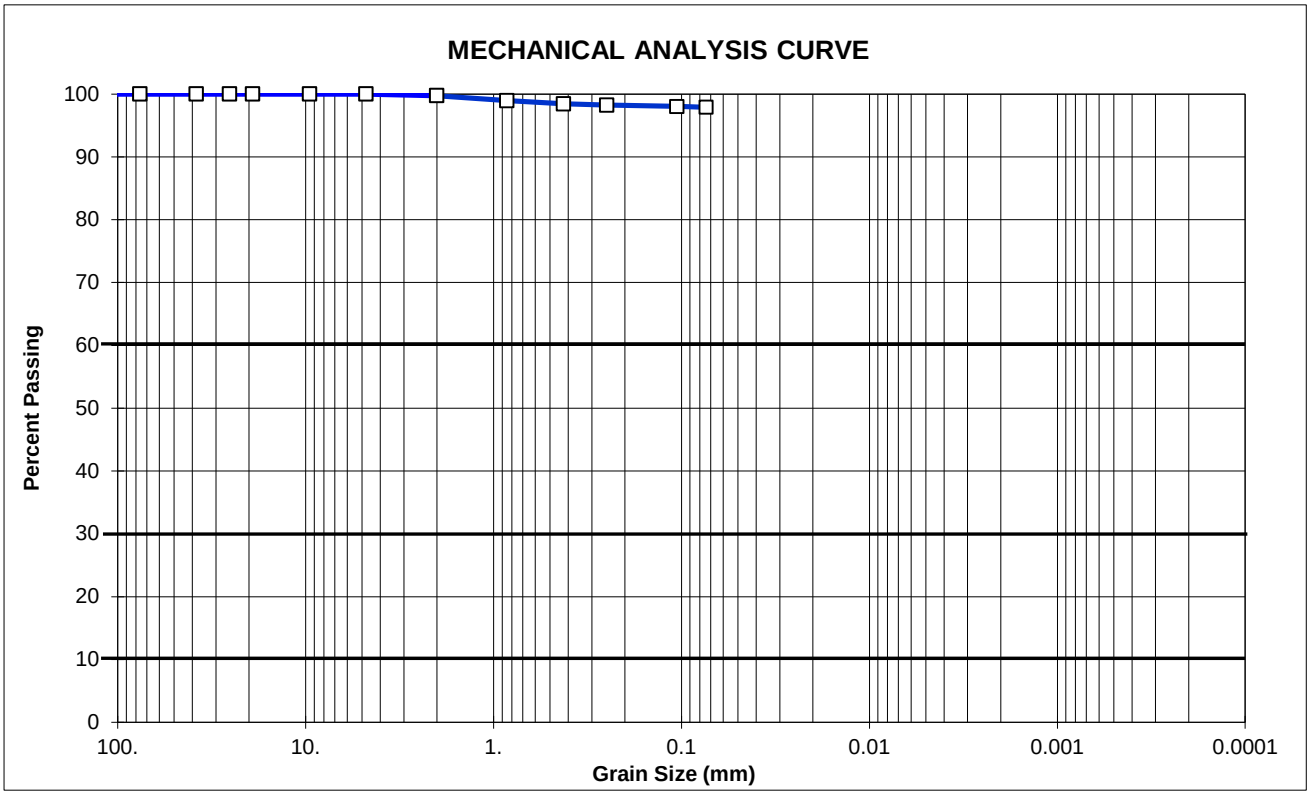
PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga Reservoir Cleanout **PCA:** HF00710003

CLASSIFICATION: N/A **BORING/SAMPLE:** B-9



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	0.0	0.3	1.3	0.5	97.9	
TOTAL	_	= 0.0		= 2.1			#N/A	#N/A
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270

1st# passing *2nd# retaining*

Avg. Organic Content
n/a %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)	
% Retained #200 =	*2.1*	D_{10} =		C_u = D_{60} / D_{10} =
% Retained # 4 =	*0.0*	D_{30} =		C_c = D_{30}^2 / (D_{10}*D_{60}) =
% #4 / % #200 =	*0.0*	D_{60} =		

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SIEVE ANALYSIS WORKSHEET

PROJECT NAME: Big Tujunga Reservoir Cleanout
LAB. ID: n/a
CLASSIFICATION: GP
TESTED BY: EM/EH
CHECKED BY: EH
Cu / Cc: 160.0 0.3

PCA: HF00710003
BORING / SAMPLE: B10
DEPTH (FT): n/a
DATE TESTED: 4/4/12
DATE CHECKED: 6/25/12
'% ret. #4 / % ret. #200 : 62.3

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 < 50%, SILT, SAND or DUAL

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (lb)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*				100.0	
3"	*76.2*	4.00	24.6	24.6	75.4	
1 1/2"	*38.1*	3.20	10.2	34.8	65.2	
1"	*25.4*	1.82	5.8	40.6	59.4	
3/4"	*19.1*	1.04	3.3	43.9	56.1	
3/8"	*9.52*	1.22	3.9	47.8	52.2	
No. 4	*4.76*	4.02	12.8	60.6	39.4	
PAN	*0*	17.28				
TOTAL FRACTIONS		32.58				
OVEN-DRY FINES		16.25				
*** TOTAL OVEN-DRY**		31.40				

* 3" Rock included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	32.58
DRY WEIGHT (gm)	30.64
MOISTURE (%)	6.3

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	554.67
CALCULATED OVEN-DRY WEIGHT (gms)	521.64
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	1324.02

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	79.04	6.0	66.6	33.4	
20	*0.85*	71.51	5.4	72.0	28.0	
40	*0.425*	79.42	6.0	78.0	22.0	
60	*0.25*	97.49	7.4	85.3	14.7	
140	*0.106*	131.22	9.9	95.2	4.8	
200	*0.074*	26.70	2.0	97.3	2.7	
PAN	*0*	6.22	0.5			
TOTAL FRACTIONS		491.60	37.1			
TOTAL DRY WEIGHT AFTER WET SEIVING		491.50	37.1			
SIEVE LOSS-GAIN		-0.10	0.0			

Atterberg Test

Liquid **L**imit	n/a
Plastic Limit	n/a
Plastic **I**ndex	n/a

SOIL DESCRIP. / REMARKS: Sand w/ trace silts & gravels, non plastic

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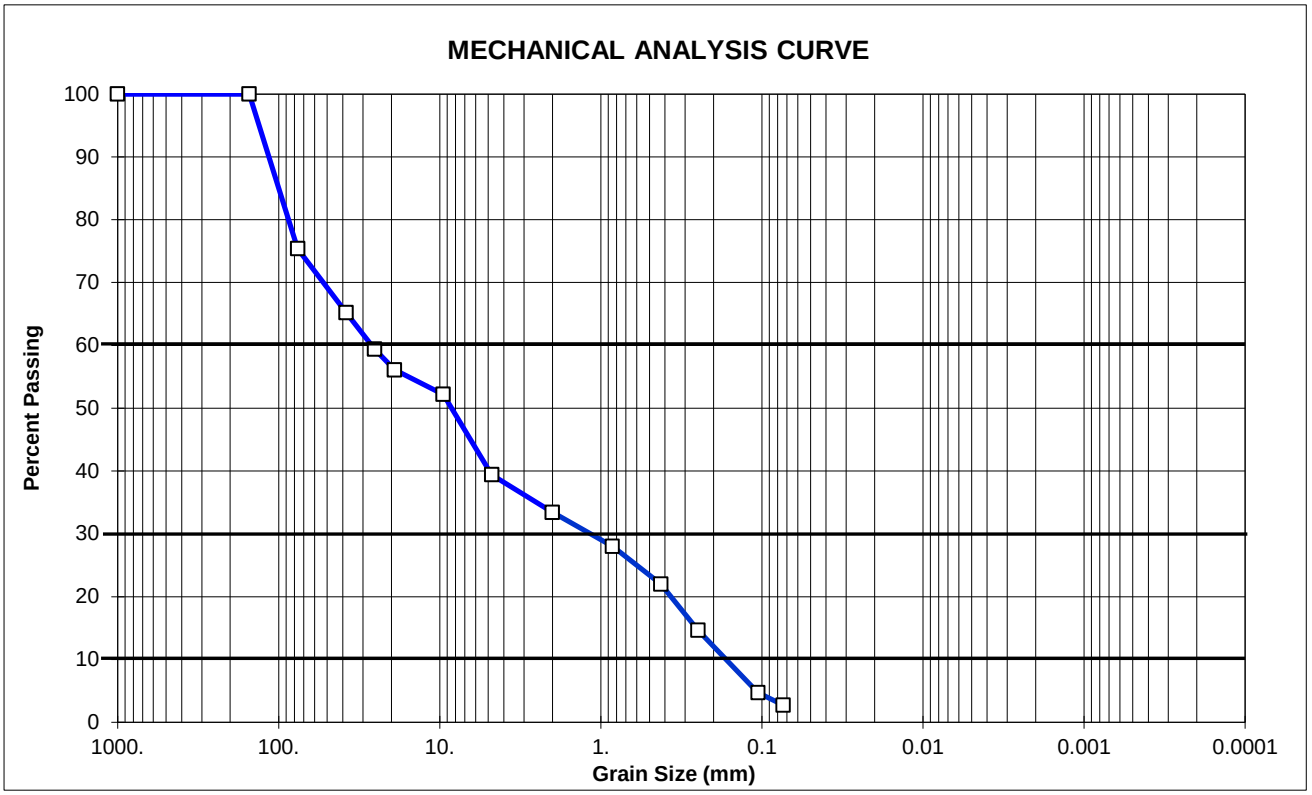
MATERIALS ENGINEERING DIVISION

Geotechnical Laboratory

PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga Reservoir Cleanout **PCA:** HF00710003

CLASSIFICATION: GP **BORING/SAMPLE:** B10



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	24.6	19.3	16.7	6.0	11.4	19.3	2.7	
TOTAL	24.6	= 36.0			=	36.7	#N/A	#N/A
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270

1st# passing *2nd# retaining*

Avg. Organic Content
n/a %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)		
% Retained #200 =	*97.3*	D_{10} =	*0.175*	$C_u = D_{60} / D_{10}$ =	*160.00*
% Retained # 4 =	*60.6*	D_{30} =	*1.25*	$C_c = D_{30}^2 / (D_{10}*D_{60})$ =	*0.31888*
% #4 / % #200 =	*62.3*	D_{60} =	*28.00*		

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ORGANIC CONTENT / ASTM D2974

Project Name:	Big Tujunga-Ponar Sampling	Checked By:	EH
PCA:	HF00710003	Date Checked:	09/19/2012
Tested By:	HA		
Date Tested:	09/12/2012		

	Lab. #	Sample # / ID, Location	Date Received	Cup	Wet Wt. + Tare	Dry Wt. + Tare	Tare	Moisture Content	Ash + Tare	Ash Content	Average Ash Content	Orgnaic Content	Average Organic Content "As Received"	Total ret. #4 "As recived"
1	6384	B-11	09/06/2012	#2	164.400	161.670	69.990	2.978	155.880	93.685	93.50	6.315	6.50	2%
				#5	157.760	154.930	60.190	2.987	148.600	93.319		6.681		
2	6385	B-12	"	#3	192.140	184.250	63.570	6.538	172.210	90.023	89.81	9.977	10.19	3%
				#6	188.240	180.580	63.780	6.558	168.430	89.598		10.402		
3	6386	B-13	"	#3	164.370	163.040	73.510	1.486	158.010	94.382	94.43	5.618	5.57	1%
				#1	144.350	143.140	66.470	1.578	138.910	94.483		5.517		
4	6387	B-14	"	#2	200.500	199.960	69.990	0.415	198.440	98.830	98.81	1.170	1.19	13%
				#5	190.180	189.750	60.190	0.332	188.180	98.788		1.212		
5	6388	B-15	"	#1	146.560	145.000	66.470	1.987	139.970	93.595	93.32	6.405	6.68	0%
				#3	161.490	159.790	73.510	1.970	153.790	93.046		6.954		
6	6389	B-16	"	#8	253.580	252.180	105.650	0.955	247.610	96.881	97.10	3.119	2.90	0%
				#4	155.020	154.150	61.460	0.939	151.670	97.324		2.676		
7														
8														
9														
10														
11														
12														
13														

REMARKS:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
Geotechnical and Materials Engineering Division
Geotechnical Laboratory - ASTM D2487, D6913, C117, C136

SIEVE ANALYSIS WORKSHEET

PROJECT NAME: Big Tujunga-Ponar Sampling
LAB. ID: 6384
CLASSIFICATION: ML
TESTED BY: HA
CHECKED BY: EH
Cu / Cc: 28.3 0.3

PCA: HF00710003
BORING / SAMPLE: B-11
DEPTH (FT): N/A
DATE TESTED: 9/12/12
DATE CHECKED: 9/19/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 > 50%, CLAY or SILT

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*				100.0	
3/8"	*9.52*	5.60	0.3	0.3	99.7	
No. 4	*4.76*	40.60	2.1	2.4	97.6	
PAN	*0*	1943.10				
TOTAL FRACTIONS		1989.30				
OVEN-DRY FINES		1887.72				
*** TOTAL OVEN-DRY**		1933.46				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	97.15
MOISTURE (%)	2.9

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	291.45
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	298.58

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	19.44	6.5	8.9	91.1	
20	*0.85*	31.97	10.7	19.6	80.4	
40	*0.425*	32.02	10.7	30.3	69.7	
60	*0.25*	14.36	4.8	35.1	64.9	
140	*0.106*	25.86	8.7	43.8	56.2	
200	*0.074*	10.07	3.4	47.2	52.8	
PAN	*0*	3.65	1.2			
TOTAL FRACTIONS		137.37	46.0			
TOTAL DRY WEIGHT AFTER WET SEIVING		137.45	46.0			
SIEVE LOSS-GAIN		0.08	0.0			

Atterberg Test

Liquid **L**imit	#NAME?
Plastic Limit	#NAME?
Plastic **I**ndex	#NAME?

SOIL DESCRIP. / REMARKS: Gray Sandy Silt W/Few Organic, Non-Plastic,

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

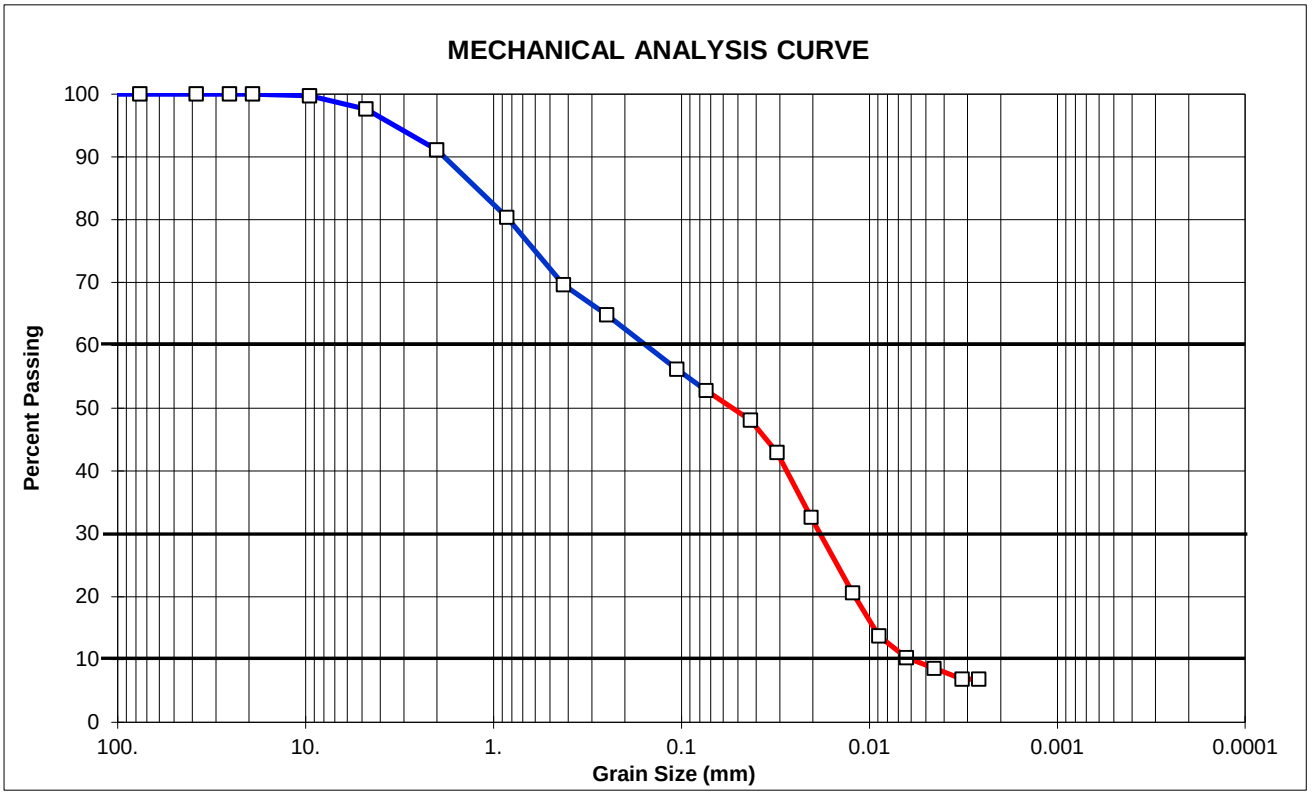
MATERIALS ENGINEERING DIVISION

Geotechnical Laboratory

PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga-Ponar Sampling **PCA:** HF00710003

CLASSIFICATION: ML **BORING/SAMPLE:** B-11



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	2.4	6.5	21.4	16.8	52.8	
TOTAL		= 2.4			= 44.8		42.5	10.30928
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270

V *1st# passing* V *2nd# retaining*

Avg. Organic Content
6.5 %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)		
% Retained #200 =	*47.2*	D_{10} =	*0.006*	$C_u = D_{60} / D_{10}$ =	*28.33*
% Retained # 4 =	*2.4*	D_{30} =	*0.018*	$C_c = D_{30}^2 / (D_{10}*D_{60})$ =	*0.31765*
% #4 / % #200 =	*5.1*	D_{60} =	*0.170*		

DEPARTMENT OF PUBLIC WORKS, LOS ANGELES
GEOTECHNICAL & MATERIALS ENGINEERING
MECHANICAL ANALYSIS - ASTM D422 & CTM 203

Project: **Big Tujunga-Ponar Sampling** Lab #: 6384

Boring / Sample: B-11 Depth (ft): N/A Date: 09/18/2012 PCA: HF00710003

Prepared By: HA Tech.: HA Calcul. By: HA Checked By: EH

T = MINUTES; **R** = HYDROMETER READING; **C** = TEMPERATURE;
R' = CORRECTED HYDROMETER READING; **P** = PERCENTAGE OF SIZE (R'/Wd);
P' = CORRECTED PERCENTAGE OF SIZE (P x % Passing No. 4 Sieve);
L = ASTM : D422, *Table II* ; **K** = ASTM : D422, *Table III* ;
D = PARTICLE SIZE (K x SQRT(L/T))

T,min.	R	C	Corrt C	R'	P	P'	L	K	D
1	30	26.0	2.0	28.0	48.1	47.0	11.4	0.01272	0.0429
2	27	26.0	2.0	25.0	43.0	41.9	11.9	0.01272	0.0310
5	21	26.0	2.0	19.0	32.6	31.9	12.9	0.01272	0.0204
15	14	26.0	2.0	12.0	20.6	20.1	14.0	0.01272	0.0123
30	10	26.0	2.0	8.0	13.7	13.4	14.7	0.01272	0.0089
60	8	26.0	2.0	6.0	10.3	10.1	15.0	0.01272	0.0064
120	7	26.0	2.0	5.0	8.6	8.4	15.2	0.01272	0.0045
240	6	26.0	2.0	4.0	6.9	6.7	15.3	0.01272	0.0032
360	6	26.0	2.0	4.0	6.9	6.7	15.3	0.01272	0.0026

SPECIFIC GRAVITY = 2.65 Cylinder #: 11

MOISTURE CONTENT

Wet Wt. of Sample + Container =	100.00	g
Dry Wt. of Sample + Container =	97.00	g
Loss of Moisture =	3.00	g
Tare =	0.00	g
Dry Wt. of Sample =	97.00	g
Moisture Content =	3.09	%

DRY WEIGHT OF TEST SAMPLE, Wd

$$= \frac{\text{Wet Wt. of Test Sample}}{100 + \text{Moisture Content}} \times 100$$

$$= \frac{60.00}{100 + 3} \times 100 = 58.20$$

CORRECTED GRADATION

Sieve Size	% Passing
1 1/2"	100.00
1"	100.00
34"	100.00
3/8"	99.71
4	97.61
10	91.10
20	80.39
40	69.67
60	64.86
140	56.20
200	52.83
PAN	
5 Microns	
1 Microns	

REMARKS:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
Geotechnical and Materials Engineering Division
Geotechnical Laboratory - ASTM D2487, D6913, C117, C136

SIEVE ANALYSIS WORKSHEET

PROJECT NAME: Big Tujunga-Ponar Sampling
LAB. ID: 6385
CLASSIFICATION: SM
TESTED BY: HA
CHECKED BY: EH
Cu / Cc: 58.3 0.6

PCA: HF00710003
BORING / SAMPLE: B-12
DEPTH (FT): N/A
DATE TESTED: 9/13/12
DATE CHECKED: 9/19/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 < 50%, SILT, SAND or DUAL

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*				100.0	
3/8"	*9.52*	7.40	0.4	0.4	99.6	
No. 4	*4.76*	60.10	3.0	3.3	96.7	
PAN	*0*	2095.90				
TOTAL FRACTIONS		2163.40				
OVEN-DRY FINES		1968.05				
*** TOTAL OVEN-DRY**		2034.88				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	93.90
MOISTURE (%)	6.5

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	281.70
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	291.37

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	23.11	7.9	11.2	88.8	
20	*0.85*	34.86	12.0	23.2	76.8	
40	*0.425*	36.49	12.5	35.7	64.3	
60	*0.25*	27.45	9.4	45.2	54.8	
140	*0.106*	37.82	13.0	58.1	41.9	
200	*0.074*	9.71	3.3	61.5	38.5	
PAN	*0*	9.34	3.2			
TOTAL FRACTIONS		178.78	61.4			
TOTAL DRY WEIGHT AFTER WET SEIVING		178.80	61.4			
SIEVE LOSS-GAIN		0.02	0.0			

Atterberg Test

Liquid **L**imit	#NAME?
Plastic Limit	#NAME?
Plastic **I**ndex	#NAME?

SOIL DESCRIP. / REMARKS: Gray Silty Sand W/Few Organic W/Trace Of Gravel,

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

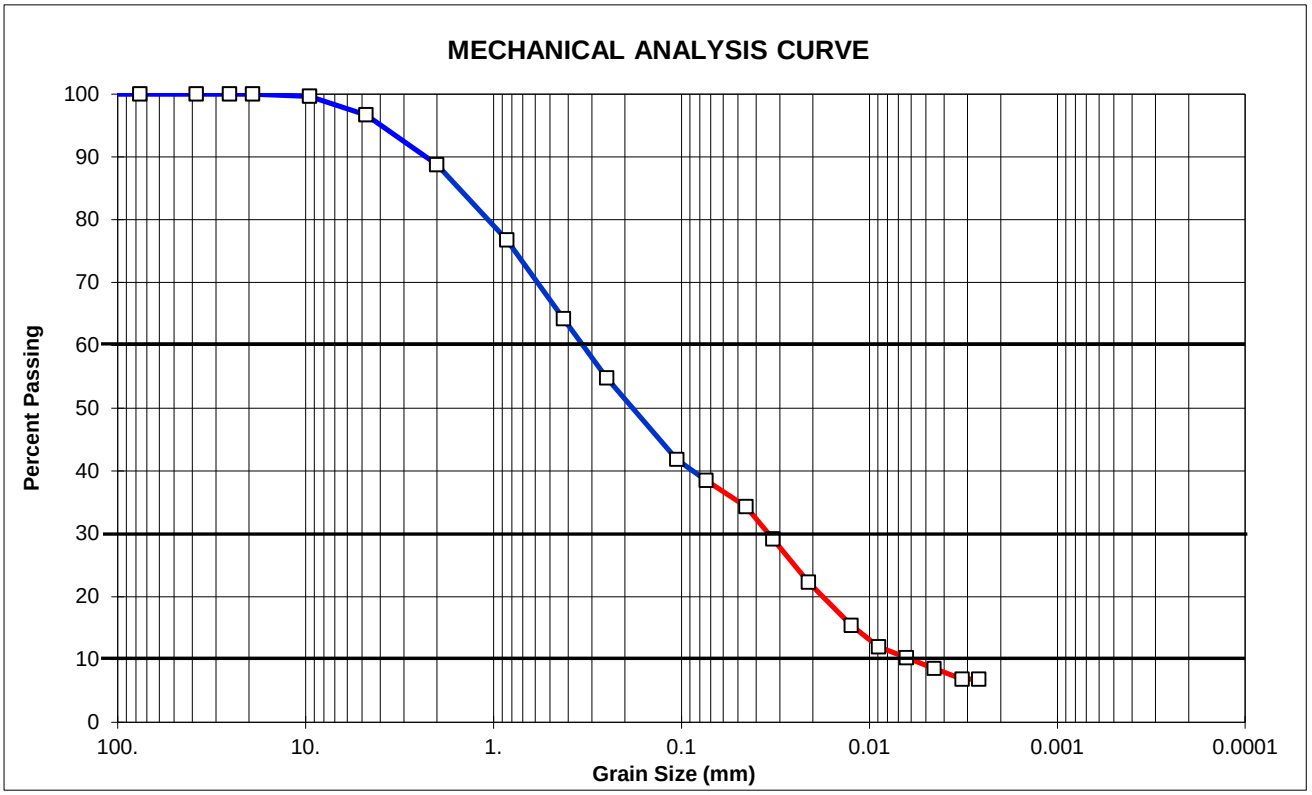
MATERIALS ENGINEERING DIVISION

Geotechnical Laboratory

PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga-Ponar Sampling **PCA:** HF00710003

CLASSIFICATION: SM **BORING/SAMPLE:** B-12



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	3.3	7.9	24.5	25.7	38.5	
TOTAL	-	= 3.3		= 58.2			28.2	10.30186
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270

V *1st# passing* V *2nd# retaining*

Avg. Organic Content
10.2 %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)		
% Retained #200 =	*61.5*	D_{10} =	*0.006*	$C_u = D_{60} / D_{10}$ =	*58.33*
% Retained # 4 =	*3.3*	D_{30} =	*0.035*	$C_c = D_{30}^2 / (D_{10}*D_{60})$ =	*0.58333*
% #4 / % #200 =	*5.4*	D_{60} =	*0.350*		

DEPARTMENT OF PUBLIC WORKS, LOS ANGELES
GEOTECHNICAL & MATERIALS ENGINEERING
MECHANICAL ANALYSIS - ASTM D422 & CTM 203

Project: **Big Tujunga-Ponar Sampling** Lab #: 6385

Boring / Sample: B-12 Depth (ft): N/A Date: 09/18/2012 PCA: HF00710003

Prepared By: HA Tech.: HA Calcul. By: HA Checked By: EH

T = MINUTES; **R** = HYDROMETER READING; **C** = TEMPERATURE;
R' = CORRECTED HYDROMETER READING; **P** = PERCENTAGE OF SIZE (R'/Wd);
P' = CORRECTED PERCENTAGE OF SIZE (P x % Passing No. 4 Sieve);
L = ASTM : D422, *Table II* ; **K** = ASTM : D422, *Table III* ;
D = PARTICLE SIZE (K x SQRT(L/T))

T,min.	R	C	Corrt C	R'	P	P'	L	K	D
1	22	26.0	2.0	20.0	35.5	34.3	12.7	0.01272	0.0453
2	19	26.0	2.0	17.0	30.2	29.2	13.2	0.01272	0.0327
5	15	26.0	2.0	13.0	23.1	22.3	13.8	0.01272	0.0211
15	11	26.0	2.0	9.0	16.0	15.5	14.5	0.01272	0.0125
30	9	26.0	2.0	7.0	12.4	12.0	14.8	0.01272	0.0089
60	8	26.0	2.0	6.0	10.7	10.3	15.0	0.01272	0.0064
120	7	26.0	2.0	5.0	8.9	8.6	15.2	0.01272	0.0045
240	6	26.0	2.0	4.0	7.1	6.9	15.3	0.01272	0.0032
360	6	26.0	2.0	4.0	7.1	6.9	15.3	0.01272	0.0026

SPECIFIC GRAVITY = 2.65 Cylinder #: 12

MOISTURE CONTENT

Wet Wt. of Sample + Container =	100.00	g
Dry Wt. of Sample + Container =	93.85	g
Loss of Moisture =	6.15	g
Tare =	0.00	g
Dry Wt. of Sample =	93.85	g
Moisture Content =	6.55	%

DRY WEIGHT OF TEST SAMPLE, Wd

$$= \frac{\text{Wet Wt. of Test Sample}}{100 + \text{Moisture Content}} \times 100$$

$$= \frac{60.00}{100 + } \times 100 \quad 56.31$$

CORRECTED GRADATION

Sieve Size	% Passing
1 1/2"	100.00
1"	100.00
34"	100.00
3/8"	99.64
4	96.68
10	88.75
20	76.79
40	64.26
60	54.84
140	41.86
200	38.53
PAN	
5 Microns	
1 Microns	

REMARKS:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
Geotechnical and Materials Engineering Division
Geotechnical Laboratory - ASTM D2487, D6913, C117, C136

SIEVE ANALYSIS WORKSHEET

PROJECT NAME: Big Tujunga-Ponar Sampling
LAB. ID: 6386
CLASSIFICATION: ML
TESTED BY: HA
CHECKED BY: EH
Cu / Cc: 14.7 1.7

PCA: HF00710003
BORING / SAMPLE: B-13
DEPTH (FT): N/A
DATE TESTED: 9/13/12
DATE CHECKED: 9/19/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 > 50%, CLAY or SILT

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*				100.0	
3/4"	*19.1*	14.60	1.0	1.0	99.0	
3/8"	*9.52*	0.90	0.1	1.0	99.0	
No. 4	*4.76*	1.00	0.1	1.1	98.9	
PAN	*0*	1534.20				
TOTAL FRACTIONS		1550.70				
OVEN-DRY FINES		1511.19				
*** TOTAL OVEN-DRY**		1527.52				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	98.50
MOISTURE (%)	1.5

* Cobbles not included in total oven-dry weight
• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	295.50
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	298.73

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	1.25	0.4	1.5	98.5	
20	*0.85*	4.63	1.5	3.0	97.0	
40	*0.425*	4.04	1.4	4.4	95.6	
60	*0.25*	3.63	1.2	5.6	94.4	
140	*0.106*	31.71	10.6	16.2	83.8	
200	*0.074*	36.13	12.1	28.3	71.7	
PAN	*0*	55.12	18.5			
TOTAL FRACTIONS		136.51	45.7			
TOTAL DRY WEIGHT AFTER WET SEIVING		136.58	45.7			
SIEVE LOSS-GAIN		0.07	0.0			

Atterberg Test

Liquid **L**imit	#NAME?
Plastic Limit	#NAME?
Plastic **I**ndex	#NAME?

SOIL DESCRIP. / REMARKS: Gray Fine Sandy Silt W/Few Organic W/Trace Of Gravel, Non-Plastic,

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

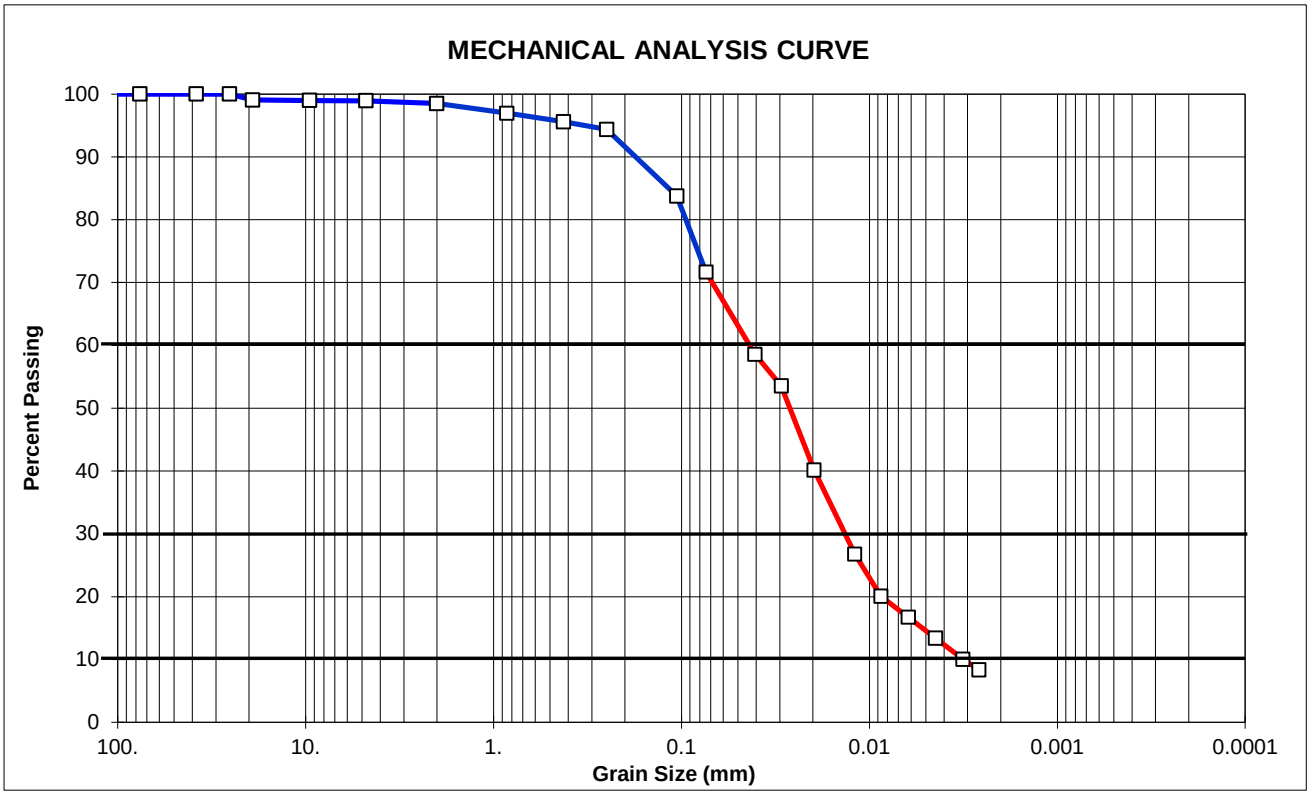
MATERIALS ENGINEERING DIVISION

Geotechnical Laboratory

PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga-Ponar Sampling **PCA:** HF00710003

CLASSIFICATION: ML **BORING/SAMPLE:** B-13



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	1.0	0.1	0.4	2.9	23.9	71.7	
TOTAL	-	= 1.1		=		27.2	54.9	16.7377
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270
	V 1st# passing	V 2nd# retaining						

Avg. Organic Content
5.6 %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)		
% Retained #200 =	*28.3*	D_{10} =	*0.003*	$C_u = D_{60} / D_{10}$ =	*14.67*
% Retained # 4 =	*1.1*	D_{30} =	*0.015*	$C_c = D_{30}^2 / (D_{10}*D_{60})$ =	*1.70455*
% #4 / % #200 =	*3.8*	D_{60} =	*0.044*		

DEPARTMENT OF PUBLIC WORKS, LOS ANGELES
GEOTECHNICAL & MATERIALS ENGINEERING
MECHANICAL ANALYSIS - ASTM D422 & CTM 203

Project: **Big Tujunga-Ponar Sampling** Lab #: 6386

Boring / Sample: B-13 Depth (ft): N/A Date: 09/18/2012 PCA: HF00710003

Prepared By: HA Tech.: HA Calcul. By: HA Checked By: EH

T = MINUTES; **R** = HYDROMETER READING; **C** = TEMPERATURE;
R' = CORRECTED HYDROMETER READING; **P** = PERCENTAGE OF SIZE (R'/Wd);
P' = CORRECTED PERCENTAGE OF SIZE (P x % Passing No. 4 Sieve);
L = ASTM : D422, *Table II* ; **K** = ASTM : D422, *Table III* ;
D = PARTICLE SIZE (K x SQRT(L/T))

T,min.	R	C	Corrt C	R'	P	P'	L	K	D
1	37	26.0	2.0	35.0	59.2	58.6	10.2	0.01272	0.0406
2	34	26.0	2.0	32.0	54.1	53.6	10.7	0.01272	0.0294
5	26	26.0	2.0	24.0	40.6	40.2	12.0	0.01272	0.0197
15	18	26.0	2.0	16.0	27.1	26.8	13.3	0.01272	0.0120
30	14	26.0	2.0	12.0	20.3	20.1	14.0	0.01272	0.0087
60	12	26.0	2.0	10.0	16.9	16.7	14.3	0.01272	0.0062
120	10	26.0	2.0	8.0	13.5	13.4	14.7	0.01272	0.0045
240	8	26.0	2.0	6.0	10.2	10.0	15.0	0.01272	0.0032
360	7	26.0	2.0	5.0	8.5	8.4	15.2	0.01272	0.0026

SPECIFIC GRAVITY = 2.65 Cylinder #: 13

MOISTURE CONTENT

Wet Wt. of Sample + Container =	100.00	g
Dry Wt. of Sample + Container =	98.50	g
Loss of Moisture =	1.50	g
Tare =	0.00	g
Dry Wt. of Sample =	98.50	g
Moisture Content =	1.52	%

DRY WEIGHT OF TEST SAMPLE, Wd

$$= \frac{\text{Wet Wt. of Test Sample}}{100 + \text{Moisture Content}} \times 100$$

$$= \frac{60.00}{100 +} \times 100 \qquad 59.10$$

CORRECTED GRADATION

Sieve Size	% Passing
1 1/2"	100.00
1"	100.00
34"	99.04
3/8"	98.99
4	98.92
10	98.50
20	96.95
40	95.60
60	94.38
140	83.77
200	71.67
PAN	
5 Microns	
1 Microns	

REMARKS:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
Geotechnical and Materials Engineering Division
Geotechnical Laboratory - ASTM D2487, D6913, C117, C136

SIEVE ANALYSIS WORKSHEET

PROJECT NAME: Big Tujunga-Ponar Sampling
LAB. ID: 6387
CLASSIFICATION: SM
TESTED BY: HA
CHECKED BY: EH
Cu / Cc: 68.4 3.6

PCA: HF00710003
BORING / SAMPLE: B-14
DEPTH (FT): N/A
DATE TESTED: 9/13/12
DATE CHECKED: 9/19/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 < 50%, SILT, SAND or DUAL

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*				100.0	
3/4"	*19.1*	18.60	0.8	0.8	99.2	
3/8"	*9.52*	80.50	3.7	4.5	95.5	
No. 4	*4.76*	185.90	8.5	13.0	87.0	
PAN	*0*	1925.00				
TOTAL FRACTIONS		2210.00				
OVEN-DRY FINES		1916.92				
*** TOTAL OVEN-DRY**		2199.09				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	99.58
MOISTURE (%)	0.4

* Cobbles not included in total oven-dry weight
• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	500.00
CALCULATED OVEN-DRY WEIGHT (gms)	497.90
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	572.04

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	85.97	15.0	28.0	72.0	
20	*0.85*	108.43	19.0	46.9	53.1	
40	*0.425*	88.56	15.5	62.4	37.6	
60	*0.25*	62.45	10.9	73.3	26.7	
140	*0.106*	62.71	11.0	84.3	15.7	
200	*0.074*	5.02	0.9	85.2	14.8	
PAN	*0*	1.49	0.3			
TOTAL FRACTIONS		414.63	72.5			
TOTAL DRY WEIGHT AFTER WET SEIVING		414.70	72.5			
SIEVE LOSS-GAIN		0.07	0.0			

Atterberg Test

Liquid **L**imit	#NAME?
Plastic Limit	#NAME?
Plastic **I**ndex	#NAME?

SOIL DESCRIP. / REMARKS: Gray Sand W/Few Gravel W/Few Silt W/Trace Of Organic, Non-Plastic,

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

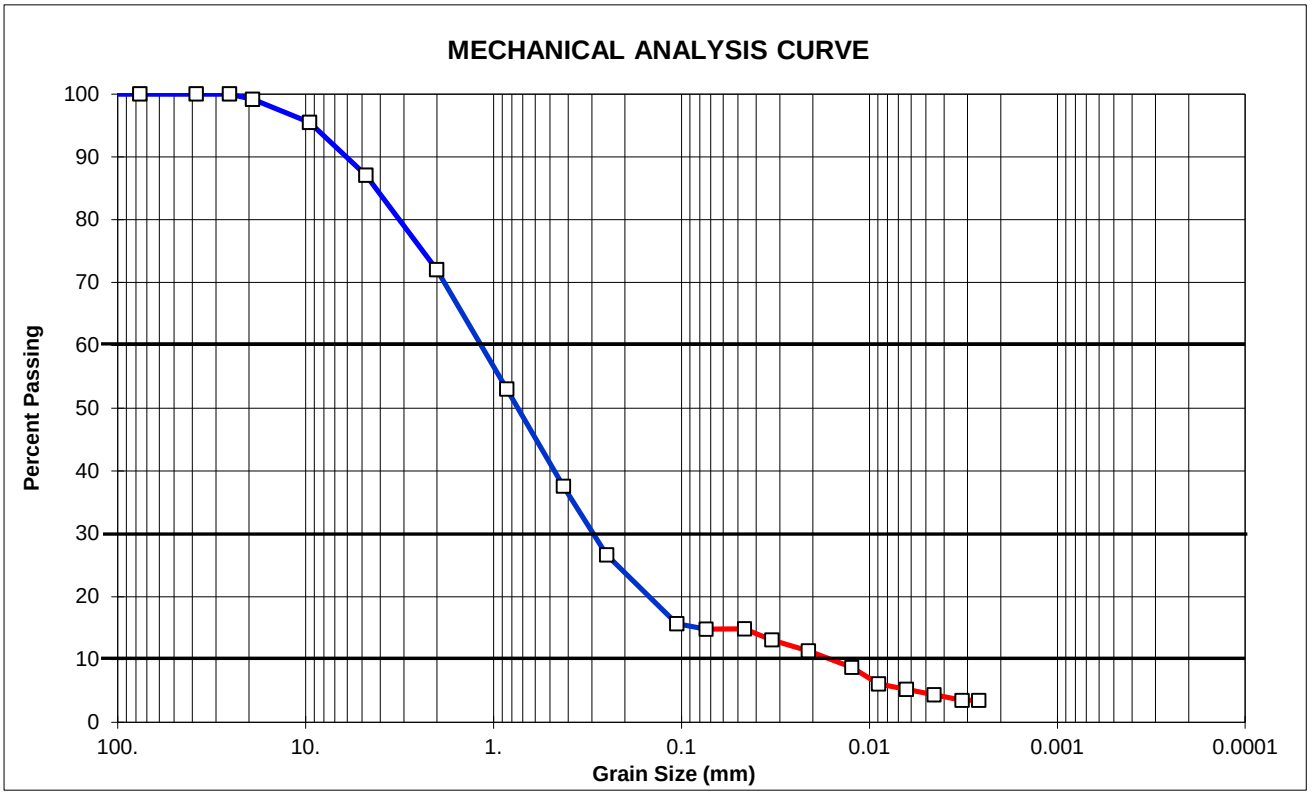
MATERIALS ENGINEERING DIVISION

Geotechnical Laboratory

PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga-Ponar Sampling **PCA:** HF00710003

CLASSIFICATION: SM **BORING/SAMPLE:** B-14



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.8	12.1	15.0	34.4	22.8	14.8	
TOTAL		= 13.0			= 72.2		9.6	5.24865
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270
	V 1st# passing	V 2nd# retaining						

Avg. Organic Content
1.2 %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)		
% Retained #200 =	*85.2*	D_{10} =	*0.019*	$C_u = D_{60} / D_{10}$ =	*68.42*
% Retained # 4 =	*13.0*	D_{30} =	*0.300*	$C_c = D_{30}^2 / (D_{10}*D_{60})$ =	*3.64372*
% #4 / % #200 =	*15.2*	D_{60} =	*1.300*		

DEPARTMENT OF PUBLIC WORKS, LOS ANGELES
GEOTECHNICAL & MATERIALS ENGINEERING
MECHANICAL ANALYSIS - ASTM D422 & CTM 203

Project: **Big Tujunga-Ponar Sampling** Lab #: 6387

Boring / Sample: B-14 Depth (ft): N/A Date: 09/18/2012 PCA: HF00710003

Prepared By: HA Tech.: HA Calcul. By: HA Checked By: EH

T = MINUTES; **R** = HYDROMETER READING; **C** = TEMPERATURE;
R' = CORRECTED HYDROMETER READING; **P** = PERCENTAGE OF SIZE (R'/Wd);
P' = CORRECTED PERCENTAGE OF SIZE (P x % Passing No. 4 Sieve);
L = ASTM : D422, *Table II* ; **K** = ASTM : D422, *Table III* ;
D = PARTICLE SIZE (K x SQRT(L/T))

T,min.	R	C	Corrt C	R'	P	P'	L	K	D
1	19	26.0	2.0	17.0	17.1	14.9	13.2	0.01272	0.0462
2	17	26.0	2.0	15.0	15.1	13.1	13.5	0.01272	0.0330
5	15	26.0	2.0	13.0	13.1	11.4	13.8	0.01272	0.0211
15	12	26.0	2.0	10.0	10.1	8.7	14.3	0.01272	0.0124
30	9	26.0	2.0	7.0	7.0	6.1	14.8	0.01272	0.0089
60	8	26.0	2.0	6.0	6.0	5.2	15.0	0.01272	0.0064
120	7	26.0	2.0	5.0	5.0	4.4	15.2	0.01272	0.0045
240	6	26.0	2.0	4.0	4.0	3.5	15.3	0.01272	0.0032
360	6	26.0	2.0	4.0	4.0	3.5	15.3	0.01272	0.0026

SPECIFIC GRAVITY = 2.65 Cylinder #: 14

MOISTURE CONTENT

Wet Wt. of Sample + Container =	100.00	g
Dry Wt. of Sample + Container =	99.50	g
Loss of Moisture =	0.50	g
Tare =	0.00	g
Dry Wt. of Sample =	99.50	g
Moisture Content =	0.50	%

DRY WEIGHT OF TEST SAMPLE, Wd

$$= \frac{\text{Wet Wt. of Test Sample}}{\text{100 + Moisture Content}} \times 100$$

$$= \frac{\text{100.00}}{\text{100 +}} \times 100 \quad 99.50$$

CORRECTED GRADATION

Sieve Size	% Passing
1 1/2"	100.00
1"	100.00
34"	99.15
3/8"	95.49
4	87.04
10	72.01
20	53.06
40	37.57
60	26.66
140	15.69
200	14.82
PAN	
5 Microns	
1 Microns	

REMARKS:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
Geotechnical and Materials Engineering Division
Geotechnical Laboratory - ASTM D2487, D6913, C117, C136

SIEVE ANALYSIS WORKSHEET

PROJECT NAME: Big Tujunga-Ponar Sampling
LAB. ID: 6388
CLASSIFICATION: ML
TESTED BY: HA
CHECKED BY: EH

PCA: HF00710003
BORING / SAMPLE: B-15
DEPTH (FT): N/A
DATE TESTED: 9/13/12
DATE CHECKED: 9/19/12

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 > 50%, CLAY or SILT

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*					
3/8"	*9.52*				100.0	
No. 4	*4.76*	2.50	0.2	0.2	99.8	
PAN	*0*	1690.00				
TOTAL FRACTIONS		1692.50				
OVEN-DRY FINES		1657.05				
*** TOTAL OVEN-DRY**		1659.52				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	98.05
MOISTURE (%)	2.0

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	300.00
CALCULATED OVEN-DRY WEIGHT (gms)	294.15
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	294.59

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	0.85	0.3	0.4	99.6	
20	*0.85*	2.43	0.8	1.3	98.7	
40	*0.425*	2.30	0.8	2.0	98.0	
60	*0.25*	1.94	0.7	2.7	97.3	
140	*0.106*	6.45	2.2	4.9	95.1	
200	*0.074*	7.40	2.5	7.4	92.6	
PAN	*0*	15.17	5.1			
TOTAL FRACTIONS		36.54	12.4			
TOTAL DRY WEIGHT AFTER WET SEIVING		36.54	12.4			
SIEVE LOSS-GAIN		0.00	0.0			

Atterberg Test

Liquid **L**imit	#NAME?
Plastic Limit	#NAME?
Plastic **I**ndex	#NAME?

SOIL DESCRIP. / REMARKS: L. Gray Silt W/Few Sand W/Few Organic Low Plastic - non rollable

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

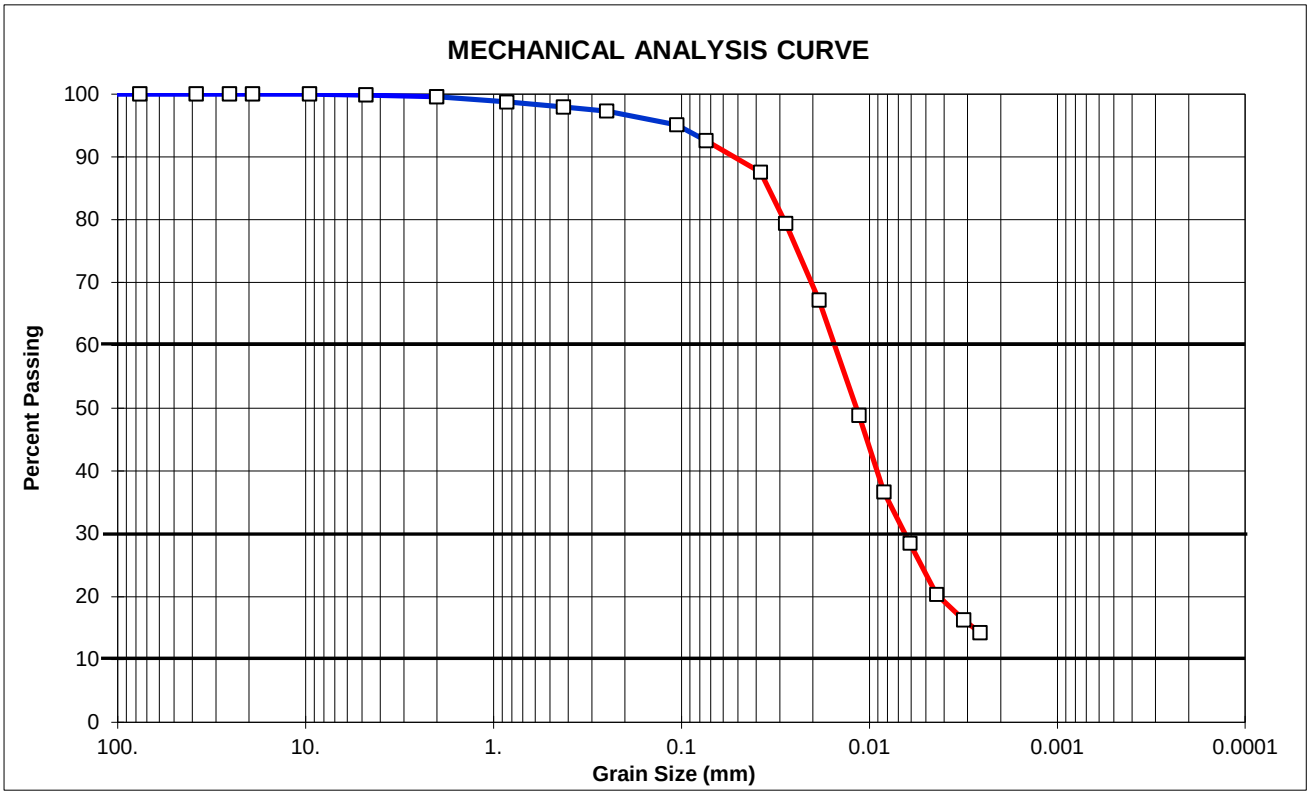
MATERIALS ENGINEERING DIVISION

Geotechnical Laboratory

PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga-Ponar Sampling **PCA:** HF00710003

CLASSIFICATION: ML **BORING/SAMPLE:** B-15



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	0.2	0.3	1.6	5.4	92.6	
TOTAL	_	= 0.2		=		7.3	64.1	28.51093
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270

V 1st# passing

V 2nd# retaining

Avg. Organic Content

6.7 %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)	
% Retained #200 =	*7.4*	D_{10} =		C_u = D_{60} / D_{10} =
% Retained # 4 =	*0.2*	D_{30} =		C_c = D_{30}^2 / (D_{10}*D_{60}) =
% #4 / % #200 =	*2.0*	D_{60} =		

DEPARTMENT OF PUBLIC WORKS, LOS ANGELES
GEOTECHNICAL & MATERIALS ENGINEERING
MECHANICAL ANALYSIS - ASTM D422 & CTM 203

Project: **Big Tujunga-Ponar Sampling**

Lab #: 6388

Boring / Sample: B-15 Depth (ft): N/A Date: 09/18/2012 PCA: HP0071000-2

Prepared By: HA Tech.: HA Calcul. By: HA Checked By: EH

T = MINUTES; **R** = HYDROMETER READING; **C** = TEMPERATURE;
R' = CORRECTED HYDROMETER READING; **P** = PERCENTAGE OF SIZE (R'/Wd);
P' = CORRECTED PERCENTAGE OF SIZE (P x % Passing No. 4 Sieve);
L = ASTM : D422, *Table II* ; **K** = ASTM : D422, *Table III* ;
D = PARTICLE SIZE (K x SQRT(L/T))

T,min.	R	C	Corrt C	R'	P	P'	L	K	D
1	45	26.0	2.0	43.0	87.7	87.6	8.9	0.01272	0.0379
2	41	26.0	2.0	39.0	79.5	79.4	9.6	0.01272	0.0279
5	35	26.0	2.0	33.0	67.3	67.2	10.6	0.01272	0.0185
15	26	26.0	2.0	24.0	48.9	48.9	12.0	0.01272	0.0114
30	20	26.0	2.0	18.0	36.7	36.7	13.0	0.01272	0.0084
60	16	26.0	2.0	14.0	28.6	28.5	13.7	0.01272	0.0061
120	12	26.0	2.0	10.0	20.4	20.4	14.3	0.01272	0.0044
240	10	26.0	2.0	8.0	16.3	16.3	14.7	0.01272	0.0031
360	9	26.0	2.0	7.0	14.3	14.3	14.8	0.01272	0.0026

SPECIFIC GRAVITY = 2.65 Cylinder #: 15

MOISTURE CONTENT

Wet Wt. of Sample + Container =	100.00	g
Dry Wt. of Sample + Container =	98.06	g
Loss of Moisture =	1.94	g
Tare =	0.00	g
Dry Wt. of Sample =	98.06	g
Moisture Content =	1.98	%

DRY WEIGHT OF TEST SAMPLE, Wd

$$= \frac{\text{Wet Wt. of Test Sample}}{\text{100 + Moisture Content}} \times 100$$

50.00

$$= \frac{}{100 +} \times 100 = 49.03$$

CORRECTED GRADATION

Sieve Size	% Passing
1 1/2"	100.00
1"	100.00
34"	100.00
3/8"	100.00
4	99.85
10	99.56
20	98.74
40	97.96
60	97.30
140	95.11
200	92.60
PAN	
5 Microns	
1 Microns	

REMARKS:

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
Geotechnical and Materials Engineering Division
Geotechnical Laboratory - ASTM D2487, D6913, C117, C136

SIEVE ANALYSIS WORKSHEET

PROJECT NAME:	**Big Tujunga-Ponar Sampling**	**PCA:**	HF00710003
LAB. ID:	6389	**BORING / SAMPLE:**	B-16
CLASSIFICATION:	**SM**	**DEPTH (FT):**	N/A
TESTED BY:	HA	**DATE TESTED:**	9/13/12
CHECKED BY:	**EH**	**DATE CHECKED:**	9/19/12
Cu / Cc:	35.0	4.1	

If % Accum. Ret. #4 / % Accum. Ret. #200 > 50%, then Gravel
If % Passing #200 < 50%, SILT, SAND or DUAL

COARSE (Plus no. 4)

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
6"	*152.4*					
3"	*76.2*					
1 1/2"	*38.1*					
1"	*25.4*					
3/4"	*19.1*					
3/8"	*9.52*				100.0	
No. 4	*4.76*	5.60	0.3	0.3	99.7	
PAN	*0*	1695.00				
TOTAL FRACTIONS		1700.60				
OVEN-DRY FINES		1678.90				
*** TOTAL OVEN-DRY**		1684.44				

MOISTURE CONTENT OF FINES	
WET WEIGHT (gm)	100.00
DRY WEIGHT (gm)	99.05
MOISTURE (%)	1.0

* Cobbles not included in total oven-dry weight

• If moisture was not taken from Course material a 1% moisture content will be assumed.

MOISTURE CONTENT OF COURSE	
Wet WGT. (gm)	
Dry WGT. (gm)	
MOISTURE (%)	0.01

FINES (Minus no. 4)

WET WEIGHT OF FINES USED FOR WASHING (gms)	500.00
CALCULATED OVEN-DRY WEIGHT (gms)	495.25
WT. OF TOTAL SAMPLE REPRESENTED BY FINES, OVEN-DRY (gms):	496.90

ASTM SIEVE NUMBER	SIZE (mm)	RETAINED (gms)	% OF TOTAL OVEN DRY RETAINED	ACCUM. % RETAINED	ACCUM. % PASSING ACTUAL	ACCUM. % PASSING SPEC. REQ.
10	*2*	16.44	3.3	3.6	96.4	
20	*0.85*	52.72	10.6	14.3	85.7	
40	*0.425*	90.56	18.2	32.5	67.5	
60	*0.25*	86.69	17.4	49.9	50.1	
140	*0.106*	104.29	21.0	70.9	29.1	
200	*0.074*	23.28	4.7	75.6	24.4	
PAN	*0*	7.38	1.5			
TOTAL FRACTIONS		381.36	76.7			
TOTAL DRY WEIGHT AFTER WET SEIVING		381.40	76.8			
SIEVE LOSS-GAIN		0.04	0.0			

Atterberg Test

Liquid **L**imit	#NAME?
Plastic Limit	#NAME?
Plastic **I**ndex	#NAME?

SOIL DESCRIP. / REMARKS: L. Gray Silty Sand W/Trace Of Organic, Non-Plastic,

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

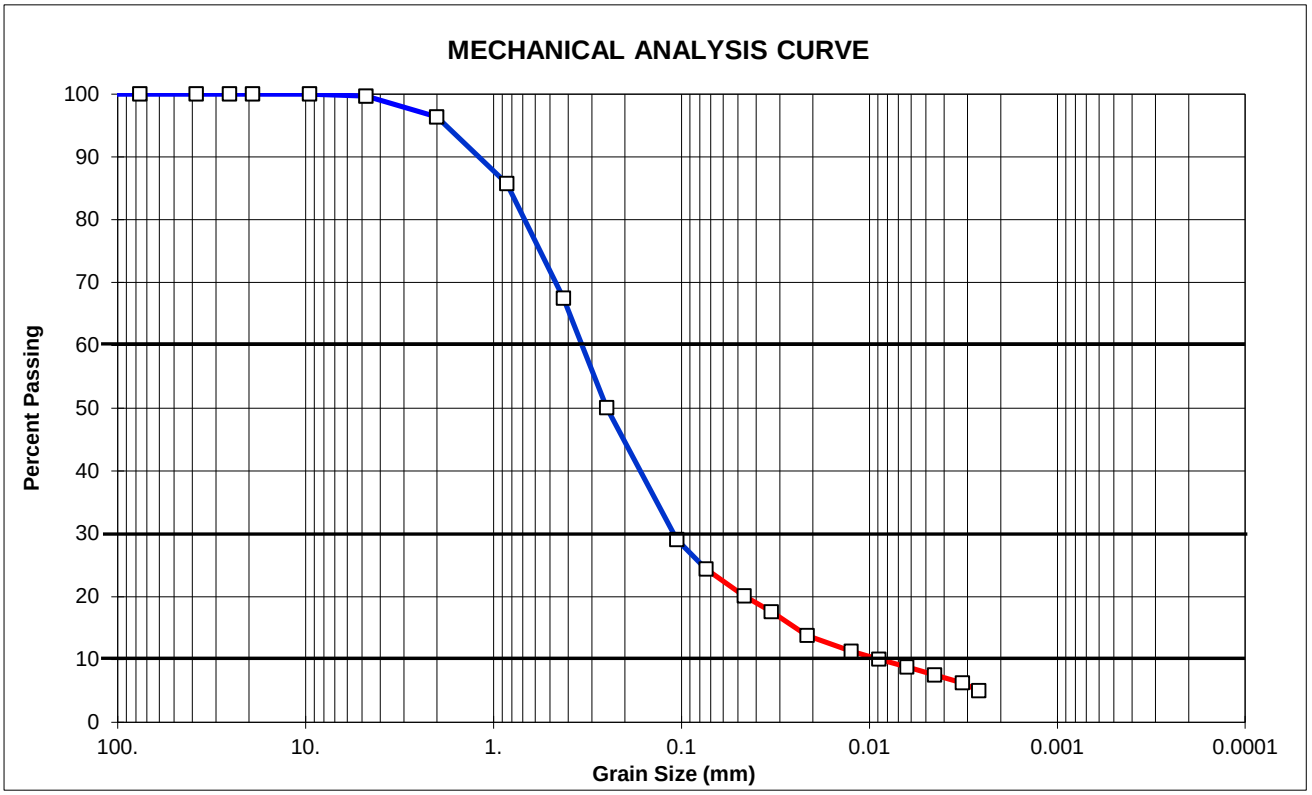
MATERIALS ENGINEERING DIVISION

Geotechnical Laboratory

PARTICLE SIZE DISTRIBUTION REPORT

PROJECT NAME: Big Tujunga-Ponar Sampling **PCA:** HF00710003

CLASSIFICATION: SM **BORING/SAMPLE:** B-16



	% COBBLES	% GRAVEL		% SAND			% FINES	
		coarse	fine	coarse	medium	fine	silt +	clay
(mm)*	(300-75)	(75-19)	(19-4.75)	(4.75-2)	(2-.425)	(.425-.075)	(-.075)	(-.005)
(%)	0.0	0.0	0.3	3.3	28.8	43.1	24.4	
TOTAL	-	= 0.3			=	75.3	15.6	8.803665
*sieve#	(12" - 3")	(3" - 3/4")	(3/4"- #4)	(#4 - #10)	(#10 - #40)	(#40 - #200)	pass#200	pass#270

1st# passing *2nd# retaining*

Avg. Organic Content
2.9 %

SAND EQUIVALENT / ASTM D2419

	Cylind. 1	Cylind. 2	VALUE
Sand			n/a
Clay			

			(mm)		
% Retained #200 =	*75.6*	D_{10} =	*0.010*	$C_u = D_{60} / D_{10}$ =	*35.00*
% Retained # 4 =	*0.3*	D_{30} =	*0.120*	$C_c = D_{30}^2 / (D_{10}*D_{60})$ =	*4.11429*
% #4 / % #200 =	*0.4*	D_{60} =	*0.350*		

DEPARTMENT OF PUBLIC WORKS, LOS ANGELES
GEOTECHNICAL & MATERIALS ENGINEERING
MECHANICAL ANALYSIS - ASTM D422 & CTM 203

Project: **Big Tujunga-Ponar Sampling** Lab #: 6389

Boring / Sample: B-16 Depth (ft): N/A Date: 09/18/2012 PCA: HF00710003

Prepared By: HA Tech.: HA Calcul. By: HA Checked By: EH

T = MINUTES; **R** = HYDROMETER READING; **C** = TEMPERATURE;
R' = CORRECTED HYDROMETER READING; **P** = PERCENTAGE OF SIZE (R'/Wd);
P' = CORRECTED PERCENTAGE OF SIZE (P x % Passing No. 4 Sieve);
L = ASTM : D422, *Table II* ; **K** = ASTM : D422, *Table III* ;
D = PARTICLE SIZE (K x SQRT(L/T))

T,min.	R	C	Corrt C	R'	P	P'	L	K	D
1	18	26.0	2.0	16.0	20.2	20.1	13.3	0.01272	0.0464
2	16	26.0	2.0	14.0	17.7	17.6	13.7	0.01272	0.0333
5	13	26.0	2.0	11.0	13.9	13.8	14.2	0.01272	0.0214
15	11	26.0	2.0	9.0	11.4	11.3	14.5	0.01272	0.0125
30	10	26.0	2.0	8.0	10.1	10.1	14.7	0.01272	0.0089
60	9	26.0	2.0	7.0	8.8	8.8	14.8	0.01272	0.0063
120	8	26.0	2.0	6.0	7.6	7.5	15.0	0.01272	0.0045
240	7	26.0	2.0	5.0	6.3	6.3	15.2	0.01272	0.0032
360	6	26.0	2.0	4.0	5.0	5.0	15.3	0.01272	0.0026

SPECIFIC GRAVITY = 2.65 Cylinder #: 16

MOISTURE CONTENT

Wet Wt. of Sample + Container =	100.00	g
Dry Wt. of Sample + Container =	99.06	g
Loss of Moisture =	0.94	g
Tare =	0.00	g
Dry Wt. of Sample =	99.06	g
Moisture Content =	0.95	%

DRY WEIGHT OF TEST SAMPLE, Wd

$$= \frac{\text{Wet Wt. of Test Sample}}{100 + \text{Moisture Content}} \times 100$$

$$= \frac{80.00}{100 + } \times 100 \quad 79.25$$

CORRECTED GRADATION

Sieve Size	% Passing
1 1/2"	100.00
1"	100.00
34"	100.00
3/8"	100.00
4	99.67
10	96.36
20	85.75
40	67.52
60	50.08
140	29.09
200	24.41
PAN	
5 Microns	
1 Microns	

REMARKS:

APPENDIX B
ENVIRONMENTAL ANALYTICAL RESULTS

Table 2

Summary of Analytical Test Results

Sample Identification			B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-10-2
Matrix			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
EPA Method	Analyte	Units	01/09/12	01/09/12	01/09/12	01/09/12	01/09/12	01/10/12	01/10/12	01/10/12	04/18/12
Metals [1,2]											
6010B	**Barium**	mg/kg	**62**	**99**	**100**	**110**	**110**	**120**	**130**	**130**	**37**
6010B	**Cobalt**	mg/kg	**5.4**	**10**	**11**	**11**	**11**	**12**	**12**	**11**	**7.3**
6010B	**Chromium**	mg/kg	**5.5**	**19**	**21**	**22**	**20**	**22**	**22**	**20**	**4.8**
6010B	**Copper**	mg/kg	**7.3**	**17**	**22**	**23**	**23**	**25**	**27**	**27**	**12**
6010B	**Nickel**	mg/kg	**5.5**	**14**	**16**	**17**	**16**	**17**	**18**	**17**	**6.5**
6010B	**Lead**	mg/kg	ND	**5.3**	**7.6**	**8.3**	**8.5**	**8.6**	**10**	**11**	ND
6010B	**Vanadium**	mg/kg	**15**	**31**	**32**	**33**	**32**	**35**	**36**	**35**	**9.1**
6010B	**Zinc**	mg/kg	**19**	**38**	**39**	**40**	**38**	**42**	**43**	**42**	**11**
Volatile Organic Compounds (VOCs) [2,3,4]											
8260B	**Benzene**	µg/kg	**23**	**23**	**21**	**18**	**25**	**16**	**21**	**19**	**58**
8260B	**Tert-butyl alcohol**	µg/kg	**360**	**160**	ND<5.0	ND<5.0	**1600**	ND<5.0	ND<5.0	ND<5.0	ND<5.0
8260B	**Toluene**	µg/kg	**14**	**29**	**66**	**66**	**94**	**35**	**59**	**28**	ND<5.0
Carbofurans											
8321		µg/kg	ND<25	ND<25	NR	ND<25	NR	NR	NR	ND<25	ND<25
Organochlorine Pesticides (OCPs)											
8081A		µg/kg	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
Chlorinated Herbicides (CHs)											
8151A		µg/kg	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0
Polynuclear Aromatic Hydrocarbons (PAHs)											
8310		mg/kg	ND<0.200	ND<0.200	ND<0.200	ND<0.200	ND<0.200	ND<0.200	ND<0.200	ND<0.200	ND<0.200
Semivolatile Organic Compounds (SVOCs)											
8270C		mg/kg	ND<0.33	ND<0.33	ND<0.33	ND<0.33	ND<0.33	ND<0.33	ND<0.33	ND<0.33	ND<0.33
Polychlorinated Biphenyls (PCBs)											
8082		µg/kg	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20	ND<20
2,3,7,8-TCDD (Dioxin)											
8290		ng/kg	ND<2.02	ND<1.65	NR	ND<2.55	NR	NR	NR	ND<2.15	ND<1.0
1,4 Dioxane											
8270		µg/kg	ND<230	ND<230	NR	ND<230	NR	NR	NR	ND<230	ND<61

Notes:

1. All other metals (by EPA 6010B) including mercury (by EPA 7471) not detected from 0.2 to 5.0 mg/kg.
2. See analytical laboratory reports for analytes tested and analyte specific reporting limits.
3. All other VOCs not detected above 5.0 µg/kg.
4. Including EDB (Dibromomethane) and DBCP (Dibromochloropropane).

ND = Analyte not detected at or above the reporting limit.
NR = Not reported.
mg/kg = Milligrams per kilogram.
µg/kg = Micrograms per kilogram.
ng/kg = Nanograms per kilogram.

SIERRA ANALYTICAL

23 January 2012

Geir Mathisen
Los Angeles County Dept. of Public Works
900 S. Fremont Ave.
Alhambra, CA 91803

RE:Big T Res. Sed. Char. Program

Work Order No.: 1201110

Attached are the results of the analyses for samples received by the laboratory on 01/10/12 11:30.

The samples were received by Sierra Analytical Labs, Inc. with a chain of custody record attached or completed at the submittal of the samples.

The analyses were performed according to the prescribed method as outlined by EPA, Standard Methods, and A.S.T.M.

The remaining portions of the samples will be disposed of within 30 days from the date of this report.
If you require any additional retaining time, please advise us.

Sincerely,

Richard K. Forsyth

Richard K. Forsyth

Laboratory Director

Sierra Analytical Labs, Inc. is certified by the California Department of Health Services (DOHS),
Environmental Laboratory Accredidation Program (ELAP) No. 2320.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1	1201110-01	Soil	01/09/12 09:30	01/10/12 11:30
B-2	1201110-02	Soil	01/09/12 09:50	01/10/12 11:30
B-3	1201110-03	Soil	01/09/12 10:40	01/10/12 11:30
B-4	1201110-04	Soil	01/09/12 11:00	01/10/12 11:30
B-5	1201110-05	Soil	01/09/12 11:20	01/10/12 11:30

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, and accompanied by chain of custody documentation.
PRESERVATION: Samples requiring preservation were verified prior to sample preparation and analysis.
HOLDING TIMES: All holding times were met, unless otherwises noted in the report with data qualifiers.
QA/QC CRITERIA: All quality objective criteria were met, except as noted in the report with data qualifiers.

26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
TELEPHONE: (949) 348-9389 FAX: (949) 348-9115
E-MAIL: SIERRALABS @ SIERRALABS.NET

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (1201110-01) Soil Sampled: 01/09/12 09:30 Received: 01/10/12 11:30									
Silver	ND	1.0	mg/kg	1	B2A1102	01/11/12	01/11/12 16:07	EPA 6010B	
Arsenic	ND	3.5	"	"	"	"	01/11/12 16:08	"	
Barium	**62**	6.5	"	"	"	"	01/11/12 16:07	"	
Beryllium	ND	0.50	"	"	"	"	"	"	
Cadmium	ND	0.50	"	"	"	"	01/11/12 16:08	"	
Cobalt	**5.4**	2.5	"	"	"	"	"	"	
Chromium	**5.5**	3.0	"	"	"	"	"	"	
Copper	**7.3**	2.0	"	"	"	"	01/11/12 16:07	"	
Mercury	ND	0.15	"	"	B2A1101	01/11/12	01/11/12 12:02	EPA 7471A	
Molybdenum	ND	1.0	"	"	B2A1102	01/11/12	01/11/12 16:08	EPA 6010B	
Nickel	**5.5**	4.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Antimony	ND	2.5	"	"	"	"	"	"	
Selenium	ND	6.0	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**15**	6.0	"	"	"	"	01/11/12 16:07	"	
Zinc	**19**	10	"	"	"	"	01/11/12 16:08	"	
B-2 (1201110-02) Soil Sampled: 01/09/12 09:50 Received: 01/10/12 11:30									
Silver	ND	1.0	mg/kg	1	B2A1102	01/11/12	01/11/12 16:24	EPA 6010B	
Arsenic	ND	3.5	"	"	"	"	"	"	
Barium	**99**	6.5	"	"	"	"	"	"	
Beryllium	ND	0.50	"	"	"	"	"	"	
Cadmium	ND	0.50	"	"	"	"	"	"	
Cobalt	**10**	2.5	"	"	"	"	"	"	
Chromium	**19**	3.0	"	"	"	"	"	"	
Copper	**17**	2.0	"	"	"	"	"	"	
Mercury	ND	0.13	"	"	B2A1101	01/11/12	01/11/12 12:08	EPA 7471A	
Molybdenum	ND	1.0	"	"	B2A1102	01/11/12	01/11/12 16:24	EPA 6010B	
Nickel	**14**	4.0	"	"	"	"	"	"	
Lead	**5.3**	3.0	"	"	"	"	"	"	
Antimony	ND	2.5	"	"	"	"	"	"	
Selenium	ND	6.0	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**31**	6.0	"	"	"	"	"	"	
Zinc	**38**	10	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-3 (1201110-03) Soil Sampled: 01/09/12 10:40 Received: 01/10/12 11:30									
Silver	ND	0.91	mg/kg	1	B2A1102	01/11/12	01/11/12 16:29	EPA 6010B	
Arsenic	ND	3.2	"	"	"	"	01/11/12 16:30	"	
Barium	**100**	5.9	"	"	"	"	01/11/12 16:29	"	
Beryllium	ND	0.45	"	"	"	"	"	"	
Cadmium	ND	0.45	"	"	"	"	01/11/12 16:30	"	
Cobalt	**11**	2.3	"	"	"	"	"	"	
Chromium	**21**	2.7	"	"	"	"	"	"	
Copper	**22**	1.8	"	"	"	"	01/11/12 16:29	"	
Mercury	ND	0.14	"	"	B2A1101	01/11/12	01/11/12 12:10	EPA 7471A	
Molybdenum	ND	0.91	"	"	B2A1102	01/11/12	01/11/12 16:30	EPA 6010B	
Nickel	**16**	3.6	"	"	"	"	"	"	
Lead	**7.6**	2.7	"	"	"	"	"	"	
Antimony	ND	2.3	"	"	"	"	"	"	
Selenium	ND	5.5	"	"	"	"	"	"	
Thallium	ND	2.3	"	"	"	"	"	"	
Vanadium	**32**	5.5	"	"	"	"	01/11/12 16:29	"	
Zinc	**39**	9.1	"	"	"	"	"	"	
B-4 (1201110-04) Soil Sampled: 01/09/12 11:00 Received: 01/10/12 11:30									
Silver	ND	1.0	mg/kg	1	B2A1102	01/11/12	01/11/12 16:35	EPA 6010B	
Arsenic	ND	3.5	"	"	"	"	"	"	
Barium	**110**	6.5	"	"	"	"	"	"	
Beryllium	ND	0.50	"	"	"	"	"	"	
Cadmium	ND	0.50	"	"	"	"	"	"	
Cobalt	**11**	2.5	"	"	"	"	"	"	
Chromium	**22**	3.0	"	"	"	"	"	"	
Copper	**23**	2.0	"	"	"	"	"	"	
Mercury	ND	0.15	"	"	B2A1101	01/11/12	01/11/12 12:16	EPA 7471A	
Molybdenum	ND	1.0	"	"	B2A1102	01/11/12	01/11/12 16:35	EPA 6010B	
Nickel	**17**	4.0	"	"	"	"	"	"	
Lead	**8.3**	3.0	"	"	"	"	"	"	
Antimony	ND	2.5	"	"	"	"	"	"	
Selenium	ND	6.0	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**33**	6.0	"	"	"	"	"	"	
Zinc	**40**	10	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-5 (1201110-05) Soil Sampled: 01/09/12 11:20 Received: 01/10/12 11:30									
Silver	ND	1.0	mg/kg	1	B2A1102	01/11/12	01/11/12 16:40	EPA 6010B	
Arsenic	ND	3.5	"	"	"	"	01/11/12 16:41	"	
Barium	**110**	6.5	"	"	"	"	01/11/12 16:40	"	
Beryllium	ND	0.50	"	"	"	"	"	"	
Cadmium	ND	0.50	"	"	"	"	01/11/12 16:41	"	
Cobalt	**11**	2.5	"	"	"	"	"	"	
Chromium	**20**	3.0	"	"	"	"	"	"	
Copper	**23**	2.0	"	"	"	"	01/11/12 16:40	"	
Mercury	ND	0.13	"	"	B2A1101	01/11/12	01/11/12 13:52	EPA 7471A	
Molybdenum	ND	1.0	"	"	B2A1102	01/11/12	01/11/12 16:41	EPA 6010B	
Nickel	**16**	4.0	"	"	"	"	"	"	
Lead	**8.5**	3.0	"	"	"	"	"	"	
Antimony	ND	2.5	"	"	"	"	"	"	
Selenium	ND	6.0	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**32**	6.0	"	"	"	"	01/11/12 16:40	"	
Zinc	**38**	10	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Organochlorine Pesticides by EPA Method 8081A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (1201110-01) Soil Sampled: 01/09/12 09:30 Received: 01/10/12 11:30									
Aldrin	ND	0.0020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8081A	
HCH-alpha	ND	0.0020	"	"	"	"	"	"	
HCH-beta	ND	0.0040	"	"	"	"	"	"	
HCH-delta	ND	0.0020	"	"	"	"	"	"	
HCH-gamma (Lindane)	ND	0.0020	"	"	"	"	"	"	
Chlordane	ND	0.0040	"	"	"	"	"	"	
4,4´-DDD	ND	0.0030	"	"	"	"	"	"	
4,4´-DDE	ND	0.0020	"	"	"	"	"	"	
4,4´-DDT	ND	0.0030	"	"	"	"	"	"	
Dieldrin	ND	0.0020	"	"	"	"	"	"	
Endosulfan I	ND	0.0020	"	"	"	"	"	"	
Endosulfan II	ND	0.0040	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.0020	"	"	"	"	"	"	
Endrin	ND	0.0020	"	"	"	"	"	"	
Endrin aldehyde	ND	0.0020	"	"	"	"	"	"	
Endrin ketone	ND	0.0020	"	"	"	"	"	"	
Heptachlor	ND	0.0020	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.0020	"	"	"	"	"	"	
Methoxychlor	ND	0.010	"	"	"	"	"	"	
Toxaphene	ND	0.040	"	"	"	"	"	"	
Mirex	ND	0.0040	"	"	"	"	"	"	
Kepone	ND	0.0040	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*74.7 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*69.9 %*		*42-147*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Organochlorine Pesticides by EPA Method 8081A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-2 (1201110-02) Soil Sampled: 01/09/12 09:50 Received: 01/10/12 11:30									
Aldrin	ND	0.0020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8081A	
HCH-alpha	ND	0.0020	"	"	"	"	"	"	
HCH-beta	ND	0.0040	"	"	"	"	"	"	
HCH-delta	ND	0.0020	"	"	"	"	"	"	
HCH-gamma (Lindane)	ND	0.0020	"	"	"	"	"	"	
Chlordane	ND	0.0040	"	"	"	"	"	"	
4,4´-DDD	ND	0.0030	"	"	"	"	"	"	
4,4´-DDE	ND	0.0020	"	"	"	"	"	"	
4,4´-DDT	ND	0.0030	"	"	"	"	"	"	
Dieldrin	ND	0.0020	"	"	"	"	"	"	
Endosulfan I	ND	0.0020	"	"	"	"	"	"	
Endosulfan II	ND	0.0040	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.0020	"	"	"	"	"	"	
Endrin	ND	0.0020	"	"	"	"	"	"	
Endrin aldehyde	ND	0.0020	"	"	"	"	"	"	
Endrin ketone	ND	0.0020	"	"	"	"	"	"	
Heptachlor	ND	0.0020	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.0020	"	"	"	"	"	"	
Methoxychlor	ND	0.010	"	"	"	"	"	"	
Toxaphene	ND	0.040	"	"	"	"	"	"	
Mirex	ND	0.0040	"	"	"	"	"	"	
Kepone	ND	0.0040	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*43.3 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*48.6 %*		*42-147*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Organochlorine Pesticides by EPA Method 8081A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-3 (1201110-03) Soil Sampled: 01/09/12 10:40 Received: 01/10/12 11:30									
Aldrin	ND	0.0020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8081A	
HCH-alpha	ND	0.0020	"	"	"	"	"	"	
HCH-beta	ND	0.0040	"	"	"	"	"	"	
HCH-delta	ND	0.0020	"	"	"	"	"	"	
HCH-gamma (Lindane)	ND	0.0020	"	"	"	"	"	"	
Chlordane	ND	0.0040	"	"	"	"	"	"	
4,4´-DDD	ND	0.0030	"	"	"	"	"	"	
4,4´-DDE	ND	0.0020	"	"	"	"	"	"	
4,4´-DDT	ND	0.0030	"	"	"	"	"	"	
Dieldrin	ND	0.0020	"	"	"	"	"	"	
Endosulfan I	ND	0.0020	"	"	"	"	"	"	
Endosulfan II	ND	0.0040	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.0020	"	"	"	"	"	"	
Endrin	ND	0.0020	"	"	"	"	"	"	
Endrin aldehyde	ND	0.0020	"	"	"	"	"	"	
Endrin ketone	ND	0.0020	"	"	"	"	"	"	
Heptachlor	ND	0.0020	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.0020	"	"	"	"	"	"	
Methoxychlor	ND	0.010	"	"	"	"	"	"	
Toxaphene	ND	0.040	"	"	"	"	"	"	
Mirex	ND	0.0040	"	"	"	"	"	"	
Kepone	ND	0.0040	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*49.2 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*59.5 %*		*42-147*	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Organochlorine Pesticides by EPA Method 8081A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-4 (1201110-04) Soil Sampled: 01/09/12 11:00 Received: 01/10/12 11:30									
Aldrin	ND	0.0020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8081A	
HCH-alpha	ND	0.0020	"	"	"	"	"	"	
HCH-beta	ND	0.0040	"	"	"	"	"	"	
HCH-delta	ND	0.0020	"	"	"	"	"	"	
HCH-gamma (Lindane)	ND	0.0020	"	"	"	"	"	"	
Chlordane	ND	0.0040	"	"	"	"	"	"	
4,4´-DDD	ND	0.0030	"	"	"	"	"	"	
4,4´-DDE	ND	0.0020	"	"	"	"	"	"	
4,4´-DDT	ND	0.0030	"	"	"	"	"	"	
Dieldrin	ND	0.0020	"	"	"	"	"	"	
Endosulfan I	ND	0.0020	"	"	"	"	"	"	
Endosulfan II	ND	0.0040	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.0020	"	"	"	"	"	"	
Endrin	ND	0.0020	"	"	"	"	"	"	
Endrin aldehyde	ND	0.0020	"	"	"	"	"	"	
Endrin ketone	ND	0.0020	"	"	"	"	"	"	
Heptachlor	ND	0.0020	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.0020	"	"	"	"	"	"	
Methoxychlor	ND	0.010	"	"	"	"	"	"	
Toxaphene	ND	0.040	"	"	"	"	"	"	
Mirex	ND	0.0040	"	"	"	"	"	"	
Kepone	ND	0.0040	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*67.1 %*	*42-147*		*"*	*"*	*"*	*"*	
Surrogate: Tetrachloro-meta-xylene		*67.6 %*	*42-147*		*"*	*"*	*"*	*"*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Organochlorine Pesticides by EPA Method 8081A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-5 (1201110-05) Soil Sampled: 01/09/12 11:20 Received: 01/10/12 11:30									
Aldrin	ND	0.0020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8081A	
HCH-alpha	ND	0.0020	"	"	"	"	"	"	
HCH-beta	ND	0.0040	"	"	"	"	"	"	
HCH-delta	ND	0.0020	"	"	"	"	"	"	
HCH-gamma (Lindane)	ND	0.0020	"	"	"	"	"	"	
Chlordane	ND	0.0040	"	"	"	"	"	"	
4,4´-DDD	ND	0.0030	"	"	"	"	"	"	
4,4´-DDE	ND	0.0020	"	"	"	"	"	"	
4,4´-DDT	ND	0.0030	"	"	"	"	"	"	
Dieldrin	ND	0.0020	"	"	"	"	"	"	
Endosulfan I	ND	0.0020	"	"	"	"	"	"	
Endosulfan II	ND	0.0040	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.0020	"	"	"	"	"	"	
Endrin	ND	0.0020	"	"	"	"	"	"	
Endrin aldehyde	ND	0.0020	"	"	"	"	"	"	
Endrin ketone	ND	0.0020	"	"	"	"	"	"	
Heptachlor	ND	0.0020	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.0020	"	"	"	"	"	"	
Methoxychlor	ND	0.010	"	"	"	"	"	"	
Toxaphene	ND	0.040	"	"	"	"	"	"	
Mirex	ND	0.0040	"	"	"	"	"	"	
Kepone	ND	0.0040	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*63.4 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*65.5 %*		*42-147*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Polychlorinated Biphenyls by EPA Method 8082

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (1201110-01) Soil Sampled: 01/09/12 09:30 Received: 01/10/12 11:30									
PCB-1016	ND	0.020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8082	
PCB-1221	ND	0.020	"	"	"	"	"	"	
PCB-1232	ND	0.020	"	"	"	"	"	"	
PCB-1242	ND	0.020	"	"	"	"	"	"	
PCB-1248	ND	0.020	"	"	"	"	"	"	
PCB-1254	ND	0.020	"	"	"	"	"	"	
PCB-1260	ND	0.020	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*74.7 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*69.9 %*		*42-147*	"	"	"	"	
B-2 (1201110-02) Soil Sampled: 01/09/12 09:50 Received: 01/10/12 11:30									
PCB-1016	ND	0.020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8082	
PCB-1221	ND	0.020	"	"	"	"	"	"	
PCB-1232	ND	0.020	"	"	"	"	"	"	
PCB-1242	ND	0.020	"	"	"	"	"	"	
PCB-1248	ND	0.020	"	"	"	"	"	"	
PCB-1254	ND	0.020	"	"	"	"	"	"	
PCB-1260	ND	0.020	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*43.3 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*48.6 %*		*42-147*	"	"	"	"	
B-3 (1201110-03) Soil Sampled: 01/09/12 10:40 Received: 01/10/12 11:30									
PCB-1016	ND	0.020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8082	
PCB-1221	ND	0.020	"	"	"	"	"	"	
PCB-1232	ND	0.020	"	"	"	"	"	"	
PCB-1242	ND	0.020	"	"	"	"	"	"	
PCB-1248	ND	0.020	"	"	"	"	"	"	
PCB-1254	ND	0.020	"	"	"	"	"	"	
PCB-1260	ND	0.020	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*49.2 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*59.5 %*		*42-147*	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Polychlorinated Biphenyls by EPA Method 8082

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-4 (1201110-04) Soil Sampled: 01/09/12 11:00 Received: 01/10/12 11:30									
PCB-1016	ND	0.020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8082	
PCB-1221	ND	0.020	"	"	"	"	"	"	
PCB-1232	ND	0.020	"	"	"	"	"	"	
PCB-1242	ND	0.020	"	"	"	"	"	"	
PCB-1248	ND	0.020	"	"	"	"	"	"	
PCB-1254	ND	0.020	"	"	"	"	"	"	
PCB-1260	ND	0.020	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*67.1 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*67.6 %*		*42-147*	"	"	"	"	
B-5 (1201110-05) Soil Sampled: 01/09/12 11:20 Received: 01/10/12 11:30									
PCB-1016	ND	0.020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8082	
PCB-1221	ND	0.020	"	"	"	"	"	"	
PCB-1232	ND	0.020	"	"	"	"	"	"	
PCB-1242	ND	0.020	"	"	"	"	"	"	
PCB-1248	ND	0.020	"	"	"	"	"	"	
PCB-1254	ND	0.020	"	"	"	"	"	"	
PCB-1260	ND	0.020	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*63.4 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*65.5 %*		*42-147*	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Chlorinated Herbicides by EPA Method 8151A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (1201110-01) Soil Sampled: 01/09/12 09:30 Received: 01/10/12 11:30									
2,4,5-T	ND	1.6	µg/kg	1	B2A1603	01/16/12	01/18/12 10:18	EPA 8151A	
2,4,5-TP (Silvex)	ND	1.6	"	"	"	"	"	"	
2,4-D	ND	1.6	"	"	"	"	"	"	
2,4-DB	ND	4.0	"	"	"	"	"	"	
3,5-Dichlorobenzoic acid	ND	2.0	"	"	"	"	"	"	
4-Nitrophenol	ND	2.0	"	"	"	"	"	"	
Acifluorfen	ND	1.6	"	"	"	"	"	"	
Bentazon	ND	1.6	"	"	"	"	"	"	
Chloramben	ND	1.6	"	"	"	"	"	"	
Dalapon	ND	20	"	"	"	"	"	"	
DCPA diacid	ND	1.6	"	"	"	"	"	"	
Dicamba	ND	1.6	"	"	"	"	"	"	
Dichlorprop	ND	1.6	"	"	"	"	"	"	
Dinoseb	ND	1.6	"	"	"	"	"	"	
Pentachlorophenol	ND	1.6	"	"	"	"	"	"	
Picloram	ND	1.6	"	"	"	"	"	"	
Surrogate: 2,4-Dichlorophenylacetic Acid		*127 %*		*35-150*	"	"	"	"	
B-2 (1201110-02) Soil Sampled: 01/09/12 09:50 Received: 01/10/12 11:30									
2,4,5-T	ND	1.6	µg/kg	1	B2A1603	01/16/12	01/18/12 10:18	EPA 8151A	
2,4,5-TP (Silvex)	ND	1.6	"	"	"	"	"	"	
2,4-D	ND	1.6	"	"	"	"	"	"	
2,4-DB	ND	4.0	"	"	"	"	"	"	
3,5-Dichlorobenzoic acid	ND	2.0	"	"	"	"	"	"	
4-Nitrophenol	ND	2.0	"	"	"	"	"	"	
Acifluorfen	ND	1.6	"	"	"	"	"	"	
Bentazon	ND	1.6	"	"	"	"	"	"	
Chloramben	ND	1.6	"	"	"	"	"	"	
Dalapon	ND	20	"	"	"	"	"	"	
DCPA diacid	ND	1.6	"	"	"	"	"	"	
Dicamba	ND	1.6	"	"	"	"	"	"	
Dichlorprop	ND	1.6	"	"	"	"	"	"	
Dinoseb	ND	1.6	"	"	"	"	"	"	
Pentachlorophenol	ND	1.6	"	"	"	"	"	"	
Picloram	ND	1.6	"	"	"	"	"	"	
Surrogate: 2,4-Dichlorophenylacetic Acid		*148 %*		*35-150*	"	"	"	"	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Chlorinated Herbicides by EPA Method 8151A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-3 (1201110-03) Soil Sampled: 01/09/12 10:40 Received: 01/10/12 11:30									
2,4,5-T	ND	1.6	µg/kg	1	B2A1603	01/16/12	01/18/12 10:18	EPA 8151A	
2,4,5-TP (Silvex)	ND	1.6	"	"	"	"	"	"	
2,4-D	ND	1.6	"	"	"	"	"	"	
2,4-DB	ND	4.0	"	"	"	"	"	"	
3,5-Dichlorobenzoic acid	ND	2.0	"	"	"	"	"	"	
4-Nitrophenol	ND	2.0	"	"	"	"	"	"	
Acifluorfen	ND	1.6	"	"	"	"	"	"	
Bentazon	ND	1.6	"	"	"	"	"	"	
Chloramben	ND	1.6	"	"	"	"	"	"	
Dalapon	ND	20	"	"	"	"	"	"	
DCPA diacid	ND	1.6	"	"	"	"	"	"	
Dicamba	ND	1.6	"	"	"	"	"	"	
Dichlorprop	ND	1.6	"	"	"	"	"	"	
Dinoseb	ND	1.6	"	"	"	"	"	"	
Pentachlorophenol	ND	1.6	"	"	"	"	"	"	
Picloram	ND	1.6	"	"	"	"	"	"	
Surrogate: 2,4-Dichlorophenylacetic Acid		*103 %*		*35-150*	"	"	"	"	
B-4 (1201110-04) Soil Sampled: 01/09/12 11:00 Received: 01/10/12 11:30									
2,4,5-T	ND	1.6	µg/kg	1	B2A1603	01/16/12	01/18/12 10:18	EPA 8151A	
2,4,5-TP (Silvex)	ND	1.6	"	"	"	"	"	"	
2,4-D	ND	1.6	"	"	"	"	"	"	
2,4-DB	ND	4.0	"	"	"	"	"	"	
3,5-Dichlorobenzoic acid	ND	2.0	"	"	"	"	"	"	
4-Nitrophenol	ND	2.0	"	"	"	"	"	"	
Acifluorfen	ND	1.6	"	"	"	"	"	"	
Bentazon	ND	1.6	"	"	"	"	"	"	
Chloramben	ND	1.6	"	"	"	"	"	"	
Dalapon	ND	20	"	"	"	"	"	"	
DCPA diacid	ND	1.6	"	"	"	"	"	"	
Dicamba	ND	1.6	"	"	"	"	"	"	
Dichlorprop	ND	1.6	"	"	"	"	"	"	
Dinoseb	ND	1.6	"	"	"	"	"	"	
Pentachlorophenol	ND	1.6	"	"	"	"	"	"	
Picloram	ND	1.6	"	"	"	"	"	"	
Surrogate: 2,4-Dichlorophenylacetic Acid		*64.0 %*		*35-150*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Chlorinated Herbicides by EPA Method 8151A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-5 (1201110-05) Soil Sampled: 01/09/12 11:20 Received: 01/10/12 11:30									
2,4,5-T	ND	1.6	µg/kg	1	B2A1603	01/16/12	01/18/12 10:18	EPA 8151A	
2,4,5-TP (Silvex)	ND	1.6	"	"	"	"	"	"	
2,4-D	ND	1.6	"	"	"	"	"	"	
2,4-DB	ND	4.0	"	"	"	"	"	"	
3,5-Dichlorobenzoic acid	ND	2.0	"	"	"	"	"	"	
4-Nitrophenol	ND	2.0	"	"	"	"	"	"	
Acifluorfen	ND	1.6	"	"	"	"	"	"	
Bentazon	ND	1.6	"	"	"	"	"	"	
Chloramben	ND	1.6	"	"	"	"	"	"	
Dalapon	ND	20	"	"	"	"	"	"	
DCPA diacid	ND	1.6	"	"	"	"	"	"	
Dicamba	ND	1.6	"	"	"	"	"	"	
Dichlorprop	ND	1.6	"	"	"	"	"	"	
Dinoseb	ND	1.6	"	"	"	"	"	"	
Pentachlorophenol	ND	1.6	"	"	"	"	"	"	
Picloram	ND	1.6	"	"	"	"	"	"	
Surrogate: 2,4-Dichlorophenylacetic Acid		*40.7 %*		*35-150*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (1201110-01) Soil Sampled: 01/09/12 09:30 Received: 01/10/12 11:30									
Benzene	**23**	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project:	Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number:	HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager:	Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (1201110-01) Soil Sampled: 01/09/12 09:30 Received: 01/10/12 11:30									
Methylene chloride	ND	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	**360**	25	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	**14**	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*115 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.0 %*	*74-121*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-2 (1201110-02) Soil Sampled: 01/09/12 09:50 Received: 01/10/12 11:30									
Benzene	**23**	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-2 (1201110-02) Soil Sampled: 01/09/12 09:50 Received: 01/10/12 11:30									
Methylene chloride	ND	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	**160**	25	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	**29**	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*120 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*95.0 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95.6 %*		*74-121*	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-3 (1201110-03) Soil Sampled: 01/09/12 10:40 Received: 01/10/12 11:30									
Benzene	**21**	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-3 (1201110-03) Soil Sampled: 01/09/12 10:40 Received: 01/10/12 11:30									
Methylene chloride	ND	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	25	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	**66**	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*116 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.6 %*	*74-121*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-4 (1201110-04) Soil Sampled: 01/09/12 11:00 Received: 01/10/12 11:30									
Benzene	**18**	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-4 (1201110-04) Soil Sampled: 01/09/12 11:00 Received: 01/10/12 11:30									
Methylene chloride	ND	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	25	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	**66**	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*115 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.6 %*	*74-121*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-5 (1201110-05) Soil Sampled: 01/09/12 11:20 Received: 01/10/12 11:30									
Benzene	**25**	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-5 (1201110-05) Soil Sampled: 01/09/12 11:20 Received: 01/10/12 11:30									
Methylene chloride	ND	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	**1600**	25	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	**94**	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*93.8 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95.0 %*	*74-121*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (1201110-01) Soil Sampled: 01/09/12 09:30 Received: 01/10/12 11:30									
Acenaphthene	ND	0.33	mg/kg	1	B2A1914	01/11/12	01/17/12 17:40	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (1201110-01) Soil Sampled: 01/09/12 09:30 Received: 01/10/12 11:30									
Hexachlorobenzene	ND	0.33	mg/kg	1	B2A1914	01/11/12	01/17/12 17:40	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*78.4 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*86.6 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*81.7 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*83.5 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*68.6 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*96.7 %*	*18-137*		"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-2 (1201110-02) Soil Sampled: 01/09/12 09:50 Received: 01/10/12 11:30									
Acenaphthene	ND	0.33	mg/kg	1	B2A1914	01/11/12	01/17/12 18:20	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-2 (1201110-02) Soil Sampled: 01/09/12 09:50 Received: 01/10/12 11:30									
Hexachlorobenzene	ND	0.33	mg/kg	1	B2A1914	01/11/12	01/17/12 18:20	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*86.2 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*83.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*99.7 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*98.5 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*73.2 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*97.3 %*	*18-137*		"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-3 (1201110-03) Soil Sampled: 01/09/12 10:40 Received: 01/10/12 11:30									
Acenaphthene	ND	0.33	mg/kg	1	B2A1914	01/11/12	01/17/12 18:59	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-3 (1201110-03) Soil Sampled: 01/09/12 10:40 Received: 01/10/12 11:30									
Hexachlorobenzene	ND	0.33	mg/kg	1	B2A1914	01/11/12	01/17/12 18:59	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*78.4 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*81.6 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*91.3 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*96.4 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*66.6 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*98.5 %*	*18-137*		"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-4 (1201110-04) Soil Sampled: 01/09/12 11:00 Received: 01/10/12 11:30									
Acenaphthene	ND	0.33	mg/kg	1	B2A1914	01/11/12	01/17/12 19:38	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-4 (1201110-04) Soil Sampled: 01/09/12 11:00 Received: 01/10/12 11:30									
Hexachlorobenzene	ND	0.33	mg/kg	1	B2A1914	01/11/12	01/17/12 19:38	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*79.8 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*81.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*97.0 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*96.7 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*74.0 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*91.0 %*	*18-137*		"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-5 (1201110-05) Soil Sampled: 01/09/12 11:20 Received: 01/10/12 11:30									
Acenaphthene	ND	0.33	mg/kg	1	B2A1914	01/11/12	01/17/12 20:18	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-5 (1201110-05) Soil Sampled: 01/09/12 11:20 Received: 01/10/12 11:30									
Hexachlorobenzene	ND	0.33	mg/kg	1	B2A1914	01/11/12	01/17/12 20:18	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*74.6 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*79.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*84.7 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*89.8 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*66.8 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*97.3 %*	*18-137*		"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Polynuclear Aromatic Compounds by EPA Method 8310

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (1201110-01) Soil Sampled: 01/09/12 09:30 Received: 01/10/12 11:30									
Naphthalene	ND	40.0	µg/kg	1	B2A1812	01/18/12	01/20/12 11:06	EPA 8310	
Acenaphthylene	ND	200	"	"	"	"	"	"	
Acenaphthene	ND	50.0	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	2.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	2.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	2.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	2.00	"	"	"	"	"	"	
Dibenzo(a,h)anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Surrogate: Decafluorobiphenyl		*91.6 %*	*30-140*		"	"	"	"	
B-2 (1201110-02) Soil Sampled: 01/09/12 09:50 Received: 01/10/12 11:30									
Naphthalene	ND	40.0	µg/kg	1	B2A1812	01/18/12	01/20/12 11:06	EPA 8310	
Acenaphthylene	ND	200	"	"	"	"	"	"	
Acenaphthene	ND	50.0	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	2.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	2.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	2.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	2.00	"	"	"	"	"	"	
Dibenzo(a,h)anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Surrogate: Decafluorobiphenyl		*43.0 %*	*30-140*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Polynuclear Aromatic Compounds by EPA Method 8310

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-3 (1201110-03) Soil Sampled: 01/09/12 10:40 Received: 01/10/12 11:30									
Naphthalene	ND	40.0	µg/kg	1	B2A1812	01/18/12	01/20/12 11:06	EPA 8310	
Acenaphthylene	ND	200	"	"	"	"	"	"	
Acenaphthene	ND	50.0	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	2.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	2.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	2.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	2.00	"	"	"	"	"	"	
Dibenzo(a,h)anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Surrogate: Decafluorobiphenyl		*53.2 %*		*30-140*	"	"	"	"	
B-4 (1201110-04) Soil Sampled: 01/09/12 11:00 Received: 01/10/12 11:30									
Naphthalene	ND	40.0	µg/kg	1	B2A1812	01/18/12	01/20/12 11:06	EPA 8310	
Acenaphthylene	ND	200	"	"	"	"	"	"	
Acenaphthene	ND	50.0	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	2.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	2.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	2.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	2.00	"	"	"	"	"	"	
Dibenzo(a,h)anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Surrogate: Decafluorobiphenyl		*71.4 %*		*30-140*	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Polynuclear Aromatic Compounds by EPA Method 8310

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-5 (1201110-05) Soil Sampled: 01/09/12 11:20 Received: 01/10/12 11:30									
Naphthalene	ND	40.0	µg/kg	1	B2A1812	01/18/12	01/20/12 11:06	EPA 8310	
Acenaphthylene	ND	200	"	"	"	"	"	"	
Acenaphthene	ND	50.0	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	2.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	2.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	2.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	2.00	"	"	"	"	"	"	
Dibenzo(a,h)anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Surrogate: Decafluorobiphenyl		*84.2 %*	*30-140*		*"*	*"*	*"*	*"*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1101 - EPA 7471A										
Blank (B2A1101-BLK1)				Prepared & Analyzed: 01/11/12						
Mercury	ND	0.15	mg/kg							
LCS (B2A1101-BS1)				Prepared & Analyzed: 01/11/12						
Mercury	0.14	0.15	mg/kg	0.167		83.8	70-130			
Matrix Spike (B2A1101-MS1)		**Source: 1201110-01**		Prepared & Analyzed: 01/11/12						
Mercury	0.15	0.15	mg/kg	0.161	0.02	80.7	70-130			
Matrix Spike Dup (B2A1101-MSD1)		**Source: 1201110-01**		Prepared & Analyzed: 01/11/12						
Mercury	0.15	0.15	mg/kg	0.162	0.02	80.2	70-130	0.00	30	
Batch B2A1102 - EPA 3050B										
Blank (B2A1102-BLK1)				Prepared & Analyzed: 01/11/12						
Antimony	ND	2.5	mg/kg							
Arsenic	ND	3.5	"							
Barium	ND	6.5	"							
Beryllium	ND	0.50	"							
Cadmium	ND	0.50	"							
Chromium	ND	3.0	"							
Cobalt	ND	2.5	"							
Copper	ND	2.0	"							
Lead	ND	3.0	"							
Molybdenum	ND	1.0	"							
Nickel	ND	4.0	"							
Selenium	ND	6.0	"							
Silver	ND	1.0	"							
Thallium	ND	2.5	"							
Vanadium	ND	6.0	"							
Zinc	ND	10	"							

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1102 - EPA 3050B										
LCS (B2A1102-BS1)				Prepared & Analyzed: 01/11/12						
Antimony	105	2.5	mg/kg	100		105	75-125			
Arsenic	104	3.5	"	100		104	78-122			
Barium	107	6.5	"	100		107	80-120			
Beryllium	104	0.50	"	100		104	80-120			
Cadmium	101	0.50	"	100		101	80-120			
Chromium	106	3.0	"	100		106	80-120			
Cobalt	113	2.5	"	100		113	80-120			
Copper	108	2.0	"	100		108	78-122			
Lead	109	3.0	"	100		109	80-120			
Molybdenum	103	1.0	"	100		103	80-120			
Nickel	112	4.0	"	100		112	80-120			
Selenium	96.6	6.0	"	100		96.6	76-124			
Silver	102	1.0	"	100		102	60-140			
Thallium	106	2.5	"	100		106	80-120			
Vanadium	102	6.0	"	100		102	80-120			
Zinc	98.9	10	"	100		98.9	78-122			
LCS Dup (B2A1102-BSD1)				Prepared & Analyzed: 01/11/12						
Antimony	104	2.5	mg/kg	100		104	75-125	0.957	20	
Arsenic	103	3.5	"	100		103	78-122	0.966	20	
Barium	108	6.5	"	100		108	80-120	0.930	20	
Beryllium	103	0.50	"	100		103	80-120	0.966	20	
Cadmium	102	0.50	"	100		102	80-120	0.985	20	
Chromium	106	3.0	"	100		106	80-120	0.00	20	
Cobalt	114	2.5	"	100		114	80-120	0.881	20	
Copper	108	2.0	"	100		108	78-122	0.00	20	
Lead	109	3.0	"	100		109	80-120	0.00	20	
Molybdenum	102	1.0	"	100		102	80-120	0.976	20	
Nickel	112	4.0	"	100		112	80-120	0.00	20	
Selenium	96.4	6.0	"	100		96.4	76-124	0.207	20	
Silver	102	1.0	"	100		102	60-140	0.00	40	
Thallium	107	2.5	"	100		107	80-120	0.939	20	
Vanadium	103	6.0	"	100		103	80-120	0.976	20	
Zinc	97.9	10	"	100		97.9	78-122	1.02	20	

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1102 - EPA 3050B										
Matrix Spike (B2A1102-MS1)	**Source: 1201110-01**			Prepared & Analyzed: 01/11/12						
Antimony	77.1	2.5	mg/kg	96.2	0.75	79.4	47.8-140			
Arsenic	90.3	3.5	"	96.2	ND	93.9	70-130			
Barium	177	6.5	"	96.2	62	120	70-130			
Beryllium	96.1	0.50	"	96.2	ND	99.9	70-130			
Cadmium	93.3	0.50	"	96.2	0.071	96.9	70-130			
Chromium	99.2	3.0	"	96.2	5.5	97.4	70-130			
Cobalt	103	2.5	"	96.2	5.4	101	70-130			
Copper	107	2.0	"	96.2	7.3	104	70-130			
Lead	96.1	3.0	"	96.2	1.5	98.3	70-130			
Molybdenum	92.0	1.0	"	96.2	0.32	95.3	70-130			
Nickel	102	4.0	"	96.2	5.5	100	70-130			
Selenium	87.7	6.0	"	96.2	ND	91.2	62.6-130			
Silver	93.3	1.0	"	96.2	ND	97.0	60-140			
Thallium	92.3	2.5	"	96.2	ND	95.9	56.9-130			
Vanadium	111	6.0	"	96.2	15	99.8	70-130			
Zinc	108	10	"	96.2	19	92.5	70-130			
Matrix Spike Dup (B2A1102-MSD1)	**Source: 1201110-01**			Prepared & Analyzed: 01/11/12						
Antimony	75.6	2.5	mg/kg	92.1	0.75	81.3	47.8-140	1.96	20	
Arsenic	89.5	3.5	"	92.1	ND	97.2	70-130	0.890	20	
Barium	160	6.5	"	92.1	62	106	70-130	10.1	20	
Beryllium	95.9	0.50	"	92.1	ND	104	70-130	0.208	20	
Cadmium	91.0	0.50	"	92.1	0.071	98.7	70-130	2.50	20	
Chromium	98.8	3.0	"	92.1	5.5	101	70-130	0.404	20	
Cobalt	102	2.5	"	92.1	5.4	105	70-130	0.976	20	
Copper	105	2.0	"	92.1	7.3	106	70-130	1.89	30	
Lead	94.9	3.0	"	92.1	1.5	101	70-130	1.26	30	
Molybdenum	91.1	1.0	"	92.1	0.32	98.6	70-130	0.983	20	
Nickel	101	4.0	"	92.1	5.5	104	70-130	0.985	20	
Selenium	87.2	6.0	"	92.1	ND	94.7	62.6-130	0.572	20	
Silver	91.6	1.0	"	92.1	ND	99.5	60-140	1.84	40	
Thallium	91.6	2.5	"	92.1	ND	99.5	56.9-130	0.761	20	
Vanadium	109	6.0	"	92.1	15	102	70-130	1.82	20	
Zinc	108	10	"	92.1	19	96.6	70-130	0.00	20	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1602 - EPA 3550B Solid Ext										
Blank (B2A1602-BLK1)				Prepared & Analyzed: 01/16/12						
Aldrin	ND	0.0020	mg/kg							
HCH-alpha	ND	0.0020	"							
HCH-beta	ND	0.0040	"							
HCH-delta	ND	0.0020	"							
HCH-gamma (Lindane)	ND	0.0020	"							
Chlordane	ND	0.0040	"							
4,4´-DDD	ND	0.0030	"							
4,4´-DDE	ND	0.0020	"							
4,4´-DDT	ND	0.0030	"							
Dieldrin	ND	0.0020	"							
Endosulfan I	ND	0.0020	"							
Endosulfan II	ND	0.0040	"							
Endosulfan sulfate	ND	0.0020	"							
Endrin	ND	0.0020	"							
Endrin aldehyde	ND	0.0020	"							
Endrin ketone	ND	0.0020	"							
Heptachlor	ND	0.0020	"							
Heptachlor epoxide	ND	0.0020	"							
Methoxychlor	ND	0.010	"							
Toxaphene	ND	0.040	"							
Mirex	ND	0.0040	"							
Kepone	ND	0.0040	"							
Surrogate: Decachlorobiphenyl	*0.00535*		*"*	*0.00833*		*64.2*	*42-147*			
Surrogate: Tetrachloro-meta-xylene	*0.00792*		*"*	*0.00833*		*95.1*	*42-147*			
LCS (B2A1602-BS1)				Prepared & Analyzed: 01/16/12						
Aldrin	0.00282	0.0020	mg/kg	0.00267		106	80-120			
HCH-gamma (Lindane)	0.00245	0.0020	"	0.00267		91.8	80-120			
4,4´-DDT	0.00610	0.0030	"	0.00667		91.5	80-120			
Dieldrin	0.00772	0.0020	"	0.00667		116	80-120			
Heptachlor	0.00249	0.0020	"	0.00267		93.3	80-120			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1602 - EPA 3550B Solid Ext										
Matrix Spike (B2A1602-MS1)		**Source: 1201110-01**		Prepared & Analyzed: 01/16/12						
Aldrin	0.00295	0.0020	mg/kg	0.00267	ND	110	50-150			
HCH-gamma (Lindane)	0.00234	0.0020	"	0.00267	ND	87.6	50-150			
4,4´-DDT	0.00640	0.0030	"	0.00667	ND	96.0	50-150			
Dieldrin	0.00540	0.0020	"	0.00667	ND	81.0	50-150			
Heptachlor	0.00235	0.0020	"	0.00267	ND	88.0	50-150			
Matrix Spike Dup (B2A1602-MSD1)		**Source: 1201110-01**		Prepared & Analyzed: 01/16/12						
Aldrin	0.00237	0.0020	mg/kg	0.00267	ND	88.8	50-150	21.8	30	
HCH-gamma (Lindane)	0.00258	0.0020	"	0.00267	ND	96.6	50-150	9.76	30	
4,4´-DDT	0.00630	0.0030	"	0.00667	ND	94.5	50-150	1.57	30	
Dieldrin	0.00570	0.0020	"	0.00667	ND	85.5	50-150	5.41	30	
Heptachlor	0.00253	0.0020	"	0.00267	ND	94.8	50-150	7.38	30	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1602 - EPA 3550B Solid Ext										
Blank (B2A1602-BLK1)				Prepared & Analyzed: 01/16/12						
PCB-1016	ND	0.020	mg/kg							
PCB-1221	ND	0.020	"							
PCB-1232	ND	0.020	"							
PCB-1242	ND	0.020	"							
PCB-1248	ND	0.020	"							
PCB-1254	ND	0.020	"							
PCB-1260	ND	0.020	"							
Surrogate: Decachlorobiphenyl	*0.00535*		*"*	*0.00833*		*64.2*	*42-147*			
Surrogate: Tetrachloro-meta-xylene	*0.00643*		*"*	*0.00833*		*77.2*	*42-147*			
LCS (B2A1602-BS1)				Prepared & Analyzed: 01/16/12						
PCB-1260	0.0595	0.020	mg/kg	0.0667		89.2	80-120			
Matrix Spike (B2A1602-MS1)		**Source: 1201110-01**		Prepared & Analyzed: 01/16/12						
PCB-1260	0.0565	0.020	mg/kg	0.0667	ND	84.7	50-150			
Matrix Spike Dup (B2A1602-MSD1)		**Source: 1201110-01**		Prepared & Analyzed: 01/16/12						
PCB-1260	0.0588	0.020	mg/kg	0.0667	ND	88.2	50-150	3.99	30	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Chlorinated Herbicides by EPA Method 8151A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1603 - EPA 8151A Herbicides										
Blank (B2A1603-BLK1)				Prepared: 01/16/12 Analyzed: 01/18/12						
2,4,5-T	ND	1.6	µg/kg							
2,4,5-TP (Silvex)	ND	1.6	"							
2,4-D	ND	1.6	"							
2,4-DB	ND	4.0	"							
3,5-Dichlorobenzoic acid	ND	2.0	"							
4-Nitrophenol	ND	2.0	"							
Acifluorfen	ND	1.6	"							
Bentazon	ND	1.6	"							
Chloramben	ND	1.6	"							
Dalapon	ND	20	"							
DCPA diacid	ND	1.6	"							
Dicamba	ND	1.6	"							
Dichlorprop	ND	1.6	"							
Dinoseb	ND	1.6	"							
Pentachlorophenol	ND	1.6	"							
Picloram	ND	1.6	"							
Surrogate: 2,4-Dichlorophenylacetic Acid	*62.5*		*"*	*100*		*62.5*	*35-150*			
LCS (B2A1603-BS1)				Prepared: 01/16/12 Analyzed: 01/18/12						
2,4,5-T	10.4	1.6	µg/kg	10.0		104	20-150			
2,4,5-TP (Silvex)	7.65	1.6	"	10.0		76.5	20-150			
Dichlorprop	5.75	1.6	"	10.0		57.5	20-150			
Dinoseb	8.48	1.6	"	10.0		84.8	20-150			
Matrix Spike (B2A1603-MS1)	**Source: 1201143-03**			Prepared: 01/16/12 Analyzed: 01/18/12						
2,4,5-T	11.3	1.6	µg/kg	10.0	ND	113	20-150			
2,4,5-TP (Silvex)	5.83	1.6	"	10.0	ND	58.3	20-150			
Dichlorprop	11.6	1.6	"	10.0	ND	116	20-150			
Dinoseb	10.2	1.6	"	10.0	ND	102	20-150			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Chlorinated Herbicides by EPA Method 8151A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1603 - EPA 8151A Herbicides										
Matrix Spike Dup (B2A1603-MSD1)	**Source: 1201143-03**			Prepared: 01/16/12	Analyzed: 01/18/12					
2,4,5-T	10.2	1.6	µg/kg	10.0	ND	102	20-150	10.2	30	
2,4,5-TP (Silvex)	7.42	1.6	"	10.0	ND	74.2	20-150	24.0	30	
Dichlorprop	10.1	1.6	"	10.0	ND	101	20-150	13.8	30	
Dinoseb	9.27	1.6	"	10.0	ND	92.7	20-150	9.55	30	

26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1601 - EPA 5035 P & T										
Blank (B2A1601-BLK1)				Prepared: 01/16/12 Analyzed: 01/17/12						
Benzene	ND	5.0	µg/kg							
Bromobenzene	ND	5.0	"							
Bromochloromethane	ND	5.0	"							
Bromodichloromethane	ND	5.0	"							
Bromoform	ND	5.0	"							
Bromomethane	ND	5.0	"							
n-Butylbenzene	ND	5.0	"							
sec-Butylbenzene	ND	5.0	"							
tert-Butylbenzene	ND	5.0	"							
Carbon tetrachloride	ND	5.0	"							
Chlorobenzene	ND	5.0	"							
Chloroethane	ND	5.0	"							
Chloroform	ND	5.0	"							
Chloromethane	ND	5.0	"							
2-Chlorotoluene	ND	5.0	"							
4-Chlorotoluene	ND	5.0	"							
Dibromochloromethane	ND	5.0	"							
1,2-Dibromo-3-chloropropane	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	5.0	"							
Dibromomethane	ND	5.0	"							
1,2-Dichlorobenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	5.0	"							
1,4-Dichlorobenzene	ND	5.0	"							
Dichlorodifluoromethane	ND	5.0	"							
1,1-Dichloroethane	ND	5.0	"							
1,2-Dichloroethane	ND	5.0	"							
1,1-Dichloroethene	ND	5.0	"							
cis-1,2-Dichloroethene	ND	5.0	"							
trans-1,2-Dichloroethene	ND	5.0	"							
1,2-Dichloropropane	ND	5.0	"							
1,3-Dichloropropane	ND	5.0	"							
2,2-Dichloropropane	ND	5.0	"							
1,1-Dichloropropene	ND	5.0	"							
cis-1,3-Dichloropropene	ND	5.0	"							
trans-1,3-Dichloropropene	ND	5.0	"							
Di-isopropyl ether	ND	5.0	"							
Ethyl tert-butyl ether	ND	5.0	"							

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1601 - EPA 5035 P & T										
Blank (B2A1601-BLK1)				Prepared: 01/16/12 Analyzed: 01/17/12						
Ethylbenzene	ND	5.0	µg/kg							
Hexachlorobutadiene	ND	5.0	"							
Isopropylbenzene	ND	5.0	"							
p-Isopropyltoluene	ND	5.0	"							
Methylene chloride	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Naphthalene	ND	5.0	"							
n-Propylbenzene	ND	5.0	"							
Styrene	ND	5.0	"							
Tert-amyl methyl ether	ND	5.0	"							
Tert-butyl alcohol	ND	25	"							
1,1,1,2-Tetrachloroethane	ND	5.0	"							
1,1,2,2-Tetrachloroethane	ND	5.0	"							
Tetrachloroethene	ND	5.0	"							
Toluene	ND	5.0	"							
1,2,3-Trichlorobenzene	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
1,1,1-Trichloroethane	ND	5.0	"							
1,1,2-Trichloroethane	ND	5.0	"							
Trichloroethene	ND	5.0	"							
Trichlorofluoromethane	ND	5.0	"							
1,2,3-Trichloropropane	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
Vinyl chloride	ND	5.0	"							
m,p-Xylene	ND	5.0	"							
o-Xylene	ND	5.0	"							
Surrogate: Dibromofluoromethane	*52.5*		*"*	*50.0*		*105*	*80-120*			
Surrogate: Toluene-d8	*56.5*		*"*	*50.0*		*113*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*50.1*		*"*	*50.0*		*100*	*74-121*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1601 - EPA 5035 P & T										
LCS (B2A1601-BS1)				Prepared: 01/16/12 Analyzed: 01/17/12						
Benzene	54.0	5.0	µg/kg	50.0		108	80-120			
Chlorobenzene	47.1	5.0	"	50.0		94.2	80-120			
1,1-Dichloroethene	53.0	5.0	"	50.0		106	80-120			
Toluene	55.9	5.0	"	50.0		112	80-120			
Trichloroethene	55.1	5.0	"	50.0		110	80-120			
Matrix Spike (B2A1601-MS1)		**Source: 1201148-05**		Prepared: 01/16/12 Analyzed: 01/17/12						
Benzene	48.3	5.0	µg/kg	50.0	ND	96.6	37-151			
Chlorobenzene	49.3	5.0	"	50.0	ND	98.6	37-160			
1,1-Dichloroethene	54.6	5.0	"	50.0	ND	109	50-150			
Toluene	49.9	5.0	"	50.0	ND	99.8	47-150			
Trichloroethene	52.7	5.0	"	50.0	ND	105	71-157			
Matrix Spike Dup (B2A1601-MSD1)		**Source: 1201148-05**		Prepared: 01/16/12 Analyzed: 01/17/12						
Benzene	54.8	5.0	µg/kg	50.0	ND	110	37-151	12.6	30	
Chlorobenzene	50.0	5.0	"	50.0	ND	100	37-160	1.41	30	
1,1-Dichloroethene	49.0	5.0	"	50.0	ND	98.0	50-150	10.8	30	
Toluene	52.6	5.0	"	50.0	ND	105	47-150	5.27	30	
Trichloroethene	53.7	5.0	"	50.0	ND	107	71-157	1.88	30	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1914 - EPA 3550B Solid Ext										
Blank (B2A1914-BLK1)				Prepared: 01/11/12 Analyzed: 01/17/12						
Acenaphthene	ND	0.33	mg/kg							
Acenaphthylene	ND	0.33	"							
Anthracene	ND	0.33	"							
Benzidine	ND	0.33	"							
Benzo (a) anthracene	ND	0.33	"							
Benzo (b) fluoranthene	ND	0.33	"							
Benzo (k) fluoranthene	ND	0.33	"							
Benzo (a) pyrene	ND	0.33	"							
Benzo (g,h,i) perylene	ND	0.33	"							
Benzyl alcohol	ND	0.33	"							
Bis(2-chloroethyl)ether	ND	0.33	"							
Bis(2-chloroethoxy)methane	ND	0.33	"							
Bis(2-ethylhexyl)phthalate	ND	0.33	"							
Bis(2-chloroisopropyl)ether	ND	0.33	"							
4-Bromophenyl phenyl ether	ND	0.33	"							
Butyl benzyl phthalate	ND	0.33	"							
4-Chloroaniline	ND	0.33	"							
2-Chlorophenol	ND	0.33	"							
4-Chloro-3-methylphenol	ND	0.33	"							
2-Chloronaphthalene	ND	0.33	"							
4-Chlorophenyl phenyl ether	ND	0.33	"							
Chrysene	ND	0.33	"							
Dibenz (a,h) anthracene	ND	0.33	"							
Dibenzofuran	ND	0.33	"							
1,3-Dichlorobenzene	ND	0.33	"							
1,2-Dichlorobenzene	ND	0.33	"							
1,4-Dichlorobenzene	ND	0.33	"							
3,3´-Dichlorobenzidine	ND	0.33	"							
2,4-Dichlorophenol	ND	0.33	"							
Diethyl phthalate	ND	0.33	"							
2,4-Dimethylphenol	ND	0.33	"							
Dimethyl phthalate	ND	0.33	"							
Di-n-butyl phthalate	ND	0.33	"							
2,4-Dinitrophenol	ND	0.33	"							
4,6-Dinitro-2-methylphenol	ND	0.33	"							
2,4-Dinitrotoluene	ND	0.33	"							
2,6-Dinitrotoluene	ND	0.33	"							

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1914 - EPA 3550B Solid Ext										
Blank (B2A1914-BLK1)				Prepared: 01/11/12 Analyzed: 01/17/12						
Di-n-octyl phthalate	ND	0.33	mg/kg							
1,2-Diphenylhydrazine	ND	0.33	"							
Fluoranthene	ND	0.33	"							
Fluorene	ND	0.33	"							
Hexachlorobenzene	ND	0.33	"							
Hexachlorobutadiene	ND	0.33	"							
Hexachlorocyclopentadiene	ND	0.33	"							
Hexachloroethane	ND	0.33	"							
Indeno (1,2,3-cd) pyrene	ND	0.33	"							
Isophorone	ND	0.33	"							
2-Methylnaphthalene	ND	0.33	"							
2-Methylphenol	ND	0.33	"							
4-Methylphenol	ND	0.33	"							
Naphthalene	ND	0.33	"							
2-Nitroaniline	ND	0.33	"							
3-Nitroaniline	ND	0.33	"							
4-Nitroaniline	ND	0.33	"							
Nitrobenzene	ND	0.33	"							
2-Nitrophenol	ND	0.33	"							
4-Nitrophenol	ND	0.33	"							
N-Nitrosodimethylamine	ND	0.33	"							
Diphenylamine	ND	0.33	"							
N-Nitrosodi-n-propylamine	ND	0.33	"							
Pentachlorophenol	ND	0.33	"							
Phenanthrene	ND	0.33	"							
Phenol	ND	0.33	"							
Pyrene	ND	0.33	"							
1,2,4-Trichlorobenzene	ND	0.33	"							
2,4,5-Trichlorophenol	ND	0.33	"							
2,4,6-Trichlorophenol	ND	0.33	"							
Surrogate: 2-Fluorophenol	*0.342*		*"*	*0.500*		*68.4*	*25-121*			
Surrogate: Phenol-d6	*0.378*		*"*	*0.500*		*75.6*	*24-113*			
Surrogate: Nitrobenzene-d5	*0.317*		*"*	*0.333*		*95.2*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*0.260*		*"*	*0.333*		*78.1*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*0.333*		*"*	*0.500*		*66.6*	*19-122*			
Surrogate: Terphenyl-d14	*0.287*		*"*	*0.333*		*86.2*	*18-137*			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1914 - EPA 3550B Solid Ext										
LCS (B2A1914-BS1)				Prepared: 01/11/12 Analyzed: 01/17/12						
Acenaphthene	0.319	0.33	mg/kg	0.333		95.8	47-145			
2-Chlorophenol	0.377	0.33	"	0.667		56.5	23-134			
4-Chloro-3-methylphenol	0.396	0.33	"	0.667		59.4	22-147			
1,4-Dichlorobenzene	0.316	0.33	"	0.333		94.9	20-124			
2,4-Dinitrotoluene	0.351	0.33	"	0.333		105	39-139			
4-Nitrophenol	0.242	0.33	"	0.667		36.3	0-132			
N-Nitrosodi-n-propylamine	0.357	0.33	"	0.333		107	0-230			
Pentachlorophenol	0.250	0.33	"	0.667		37.5	14-176			
Phenol	0.393	0.33	"	0.667		58.9	5-112			
Pyrene	0.317	0.33	"	0.333		95.2	52-115			
1,2,4-Trichlorobenzene	0.327	0.33	"	0.333		98.2	44-142			
Matrix Spike (B2A1914-MS1)		**Source: 1201110-01**		Prepared: 01/11/12 Analyzed: 01/17/12						
Acenaphthene	0.293	0.33	mg/kg	0.333	ND	88.0	47-145			
2-Chlorophenol	0.381	0.33	"	0.667	ND	57.1	23-134			
4-Chloro-3-methylphenol	0.397	0.33	"	0.667	ND	59.5	22-147			
1,4-Dichlorobenzene	0.258	0.33	"	0.333	ND	77.5	20-124			
2,4-Dinitrotoluene	0.360	0.33	"	0.333	ND	108	39-139			
4-Nitrophenol	0.251	0.33	"	0.667	ND	37.6	0-132			
N-Nitrosodi-n-propylamine	0.305	0.33	"	0.333	ND	91.6	0-230			
Pentachlorophenol	0.254	0.33	"	0.667	ND	38.1	14-176			
Phenol	0.383	0.33	"	0.667	ND	57.4	5-112			
Pyrene	0.300	0.33	"	0.333	ND	90.1	52-115			
1,2,4-Trichlorobenzene	0.283	0.33	"	0.333	ND	85.0	44-142			
Matrix Spike Dup (B2A1914-MSD1)		**Source: 1201110-01**		Prepared: 01/11/12 Analyzed: 01/17/12						
Acenaphthene	0.289	0.33	mg/kg	0.333	ND	86.8	47-145	1.37	30	
2-Chlorophenol	0.389	0.33	"	0.667	ND	58.3	23-134	2.08	30	
4-Chloro-3-methylphenol	0.405	0.33	"	0.667	ND	60.7	22-147	2.00	30	
1,4-Dichlorobenzene	0.252	0.33	"	0.333	ND	75.7	20-124	2.35	30	
2,4-Dinitrotoluene	0.315	0.33	"	0.333	ND	94.6	39-139	13.3	30	
4-Nitrophenol	0.231	0.33	"	0.667	ND	34.6	0-132	8.30	30	
N-Nitrosodi-n-propylamine	0.327	0.33	"	0.333	ND	98.2	0-230	6.96	30	
Pentachlorophenol	0.226	0.33	"	0.667	ND	33.9	14-176	11.7	30	
Phenol	0.401	0.33	"	0.667	ND	60.1	5-112	4.59	30	
Pyrene	0.322	0.33	"	0.333	ND	96.7	52-115	7.07	30	
1,2,4-Trichlorobenzene	0.284	0.33	"	0.333	ND	85.3	44-142	0.353	30	

26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
TELEPHONE: (949) 348-9389 FAX: (949) 348-9115
E-MAIL: SIERRALABS @ SIERRALABS.NET

Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1812 - EPA 3550B Solid Ext										
Blank (B2A1812-BLK1)				Prepared: 01/18/12 Analyzed: 01/20/12						
Naphthalene	ND	40.0	µg/kg							
Acenaphthylene	ND	200	"							
Acenaphthene	ND	50.0	"							
Fluorene	ND	5.00	"							
Phenanthrene	ND	5.00	"							
Anthracene	ND	2.00	"							
Fluoranthene	ND	5.00	"							
Pyrene	ND	5.00	"							
Benzo (a) anthracene	ND	2.00	"							
Chrysene	ND	5.00	"							
Benzo (b) fluoranthene	ND	5.00	"							
Benzo (k) fluoranthene	ND	2.00	"							
Benzo (a) pyrene	ND	2.00	"							
Dibenzo(a,h)anthracene	ND	5.00	"							
Benzo (g,h,i) perylene	ND	5.00	"							
Indeno (1,2,3-cd) pyrene	ND	5.00	"							
Surrogate: Decafluorobiphenyl	*422*		*"*	*500*		*84.4*	*30-140*			
LCS (B2A1812-BS1)				Prepared: 01/18/12 Analyzed: 01/20/12						
Naphthalene	62.2	40.0	µg/kg	50.0		124	60-130			
Fluorene	52.4	5.00	"	50.0		105	60-130			
Pyrene	51.4	5.00	"	50.0		103	60-130			
Benzo (a) pyrene	48.6	2.00	"	50.0		97.2	60-130			
Indeno (1,2,3-cd) pyrene	52.1	5.00	"	50.0		104	60-130			
Surrogate: Decafluorobiphenyl	*346*		*"*	*500*		*69.2*	*30-140*			
Matrix Spike (B2A1812-MS1)	**Source: 1201143-03**			Prepared: 01/18/12 Analyzed: 01/20/12						
Naphthalene	51.4	40.0	µg/kg	50.0	ND	103	60-140			
Fluorene	54.8	5.00	"	50.0	ND	110	60-140			
Pyrene	53.3	5.00	"	50.0	ND	107	60-140			
Benzo (a) pyrene	48.2	2.00	"	50.0	ND	96.4	60-140			
Indeno (1,2,3-cd) pyrene	49.6	5.00	"	50.0	ND	99.2	60-140			
Surrogate: Decafluorobiphenyl	*412*		*"*	*500*		*82.4*	*30-140*			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:36

Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1812 - EPA 3550B Solid Ext										
Matrix Spike Dup (B2A1812-MSD1)	**Source: 1201143-03**			Prepared: 01/18/12 Analyzed: 01/20/12						
Naphthalene	50.4	40.0	µg/kg	50.0	ND	101	60-140	1.96	20	
Fluorene	53.2	5.00	"	50.0	ND	106	60-140	2.96	20	
Pyrene	49.0	5.00	"	50.0	ND	98.0	60-140	8.41	20	
Benzo (a) pyrene	45.7	2.00	"	50.0	ND	91.4	60-140	5.32	20	
Indeno (1,2,3-cd) pyrene	46.3	5.00	"	50.0	ND	92.6	60-140	6.88	20	
Surrogate: Decafluorobiphenyl	*214*		*"*	*500*		*42.8*	*30-140*			

Los Angeles County Dept. of Public Works	Project:	Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number:	HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager:	Geir Mathisen	01/23/12 09:36

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CHAIN OF CUSTODY RECORD

SIERRA ANALYTICAL
TEL: 949•348•9389
FAX: 949•348•9115
26052 Merit Circle• Suite 105•Laguna Hills, CA•92653

Date: 1/9/12 Page 1 of 1

Lab Project No.: 120110

Client: County of Los Angeles Dep Pub. Wks.
Client Address: 900 S Fremont Ave
Alhambra, CA 91803-1331

Client Tel. No.: 626 458 4923
Client Fax. No.: 626 458 4913
Client Proj. Mgr.: Geir Mathisen

Client Project ID: HF00710003
ENC. # 12C00000299
Big T Res. Sed. Char. Program

Turn Around Time Requested: ☐ Immediate ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4 Day ☐ 5 Day ☒ Normal ☐ Mobile

Analysis Requested

Client Sample ID.	Sierra No.	Date	Time	Matrix	Preservative	Container Type	No. of Containers	6010B/7470 Title 22 Metals + Mercury	8310 PAHs	8260B VOCs + OXYs (GCMS)	8270C/8321 SVOCs + Carcinogens	8081A Pesticides	8082 PCBs	8270C 1,4 Dioxane	8280A/Dioxin	8151 Herbicides	8270C or 8081 Kepone/Mirex	Field Point Names/ Comments
B-1	01	1/9/12	9:30	SOIL	ICE	WJAR/3VOAS	4	X	X	X	X	X	X	X	X	X	X	
B-2	02		9:50					X	X	X	X	X	X	X	X	X	X	
B-3	03		10:40					X	X	X	X	X	X	X	X	X	X	
B-4	04		11:00					X	X	X	X	X	X	X	X	X	X	
B-5	05		11:20					X	X	X	X	X	X	X	X	X	X	

Geotracker EDD Info:
Client LOGCODE
Site Global ID

1 Sampler Signature: [signature] Printed Name: GEIR MATHISEN
Shipped Via: (Carrier/Waybill No.)

20 Total Number of Containers Submitted to Laboratory

2 Relinquished By: GEIR MATHISEN Date: 1/10/12 Time: 11:30 Company: LACDPW
Received By: [signature] Date: 1/10/12 Time: 11:30 Company: Sierra

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analysis specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT.
* - Samples determined to be hazardous by SIERRA will be returned to CLIENT.

20 Total Number of Containers Received by Laboratory

Sample Disposal:
☐ Return to Client
☑ Lab Disposal*
☐ Archive _____ mos.
☐ Other _____

3 Relinquished By: Date: Time: Company:
Received By: Date: Time: Company:

4 Relinquished By: Date: Time: Company:
Received By: Date: Time: Company:

FOR LABORATORY USE ONLY - Sample Receipt Conditions:
☒ Intact ☒ Chilled - Temp. (°C) 6.0
☐ Sample Seals ☐ Preservatives - Verified By
☒ Properly Labelled ☐ Other
☒ Appropriate Sample Container ☒ Storage Location: Area - A & Soil

Special Instructions: *See your bid proposal dated Dec. 5, 2011 including Table 1A and 1B for minimum required analytes to be tested. (attached).

Rev: 102005

DISTRIBUTION: White - To Accompany Samples, Yellow - Laboratory Copy, Pink - Field Personnel Copy

SIERRA ANALYTICAL

23 January 2012

Geir Mathisen
Los Angeles County Dept. of Public Works
900 S. Fremont Ave.
Alhambra, CA 91803

RE:Big T Res. Sed. Char. Program

Work Order No.: 1201143

Attached are the results of the analyses for samples received by the laboratory on 01/11/12 13:40.

The samples were received by Sierra Analytical Labs, Inc. with a chain of custody record attached or completed at the submittal of the samples.

The analyses were performed according to the prescribed method as outlined by EPA, Standard Methods, and A.S.T.M.

The remaining portions of the samples will be disposed of within 30 days from the date of this report.
If you require any additional retaining time, please advise us.

Sincerely,

Richard K. Forsyth

Richard K. Forsyth

Laboratory Director

Sierra Analytical Labs, Inc. is certified by the California Department of Health Services (DOHS), Environmental Laboratory Accredidation Program (ELAP) No. 2320.

Los Angeles County Dept. of Public Works	Project:	Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number:	HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager:	Geir Mathisen	01/23/12 09:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-6	1201143-01	Soil	01/10/12 09:45	01/11/12 13:40
B-7	1201143-02	Soil	01/10/12 10:10	01/11/12 13:40
B-8	1201143-03	Soil	01/10/12 10:35	01/11/12 13:40

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, and accompanied by chain of custody documentation.
PRESERVATION: Samples requiring preservation were verified prior to sample preparation and analysis.
HOLDING TIMES: All holding times were met, unless otherwises noted in the report with data qualifiers.
QA/QC CRITERIA: All quality objective criteria were met, except as noted in the report with data qualifiers.

26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-6 (1201143-01) Soil Sampled: 01/10/12 09:45 Received: 01/11/12 13:40									
Silver	ND	1.0	mg/kg	1	B2A1801	01/18/12	01/18/12 17:22	EPA 6010B	
Arsenic	ND	3.0	"	"	"	"	01/18/12 17:23	"	
Barium	**120**	6.5	"	"	"	"	01/18/12 17:22	"	
Beryllium	ND	0.50	"	"	"	"	"	"	
Cadmium	ND	0.50	"	"	"	"	01/18/12 17:23	"	
Cobalt	**12**	2.5	"	"	"	"	"	"	
Chromium	**22**	3.0	"	"	"	"	"	"	
Copper	**25**	2.0	"	"	"	"	01/18/12 17:22	"	
Mercury	ND	0.15	"	"	B2A1802	01/18/12	01/20/12 11:55	EPA 7471A	
Molybdenum	ND	1.0	"	"	B2A1801	01/18/12	01/18/12 17:23	EPA 6010B	
Nickel	**17**	4.0	"	"	"	"	"	"	
Lead	**8.6**	3.0	"	"	"	"	"	"	
Antimony	ND	2.5	"	"	"	"	"	"	
Selenium	ND	6.0	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**35**	6.0	"	"	"	"	01/18/12 17:22	"	
Zinc	**42**	10	"	"	"	"	"	"	
B-7 (1201143-02) Soil Sampled: 01/10/12 10:10 Received: 01/11/12 13:40									
Silver	ND	0.90	mg/kg	1	B2A1801	01/18/12	01/18/12 17:38	EPA 6010B	
Arsenic	ND	2.7	"	"	"	"	"	"	
Barium	**130**	5.8	"	"	"	"	01/18/12 17:37	"	
Beryllium	ND	0.45	"	"	"	"	"	"	
Cadmium	ND	0.45	"	"	"	"	01/18/12 17:38	"	
Cobalt	**12**	2.2	"	"	"	"	"	"	
Chromium	**22**	2.7	"	"	"	"	"	"	
Copper	**27**	1.8	"	"	"	"	01/18/12 17:37	"	
Mercury	ND	0.15	"	"	B2A1802	01/18/12	01/20/12 12:01	EPA 7471A	
Molybdenum	ND	0.90	"	"	B2A1801	01/18/12	01/18/12 17:38	EPA 6010B	
Nickel	**18**	3.6	"	"	"	"	"	"	
Lead	**10**	2.7	"	"	"	"	"	"	
Antimony	ND	2.2	"	"	"	"	"	"	
Selenium	ND	5.4	"	"	"	"	"	"	
Thallium	ND	2.2	"	"	"	"	"	"	
Vanadium	**36**	5.4	"	"	"	"	01/18/12 17:37	"	
Zinc	**43**	9.0	"	"	"	"	01/18/12 17:38	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-8 (1201143-03) Soil Sampled: 01/10/12 10:35 Received: 01/11/12 13:40									
Silver	ND	1.0	mg/kg	1	B2A1801	01/18/12	01/18/12 17:42	EPA 6010B	
Arsenic	ND	3.0	"	"	"	"	01/18/12 17:43	"	
Barium	**130**	6.5	"	"	"	"	01/18/12 17:42	"	
Beryllium	ND	0.50	"	"	"	"	"	"	
Cadmium	ND	0.50	"	"	"	"	01/18/12 17:43	"	
Cobalt	**11**	2.5	"	"	"	"	"	"	
Chromium	**20**	3.0	"	"	"	"	"	"	
Copper	**27**	2.0	"	"	"	"	01/18/12 17:42	"	
Mercury	ND	0.15	"	"	B2A1802	01/18/12	01/20/12 12:03	EPA 7471A	
Molybdenum	ND	1.0	"	"	B2A1801	01/18/12	01/18/12 17:43	EPA 6010B	
Nickel	**17**	4.0	"	"	"	"	"	"	
Lead	**11**	3.0	"	"	"	"	"	"	
Antimony	ND	2.5	"	"	"	"	"	"	
Selenium	ND	6.0	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**35**	6.0	"	"	"	"	01/18/12 17:42	"	
Zinc	**42**	10	"	"	"	"	"	"	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Organochlorine Pesticides by EPA Method 8081A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-6 (1201143-01) Soil Sampled: 01/10/12 09:45 Received: 01/11/12 13:40									
Aldrin	ND	0.0020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8081A	
HCH-alpha	ND	0.0020	"	"	"	"	"	"	
HCH-beta	ND	0.0040	"	"	"	"	"	"	
HCH-delta	ND	0.0020	"	"	"	"	"	"	
HCH-gamma (Lindane)	ND	0.0020	"	"	"	"	"	"	
Chlordane	ND	0.0040	"	"	"	"	"	"	
4,4´-DDD	ND	0.0030	"	"	"	"	"	"	
4,4´-DDE	ND	0.0020	"	"	"	"	"	"	
4,4´-DDT	ND	0.0030	"	"	"	"	"	"	
Dieldrin	ND	0.0020	"	"	"	"	"	"	
Endosulfan I	ND	0.0020	"	"	"	"	"	"	
Endosulfan II	ND	0.0040	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.0020	"	"	"	"	"	"	
Endrin	ND	0.0020	"	"	"	"	"	"	
Endrin aldehyde	ND	0.0020	"	"	"	"	"	"	
Endrin ketone	ND	0.0020	"	"	"	"	"	"	
Heptachlor	ND	0.0020	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.0020	"	"	"	"	"	"	
Methoxychlor	ND	0.010	"	"	"	"	"	"	
Toxaphene	ND	0.040	"	"	"	"	"	"	
Mirex	ND	0.0040	"	"	"	"	"	"	
Kepone	ND	0.0040	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*98.6 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*61.3 %*		*42-147*	"	"	"	"	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Organochlorine Pesticides by EPA Method 8081A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-7 (1201143-02) Soil Sampled: 01/10/12 10:10 Received: 01/11/12 13:40									
Aldrin	ND	0.0020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8081A	
HCH-alpha	ND	0.0020	"	"	"	"	"	"	
HCH-beta	ND	0.0040	"	"	"	"	"	"	
HCH-delta	ND	0.0020	"	"	"	"	"	"	
HCH-gamma (Lindane)	ND	0.0020	"	"	"	"	"	"	
Chlordane	ND	0.0040	"	"	"	"	"	"	
4,4´-DDD	ND	0.0030	"	"	"	"	"	"	
4,4´-DDE	ND	0.0020	"	"	"	"	"	"	
4,4´-DDT	ND	0.0030	"	"	"	"	"	"	
Dieldrin	ND	0.0020	"	"	"	"	"	"	
Endosulfan I	ND	0.0020	"	"	"	"	"	"	
Endosulfan II	ND	0.0040	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.0020	"	"	"	"	"	"	
Endrin	ND	0.0020	"	"	"	"	"	"	
Endrin aldehyde	ND	0.0020	"	"	"	"	"	"	
Endrin ketone	ND	0.0020	"	"	"	"	"	"	
Heptachlor	ND	0.0020	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.0020	"	"	"	"	"	"	
Methoxychlor	ND	0.010	"	"	"	"	"	"	
Toxaphene	ND	0.040	"	"	"	"	"	"	
Mirex	ND	0.0040	"	"	"	"	"	"	
Kepone	ND	0.0040	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*77.0 %*	*42-147*		*"*	*"*	*"*	*"*	
Surrogate: Tetrachloro-meta-xylene		*47.1 %*	*42-147*		*"*	*"*	*"*	*"*	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Organochlorine Pesticides by EPA Method 8081A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-8 (1201143-03) Soil Sampled: 01/10/12 10:35 Received: 01/11/12 13:40									
Aldrin	ND	0.0020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8081A	
HCH-alpha	ND	0.0020	"	"	"	"	"	"	
HCH-beta	ND	0.0040	"	"	"	"	"	"	
HCH-delta	ND	0.0020	"	"	"	"	"	"	
HCH-gamma (Lindane)	ND	0.0020	"	"	"	"	"	"	
Chlordane	ND	0.0040	"	"	"	"	"	"	
4,4´-DDD	ND	0.0030	"	"	"	"	"	"	
4,4´-DDE	ND	0.0020	"	"	"	"	"	"	
4,4´-DDT	ND	0.0030	"	"	"	"	"	"	
Dieldrin	ND	0.0020	"	"	"	"	"	"	
Endosulfan I	ND	0.0020	"	"	"	"	"	"	
Endosulfan II	ND	0.0040	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.0020	"	"	"	"	"	"	
Endrin	ND	0.0020	"	"	"	"	"	"	
Endrin aldehyde	ND	0.0020	"	"	"	"	"	"	
Endrin ketone	ND	0.0020	"	"	"	"	"	"	
Heptachlor	ND	0.0020	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.0020	"	"	"	"	"	"	
Methoxychlor	ND	0.010	"	"	"	"	"	"	
Toxaphene	ND	0.040	"	"	"	"	"	"	
Mirex	ND	0.0040	"	"	"	"	"	"	
Kepone	ND	0.0040	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*63.5 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*48.0 %*		*42-147*	"	"	"	"	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Polychlorinated Biphenyls by EPA Method 8082

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-6 (1201143-01) Soil Sampled: 01/10/12 09:45 Received: 01/11/12 13:40									
PCB-1016	ND	0.020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8082	
PCB-1221	ND	0.020	"	"	"	"	"	"	
PCB-1232	ND	0.020	"	"	"	"	"	"	
PCB-1242	ND	0.020	"	"	"	"	"	"	
PCB-1248	ND	0.020	"	"	"	"	"	"	
PCB-1254	ND	0.020	"	"	"	"	"	"	
PCB-1260	ND	0.020	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*98.6 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*61.3 %*		*42-147*	"	"	"	"	
B-7 (1201143-02) Soil Sampled: 01/10/12 10:10 Received: 01/11/12 13:40									
PCB-1016	ND	0.020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8082	
PCB-1221	ND	0.020	"	"	"	"	"	"	
PCB-1232	ND	0.020	"	"	"	"	"	"	
PCB-1242	ND	0.020	"	"	"	"	"	"	
PCB-1248	ND	0.020	"	"	"	"	"	"	
PCB-1254	ND	0.020	"	"	"	"	"	"	
PCB-1260	ND	0.020	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*77.0 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*47.1 %*		*42-147*	"	"	"	"	
B-8 (1201143-03) Soil Sampled: 01/10/12 10:35 Received: 01/11/12 13:40									
PCB-1016	ND	0.020	mg/kg	1	B2A1602	01/16/12	01/16/12 13:44	EPA 8082	
PCB-1221	ND	0.020	"	"	"	"	"	"	
PCB-1232	ND	0.020	"	"	"	"	"	"	
PCB-1242	ND	0.020	"	"	"	"	"	"	
PCB-1248	ND	0.020	"	"	"	"	"	"	
PCB-1254	ND	0.020	"	"	"	"	"	"	
PCB-1260	ND	0.020	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*63.5 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*48.0 %*		*42-147*	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Chlorinated Herbicides by EPA Method 8151A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-6 (1201143-01) Soil Sampled: 01/10/12 09:45 Received: 01/11/12 13:40									
2,4,5-T	ND	1.6	µg/kg	1	B2A1603	01/16/12	01/18/12 10:18	EPA 8151A	
2,4,5-TP (Silvex)	ND	1.6	"	"	"	"	"	"	
2,4-D	ND	1.6	"	"	"	"	"	"	
2,4-DB	ND	4.0	"	"	"	"	"	"	
3,5-Dichlorobenzoic acid	ND	2.0	"	"	"	"	"	"	
4-Nitrophenol	ND	2.0	"	"	"	"	"	"	
Acifluorfen	ND	1.6	"	"	"	"	"	"	
Bentazon	ND	1.6	"	"	"	"	"	"	
Chloramben	ND	1.6	"	"	"	"	"	"	
Dalapon	ND	20	"	"	"	"	"	"	
DCPA diacid	ND	1.6	"	"	"	"	"	"	
Dicamba	ND	1.6	"	"	"	"	"	"	
Dichlorprop	ND	1.6	"	"	"	"	"	"	
Dinoseb	ND	1.6	"	"	"	"	"	"	
Pentachlorophenol	ND	1.6	"	"	"	"	"	"	
Picloram	ND	1.6	"	"	"	"	"	"	
Surrogate: 2,4-Dichlorophenylacetic Acid		*143 %*		*35-150*	"	"	"	"	
B-7 (1201143-02) Soil Sampled: 01/10/12 10:10 Received: 01/11/12 13:40									
2,4,5-T	ND	1.6	µg/kg	1	B2A1603	01/16/12	01/18/12 10:18	EPA 8151A	
2,4,5-TP (Silvex)	ND	1.6	"	"	"	"	"	"	
2,4-D	ND	1.6	"	"	"	"	"	"	
2,4-DB	ND	4.0	"	"	"	"	"	"	
3,5-Dichlorobenzoic acid	ND	2.0	"	"	"	"	"	"	
4-Nitrophenol	ND	2.0	"	"	"	"	"	"	
Acifluorfen	ND	1.6	"	"	"	"	"	"	
Bentazon	ND	1.6	"	"	"	"	"	"	
Chloramben	ND	1.6	"	"	"	"	"	"	
Dalapon	ND	20	"	"	"	"	"	"	
DCPA diacid	ND	1.6	"	"	"	"	"	"	
Dicamba	ND	1.6	"	"	"	"	"	"	
Dichlorprop	ND	1.6	"	"	"	"	"	"	
Dinoseb	ND	1.6	"	"	"	"	"	"	
Pentachlorophenol	ND	1.6	"	"	"	"	"	"	
Picloram	ND	1.6	"	"	"	"	"	"	
Surrogate: 2,4-Dichlorophenylacetic Acid		*126 %*		*35-150*	"	"	"	"	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Chlorinated Herbicides by EPA Method 8151A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-8 (1201143-03) Soil Sampled: 01/10/12 10:35 Received: 01/11/12 13:40									
2,4,5-T	ND	1.6	µg/kg	1	B2A1603	01/16/12	01/18/12 10:18	EPA 8151A	
2,4,5-TP (Silvex)	ND	1.6	"	"	"	"	"	"	
2,4-D	ND	1.6	"	"	"	"	"	"	
2,4-DB	ND	4.0	"	"	"	"	"	"	
3,5-Dichlorobenzoic acid	ND	2.0	"	"	"	"	"	"	
4-Nitrophenol	ND	2.0	"	"	"	"	"	"	
Acifluorfen	ND	1.6	"	"	"	"	"	"	
Bentazon	ND	1.6	"	"	"	"	"	"	
Chloramben	ND	1.6	"	"	"	"	"	"	
Dalapon	ND	20	"	"	"	"	"	"	
DCPA diacid	ND	1.6	"	"	"	"	"	"	
Dicamba	ND	1.6	"	"	"	"	"	"	
Dichlorprop	ND	1.6	"	"	"	"	"	"	
Dinoseb	ND	1.6	"	"	"	"	"	"	
Pentachlorophenol	ND	1.6	"	"	"	"	"	"	
Picloram	ND	1.6	"	"	"	"	"	"	
Surrogate: 2,4-Dichlorophenylacetic Acid		*94.6 %*		*35-150*	"	"	"	"	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-6 (1201143-01) Soil Sampled: 01/10/12 09:45 Received: 01/11/12 13:40									
Benzene	**16**	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-6 (1201143-01) Soil Sampled: 01/10/12 09:45 Received: 01/11/12 13:40									
Methylene chloride	ND	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	25	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	**35**	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.8 %*	*74-121*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-7 (1201143-02) Soil Sampled: 01/10/12 10:10 Received: 01/11/12 13:40									
Benzene	**21**	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-7 (1201143-02) Soil Sampled: 01/10/12 10:10 Received: 01/11/12 13:40									
Methylene chloride	ND	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	25	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	**59**	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*	*80-120*		*"*	*"*	*"*	*"*	
Surrogate: Toluene-d8		*111 %*	*81-117*		*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*98.2 %*	*74-121*		*"*	*"*	*"*	*"*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-8 (1201143-03) Soil Sampled: 01/10/12 10:35 Received: 01/11/12 13:40									
Benzene	**19**	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-8 (1201143-03) Soil Sampled: 01/10/12 10:35 Received: 01/11/12 13:40									
Methylene chloride	ND	5.0	µg/kg	1	B2A1601	01/16/12	01/17/12 10:36	EPA 8260B	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	25	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	**28**	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*	*80-120*		"	"	"	"	
Surrogate: Toluene-d8		*114 %*	*81-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.4 %*	*74-121*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Telephone: (949) 348-9389 Fax: (949) 348-9115
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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-6 (1201143-01) Soil Sampled: 01/10/12 09:45 Received: 01/11/12 13:40									
Acenaphthene	ND	0.33	mg/kg	1	B2A1914	01/13/12	01/17/12 20:57	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-6 (1201143-01) Soil Sampled: 01/10/12 09:45 Received: 01/11/12 13:40									
Hexachlorobenzene	ND	0.33	mg/kg	1	B2A1914	01/13/12	01/17/12 20:57	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*73.4 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*74.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*97.0 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*89.5 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*65.4 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*93.1 %*	*18-137*		"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-7 (1201143-02) Soil Sampled: 01/10/12 10:10 Received: 01/11/12 13:40									
Acenaphthene	ND	0.33	mg/kg	1	B2A1914	01/13/12	01/17/12 21:36	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-7 (1201143-02) Soil Sampled: 01/10/12 10:10 Received: 01/11/12 13:40									
Hexachlorobenzene	ND	0.33	mg/kg	1	B2A1914	01/13/12	01/17/12 21:36	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*72.6 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*81.2 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*82.9 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*100 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*71.2 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*97.3 %*	*18-137*		"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-8 (1201143-03) Soil Sampled: 01/10/12 10:35 Received: 01/11/12 13:40									
Acenaphthene	ND	0.33	mg/kg	1	B2A1914	01/13/12	01/17/12 22:15	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-8 (1201143-03) Soil Sampled: 01/10/12 10:35 Received: 01/11/12 13:40									
Hexachlorobenzene	ND	0.33	mg/kg	1	B2A1914	01/13/12	01/17/12 22:15	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*76.0 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*83.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*90.4 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*94.3 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*57.6 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*97.0 %*	*18-137*		"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Polynuclear Aromatic Compounds by EPA Method 8310

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-6 (1201143-01) Soil Sampled: 01/10/12 09:45 Received: 01/11/12 13:40									
Naphthalene	ND	40.0	µg/kg	1	B2A1812	01/18/12	01/20/12 11:06	EPA 8310	
Acenaphthylene	ND	200	"	"	"	"	"	"	
Acenaphthene	ND	50.0	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	2.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	2.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	2.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	2.00	"	"	"	"	"	"	
Dibenzo(a,h)anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Surrogate: Decafluorobiphenyl		*73.0 %*	*30-140*		"	"	"	"	
B-7 (1201143-02) Soil Sampled: 01/10/12 10:10 Received: 01/11/12 13:40									
Naphthalene	ND	40.0	µg/kg	1	B2A1812	01/18/12	01/20/12 11:06	EPA 8310	
Acenaphthylene	ND	200	"	"	"	"	"	"	
Acenaphthene	ND	50.0	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	2.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	2.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	2.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	2.00	"	"	"	"	"	"	
Dibenzo(a,h)anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Surrogate: Decafluorobiphenyl		*53.2 %*	*30-140*		"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Polynuclear Aromatic Compounds by EPA Method 8310

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-8 (1201143-03) Soil Sampled: 01/10/12 10:35 Received: 01/11/12 13:40									
Naphthalene	ND	40.0	µg/kg	1	B2A1812	01/18/12	01/20/12 11:06	EPA 8310	
Acenaphthylene	ND	200	"	"	"	"	"	"	
Acenaphthene	ND	50.0	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	2.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	2.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	2.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	2.00	"	"	"	"	"	"	
Dibenzo(a,h)anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Surrogate: Decafluorobiphenyl		*39.8 %*	*30-140*		*"*	*"*	*"*	*"*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1801 - EPA 3050B										
Blank (B2A1801-BLK1)				Prepared & Analyzed: 01/18/12						
Antimony	ND	2.5	mg/kg							
Arsenic	ND	3.0	"							
Barium	ND	6.5	"							
Beryllium	ND	0.50	"							
Cadmium	ND	0.50	"							
Chromium	ND	3.0	"							
Cobalt	ND	2.5	"							
Copper	ND	2.0	"							
Lead	ND	3.0	"							
Molybdenum	ND	1.0	"							
Nickel	ND	4.0	"							
Selenium	ND	6.0	"							
Silver	ND	1.0	"							
Thallium	ND	2.5	"							
Vanadium	ND	6.0	"							
Zinc	ND	10	"							
LCS (B2A1801-BS1)				Prepared & Analyzed: 01/18/12						
Antimony	103	2.5	mg/kg	100		103	75-125			
Arsenic	102	3.0	"	100		102	78-122			
Barium	106	6.5	"	100		106	80-120			
Beryllium	100	0.50	"	100		100	80-120			
Cadmium	99.8	0.50	"	100		99.8	80-120			
Chromium	103	3.0	"	100		103	80-120			
Cobalt	110	2.5	"	100		110	80-120			
Copper	106	2.0	"	100		106	78-122			
Lead	107	3.0	"	100		107	80-120			
Molybdenum	101	1.0	"	100		101	80-120			
Nickel	109	4.0	"	100		109	80-120			
Selenium	93.8	6.0	"	100		93.8	76-124			
Silver	101	1.0	"	100		101	60-140			
Thallium	103	2.5	"	100		103	80-120			
Vanadium	98.1	6.0	"	100		98.1	80-120			
Zinc	97.2	10	"	100		97.2	78-122			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1801 - EPA 3050B										
LCS Dup (B2A1801-BSD1)				Prepared & Analyzed: 01/18/12						
Antimony	105	2.5	mg/kg	100		105	75-125	1.92	20	
Arsenic	104	3.0	"	100		104	78-122	1.94	20	
Barium	109	6.5	"	100		109	80-120	2.79	20	
Beryllium	103	0.50	"	100		103	80-120	2.96	20	
Cadmium	102	0.50	"	100		102	80-120	2.18	20	
Chromium	106	3.0	"	100		106	80-120	2.87	20	
Cobalt	112	2.5	"	100		112	80-120	1.80	20	
Copper	109	2.0	"	100		109	78-122	2.79	20	
Lead	109	3.0	"	100		109	80-120	1.85	20	
Molybdenum	105	1.0	"	100		105	80-120	3.88	20	
Nickel	112	4.0	"	100		112	80-120	2.71	20	
Selenium	96.5	6.0	"	100		96.5	76-124	2.84	20	
Silver	103	1.0	"	100		103	60-140	1.96	40	
Thallium	106	2.5	"	100		106	80-120	2.87	20	
Vanadium	100	6.0	"	100		100	80-120	1.92	20	
Zinc	101	10	"	100		101	78-122	3.83	20	
Matrix Spike (B2A1801-MS1)	**Source: 1201143-01**			Prepared & Analyzed: 01/18/12						
Antimony	41.4	2.5	mg/kg	96.4	0.84	42.1	47.8-140			QM-07
Arsenic	86.8	3.0	"	96.4	ND	90.0	70-130			
Barium	220	6.5	"	96.4	120	104	70-130			
Beryllium	93.9	0.50	"	96.4	ND	97.4	70-130			
Cadmium	90.6	0.50	"	96.4	0.073	93.9	70-130			
Chromium	115	3.0	"	96.4	22	96.5	70-130			
Cobalt	106	2.5	"	96.4	12	97.5	70-130			
Copper	126	2.0	"	96.4	25	105	70-130			
Lead	103	3.0	"	96.4	8.6	97.9	70-130			
Molybdenum	91.1	1.0	"	96.4	0.94	93.5	70-130			
Nickel	111	4.0	"	96.4	17	97.5	70-130			
Selenium	87.2	6.0	"	96.4	0.80	89.6	62.6-130			
Silver	94.1	1.0	"	96.4	ND	97.6	60-140			
Thallium	84.4	2.5	"	96.4	ND	87.6	56.9-130			
Vanadium	126	6.0	"	96.4	35	94.4	70-130			
Zinc	130	10	"	96.4	42	91.3	70-130			

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1801 - EPA 3050B										
Matrix Spike Dup (B2A1801-MSD1)	**Source: 1201143-01**			Prepared & Analyzed: 01/18/12						
Antimony	38.6	2.5	mg/kg	91.2	0.84	41.4	47.8-140	7.00	20	QM-07
Arsenic	82.3	3.0	"	91.2	ND	90.2	70-130	5.32	20	
Barium	212	6.5	"	91.2	120	101	70-130	3.70	20	
Beryllium	88.6	0.50	"	91.2	ND	97.1	70-130	5.81	20	
Cadmium	86.2	0.50	"	91.2	0.073	94.4	70-130	4.98	20	
Chromium	109	3.0	"	91.2	22	95.4	70-130	5.36	20	
Cobalt	101	2.5	"	91.2	12	97.6	70-130	4.83	20	
Copper	120	2.0	"	91.2	25	104	70-130	4.88	30	
Lead	98.0	3.0	"	91.2	8.6	98.0	70-130	4.98	30	
Molybdenum	85.7	1.0	"	91.2	0.94	92.9	70-130	6.11	20	
Nickel	106	4.0	"	91.2	17	97.6	70-130	4.61	20	
Selenium	82.7	6.0	"	91.2	0.80	89.8	62.6-130	5.30	20	
Silver	88.8	1.0	"	91.2	ND	97.4	60-140	5.80	40	
Thallium	79.6	2.5	"	91.2	ND	87.3	56.9-130	5.85	20	
Vanadium	120	6.0	"	91.2	35	93.2	70-130	4.88	20	
Zinc	127	10	"	91.2	42	93.2	70-130	2.33	20	
Batch B2A1802 - EPA 7471A										
Blank (B2A1802-BLK1)				Prepared: 01/18/12 Analyzed: 01/20/12						
Mercury	ND	0.15	mg/kg							
LCS (B2A1802-BS1)				Prepared: 01/18/12 Analyzed: 01/20/12						
Mercury	0.16	0.15	mg/kg	0.167		95.8	70-130			
Matrix Spike (B2A1802-MS1)	**Source: 1201143-01**			Prepared: 01/18/12 Analyzed: 01/20/12						
Mercury	0.19	0.15	mg/kg	0.164	0.03	97.6	70-130			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1802 - EPA 7471A										
Matrix Spike Dup (B2A1802-MSD1)	**Source: 1201143-01**			Prepared: 01/18/12 Analyzed: 01/20/12						
Mercury	0.19	0.15	mg/kg	0.159	0.03	101	70-130	0.00	30	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1602 - EPA 3550B Solid Ext										
Blank (B2A1602-BLK1)				Prepared & Analyzed: 01/16/12						
Aldrin	ND	0.0020	mg/kg							
HCH-alpha	ND	0.0020	"							
HCH-beta	ND	0.0040	"							
HCH-delta	ND	0.0020	"							
HCH-gamma (Lindane)	ND	0.0020	"							
Chlordane	ND	0.0040	"							
4,4´-DDD	ND	0.0030	"							
4,4´-DDE	ND	0.0020	"							
4,4´-DDT	ND	0.0030	"							
Dieldrin	ND	0.0020	"							
Endosulfan I	ND	0.0020	"							
Endosulfan II	ND	0.0040	"							
Endosulfan sulfate	ND	0.0020	"							
Endrin	ND	0.0020	"							
Endrin aldehyde	ND	0.0020	"							
Endrin ketone	ND	0.0020	"							
Heptachlor	ND	0.0020	"							
Heptachlor epoxide	ND	0.0020	"							
Methoxychlor	ND	0.010	"							
Toxaphene	ND	0.040	"							
Mirex	ND	0.0040	"							
Kepone	ND	0.0040	"							
Surrogate: Decachlorobiphenyl	*0.00535*		*"*	*0.00833*		*64.2*	*42-147*			
Surrogate: Tetrachloro-meta-xylene	*0.00792*		*"*	*0.00833*		*95.1*	*42-147*			
LCS (B2A1602-BS1)				Prepared & Analyzed: 01/16/12						
Aldrin	0.00282	0.0020	mg/kg	0.00267		106	80-120			
HCH-gamma (Lindane)	0.00245	0.0020	"	0.00267		91.8	80-120			
4,4´-DDT	0.00610	0.0030	"	0.00667		91.5	80-120			
Dieldrin	0.00772	0.0020	"	0.00667		116	80-120			
Heptachlor	0.00249	0.0020	"	0.00267		93.3	80-120			

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1602 - EPA 3550B Solid Ext										
Matrix Spike (B2A1602-MS1)		**Source: 1201110-01**		Prepared & Analyzed: 01/16/12						
Aldrin	0.00295	0.0020	mg/kg	0.00267	ND	110	50-150			
HCH-gamma (Lindane)	0.00234	0.0020	"	0.00267	ND	87.6	50-150			
4,4´-DDT	0.00640	0.0030	"	0.00667	ND	96.0	50-150			
Dieldrin	0.00540	0.0020	"	0.00667	ND	81.0	50-150			
Heptachlor	0.00235	0.0020	"	0.00267	ND	88.0	50-150			
Matrix Spike Dup (B2A1602-MSD1)		**Source: 1201110-01**		Prepared & Analyzed: 01/16/12						
Aldrin	0.00237	0.0020	mg/kg	0.00267	ND	88.8	50-150	21.8	30	
HCH-gamma (Lindane)	0.00258	0.0020	"	0.00267	ND	96.6	50-150	9.76	30	
4,4´-DDT	0.00630	0.0030	"	0.00667	ND	94.5	50-150	1.57	30	
Dieldrin	0.00570	0.0020	"	0.00667	ND	85.5	50-150	5.41	30	
Heptachlor	0.00253	0.0020	"	0.00267	ND	94.8	50-150	7.38	30	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1602 - EPA 3550B Solid Ext										
Blank (B2A1602-BLK1)				Prepared & Analyzed: 01/16/12						
PCB-1016	ND	0.020	mg/kg							
PCB-1221	ND	0.020	"							
PCB-1232	ND	0.020	"							
PCB-1242	ND	0.020	"							
PCB-1248	ND	0.020	"							
PCB-1254	ND	0.020	"							
PCB-1260	ND	0.020	"							
Surrogate: Decachlorobiphenyl	*0.00535*		*"*	*0.00833*		*64.2*	*42-147*			
Surrogate: Tetrachloro-meta-xylene	*0.00643*		*"*	*0.00833*		*77.2*	*42-147*			
LCS (B2A1602-BS1)				Prepared & Analyzed: 01/16/12						
PCB-1260	0.0595	0.020	mg/kg	0.0667		89.2	80-120			
Matrix Spike (B2A1602-MS1)		**Source: 1201110-01**		Prepared & Analyzed: 01/16/12						
PCB-1260	0.0565	0.020	mg/kg	0.0667	ND	84.7	50-150			
Matrix Spike Dup (B2A1602-MSD1)		**Source: 1201110-01**		Prepared & Analyzed: 01/16/12						
PCB-1260	0.0588	0.020	mg/kg	0.0667	ND	88.2	50-150	3.99	30	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
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Chlorinated Herbicides by EPA Method 8151A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1603 - EPA 8151A Herbicides										
Blank (B2A1603-BLK1)				Prepared: 01/16/12 Analyzed: 01/18/12						
2,4,5-T	ND	1.6	µg/kg							
2,4,5-TP (Silvex)	ND	1.6	"							
2,4-D	ND	1.6	"							
2,4-DB	ND	4.0	"							
3,5-Dichlorobenzoic acid	ND	2.0	"							
4-Nitrophenol	ND	2.0	"							
Acifluorfen	ND	1.6	"							
Bentazon	ND	1.6	"							
Chloramben	ND	1.6	"							
Dalapon	ND	20	"							
DCPA diacid	ND	1.6	"							
Dicamba	ND	1.6	"							
Dichlorprop	ND	1.6	"							
Dinoseb	ND	1.6	"							
Pentachlorophenol	ND	1.6	"							
Picloram	ND	1.6	"							
Surrogate: 2,4-Dichlorophenylacetic Acid	*62.5*		*"*	*100*		*62.5*	*35-150*			
LCS (B2A1603-BS1)				Prepared: 01/16/12 Analyzed: 01/18/12						
2,4,5-T	10.4	1.6	µg/kg	10.0		104	20-150			
2,4,5-TP (Silvex)	7.65	1.6	"	10.0		76.5	20-150			
Dichlorprop	5.75	1.6	"	10.0		57.5	20-150			
Dinoseb	8.48	1.6	"	10.0		84.8	20-150			
Matrix Spike (B2A1603-MS1)	**Source: 1201143-03**			Prepared: 01/16/12 Analyzed: 01/18/12						
2,4,5-T	11.3	1.6	µg/kg	10.0	ND	113	20-150			
2,4,5-TP (Silvex)	5.83	1.6	"	10.0	ND	58.3	20-150			
Dichlorprop	11.6	1.6	"	10.0	ND	116	20-150			
Dinoseb	10.2	1.6	"	10.0	ND	102	20-150			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
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Chlorinated Herbicides by EPA Method 8151A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1603 - EPA 8151A Herbicides										
Matrix Spike Dup (B2A1603-MSD1)	**Source: 1201143-03**			Prepared: 01/16/12	Analyzed: 01/18/12					
2,4,5-T	10.2	1.6	µg/kg	10.0	ND	102	20-150	10.2	30	
2,4,5-TP (Silvex)	7.42	1.6	"	10.0	ND	74.2	20-150	24.0	30	
Dichlorprop	10.1	1.6	"	10.0	ND	101	20-150	13.8	30	
Dinoseb	9.27	1.6	"	10.0	ND	92.7	20-150	9.55	30	

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900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1601 - EPA 5035 P & T										
Blank (B2A1601-BLK1)				Prepared: 01/16/12 Analyzed: 01/17/12						
Benzene	ND	5.0	µg/kg							
Bromobenzene	ND	5.0	"							
Bromochloromethane	ND	5.0	"							
Bromodichloromethane	ND	5.0	"							
Bromoform	ND	5.0	"							
Bromomethane	ND	5.0	"							
n-Butylbenzene	ND	5.0	"							
sec-Butylbenzene	ND	5.0	"							
tert-Butylbenzene	ND	5.0	"							
Carbon tetrachloride	ND	5.0	"							
Chlorobenzene	ND	5.0	"							
Chloroethane	ND	5.0	"							
Chloroform	ND	5.0	"							
Chloromethane	ND	5.0	"							
2-Chlorotoluene	ND	5.0	"							
4-Chlorotoluene	ND	5.0	"							
Dibromochloromethane	ND	5.0	"							
1,2-Dibromo-3-chloropropane	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	5.0	"							
Dibromomethane	ND	5.0	"							
1,2-Dichlorobenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	5.0	"							
1,4-Dichlorobenzene	ND	5.0	"							
Dichlorodifluoromethane	ND	5.0	"							
1,1-Dichloroethane	ND	5.0	"							
1,2-Dichloroethane	ND	5.0	"							
1,1-Dichloroethene	ND	5.0	"							
cis-1,2-Dichloroethene	ND	5.0	"							
trans-1,2-Dichloroethene	ND	5.0	"							
1,2-Dichloropropane	ND	5.0	"							
1,3-Dichloropropane	ND	5.0	"							
2,2-Dichloropropane	ND	5.0	"							
1,1-Dichloropropene	ND	5.0	"							
cis-1,3-Dichloropropene	ND	5.0	"							
trans-1,3-Dichloropropene	ND	5.0	"							
Di-isopropyl ether	ND	5.0	"							
Ethyl tert-butyl ether	ND	5.0	"							

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1601 - EPA 5035 P & T										
Blank (B2A1601-BLK1)				Prepared: 01/16/12 Analyzed: 01/17/12						
Ethylbenzene	ND	5.0	µg/kg							
Hexachlorobutadiene	ND	5.0	"							
Isopropylbenzene	ND	5.0	"							
p-Isopropyltoluene	ND	5.0	"							
Methylene chloride	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Naphthalene	ND	5.0	"							
n-Propylbenzene	ND	5.0	"							
Styrene	ND	5.0	"							
Tert-amyl methyl ether	ND	5.0	"							
Tert-butyl alcohol	ND	25	"							
1,1,1,2-Tetrachloroethane	ND	5.0	"							
1,1,2,2-Tetrachloroethane	ND	5.0	"							
Tetrachloroethene	ND	5.0	"							
Toluene	ND	5.0	"							
1,2,3-Trichlorobenzene	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
1,1,1-Trichloroethane	ND	5.0	"							
1,1,2-Trichloroethane	ND	5.0	"							
Trichloroethene	ND	5.0	"							
Trichlorofluoromethane	ND	5.0	"							
1,2,3-Trichloropropane	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
Vinyl chloride	ND	5.0	"							
m,p-Xylene	ND	5.0	"							
o-Xylene	ND	5.0	"							
Surrogate: Dibromofluoromethane	*52.5*		*"*	*50.0*		*105*	*80-120*			
Surrogate: Toluene-d8	*56.5*		*"*	*50.0*		*113*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*50.1*		*"*	*50.0*		*100*	*74-121*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1601 - EPA 5035 P & T										
LCS (B2A1601-BS1)				Prepared: 01/16/12 Analyzed: 01/17/12						
Benzene	54.0	5.0	µg/kg	50.0		108	80-120			
Chlorobenzene	47.1	5.0	"	50.0		94.2	80-120			
1,1-Dichloroethene	53.0	5.0	"	50.0		106	80-120			
Toluene	55.9	5.0	"	50.0		112	80-120			
Trichloroethene	55.1	5.0	"	50.0		110	80-120			
Matrix Spike (B2A1601-MS1)	**Source: 1201148-05**			Prepared: 01/16/12 Analyzed: 01/17/12						
Benzene	48.3	5.0	µg/kg	50.0	ND	96.6	37-151			
Chlorobenzene	49.3	5.0	"	50.0	ND	98.6	37-160			
1,1-Dichloroethene	54.6	5.0	"	50.0	ND	109	50-150			
Toluene	49.9	5.0	"	50.0	ND	99.8	47-150			
Trichloroethene	52.7	5.0	"	50.0	ND	105	71-157			
Matrix Spike Dup (B2A1601-MSD1)	**Source: 1201148-05**			Prepared: 01/16/12 Analyzed: 01/17/12						
Benzene	54.8	5.0	µg/kg	50.0	ND	110	37-151	12.6	30	
Chlorobenzene	50.0	5.0	"	50.0	ND	100	37-160	1.41	30	
1,1-Dichloroethene	49.0	5.0	"	50.0	ND	98.0	50-150	10.8	30	
Toluene	52.6	5.0	"	50.0	ND	105	47-150	5.27	30	
Trichloroethene	53.7	5.0	"	50.0	ND	107	71-157	1.88	30	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1914 - EPA 3550B Solid Ext										
Blank (B2A1914-BLK1)				Prepared: 01/11/12 Analyzed: 01/17/12						
Acenaphthene	ND	0.33	mg/kg							
Acenaphthylene	ND	0.33	"							
Anthracene	ND	0.33	"							
Benzidine	ND	0.33	"							
Benzo (a) anthracene	ND	0.33	"							
Benzo (b) fluoranthene	ND	0.33	"							
Benzo (k) fluoranthene	ND	0.33	"							
Benzo (a) pyrene	ND	0.33	"							
Benzo (g,h,i) perylene	ND	0.33	"							
Benzyl alcohol	ND	0.33	"							
Bis(2-chloroethyl)ether	ND	0.33	"							
Bis(2-chloroethoxy)methane	ND	0.33	"							
Bis(2-ethylhexyl)phthalate	ND	0.33	"							
Bis(2-chloroisopropyl)ether	ND	0.33	"							
4-Bromophenyl phenyl ether	ND	0.33	"							
Butyl benzyl phthalate	ND	0.33	"							
4-Chloroaniline	ND	0.33	"							
2-Chlorophenol	ND	0.33	"							
4-Chloro-3-methylphenol	ND	0.33	"							
2-Chloronaphthalene	ND	0.33	"							
4-Chlorophenyl phenyl ether	ND	0.33	"							
Chrysene	ND	0.33	"							
Dibenz (a,h) anthracene	ND	0.33	"							
Dibenzofuran	ND	0.33	"							
1,3-Dichlorobenzene	ND	0.33	"							
1,2-Dichlorobenzene	ND	0.33	"							
1,4-Dichlorobenzene	ND	0.33	"							
3,3´-Dichlorobenzidine	ND	0.33	"							
2,4-Dichlorophenol	ND	0.33	"							
Diethyl phthalate	ND	0.33	"							
2,4-Dimethylphenol	ND	0.33	"							
Dimethyl phthalate	ND	0.33	"							
Di-n-butyl phthalate	ND	0.33	"							
2,4-Dinitrophenol	ND	0.33	"							
4,6-Dinitro-2-methylphenol	ND	0.33	"							
2,4-Dinitrotoluene	ND	0.33	"							
2,6-Dinitrotoluene	ND	0.33	"							

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1914 - EPA 3550B Solid Ext										
Blank (B2A1914-BLK1)				Prepared: 01/11/12 Analyzed: 01/17/12						
Di-n-octyl phthalate	ND	0.33	mg/kg							
1,2-Diphenylhydrazine	ND	0.33	"							
Fluoranthene	ND	0.33	"							
Fluorene	ND	0.33	"							
Hexachlorobenzene	ND	0.33	"							
Hexachlorobutadiene	ND	0.33	"							
Hexachlorocyclopentadiene	ND	0.33	"							
Hexachloroethane	ND	0.33	"							
Indeno (1,2,3-cd) pyrene	ND	0.33	"							
Isophorone	ND	0.33	"							
2-Methylnaphthalene	ND	0.33	"							
2-Methylphenol	ND	0.33	"							
4-Methylphenol	ND	0.33	"							
Naphthalene	ND	0.33	"							
2-Nitroaniline	ND	0.33	"							
3-Nitroaniline	ND	0.33	"							
4-Nitroaniline	ND	0.33	"							
Nitrobenzene	ND	0.33	"							
2-Nitrophenol	ND	0.33	"							
4-Nitrophenol	ND	0.33	"							
N-Nitrosodimethylamine	ND	0.33	"							
Diphenylamine	ND	0.33	"							
N-Nitrosodi-n-propylamine	ND	0.33	"							
Pentachlorophenol	ND	0.33	"							
Phenanthrene	ND	0.33	"							
Phenol	ND	0.33	"							
Pyrene	ND	0.33	"							
1,2,4-Trichlorobenzene	ND	0.33	"							
2,4,5-Trichlorophenol	ND	0.33	"							
2,4,6-Trichlorophenol	ND	0.33	"							
Surrogate: 2-Fluorophenol	*0.342*		*"*	*0.500*		*68.4*	*25-121*			
Surrogate: Phenol-d6	*0.378*		*"*	*0.500*		*75.6*	*24-113*			
Surrogate: Nitrobenzene-d5	*0.317*		*"*	*0.333*		*95.2*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*0.260*		*"*	*0.333*		*78.1*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*0.333*		*"*	*0.500*		*66.6*	*19-122*			
Surrogate: Terphenyl-d14	*0.287*		*"*	*0.333*		*86.2*	*18-137*			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1914 - EPA 3550B Solid Ext										
LCS (B2A1914-BS1)				Prepared: 01/11/12 Analyzed: 01/17/12						
Acenaphthene	0.319	0.33	mg/kg	0.333		95.8	47-145			
2-Chlorophenol	0.377	0.33	"	0.667		56.5	23-134			
4-Chloro-3-methylphenol	0.396	0.33	"	0.667		59.4	22-147			
1,4-Dichlorobenzene	0.316	0.33	"	0.333		94.9	20-124			
2,4-Dinitrotoluene	0.351	0.33	"	0.333		105	39-139			
4-Nitrophenol	0.242	0.33	"	0.667		36.3	0-132			
N-Nitrosodi-n-propylamine	0.357	0.33	"	0.333		107	0-230			
Pentachlorophenol	0.250	0.33	"	0.667		37.5	14-176			
Phenol	0.393	0.33	"	0.667		58.9	5-112			
Pyrene	0.317	0.33	"	0.333		95.2	52-115			
1,2,4-Trichlorobenzene	0.327	0.33	"	0.333		98.2	44-142			
Matrix Spike (B2A1914-MS1)		**Source: 1201110-01**		Prepared: 01/11/12 Analyzed: 01/17/12						
Acenaphthene	0.293	0.33	mg/kg	0.333	ND	88.0	47-145			
2-Chlorophenol	0.381	0.33	"	0.667	ND	57.1	23-134			
4-Chloro-3-methylphenol	0.397	0.33	"	0.667	ND	59.5	22-147			
1,4-Dichlorobenzene	0.258	0.33	"	0.333	ND	77.5	20-124			
2,4-Dinitrotoluene	0.360	0.33	"	0.333	ND	108	39-139			
4-Nitrophenol	0.251	0.33	"	0.667	ND	37.6	0-132			
N-Nitrosodi-n-propylamine	0.305	0.33	"	0.333	ND	91.6	0-230			
Pentachlorophenol	0.254	0.33	"	0.667	ND	38.1	14-176			
Phenol	0.383	0.33	"	0.667	ND	57.4	5-112			
Pyrene	0.300	0.33	"	0.333	ND	90.1	52-115			
1,2,4-Trichlorobenzene	0.283	0.33	"	0.333	ND	85.0	44-142			
Matrix Spike Dup (B2A1914-MSD1)		**Source: 1201110-01**		Prepared: 01/11/12 Analyzed: 01/17/12						
Acenaphthene	0.289	0.33	mg/kg	0.333	ND	86.8	47-145	1.37	30	
2-Chlorophenol	0.389	0.33	"	0.667	ND	58.3	23-134	2.08	30	
4-Chloro-3-methylphenol	0.405	0.33	"	0.667	ND	60.7	22-147	2.00	30	
1,4-Dichlorobenzene	0.252	0.33	"	0.333	ND	75.7	20-124	2.35	30	
2,4-Dinitrotoluene	0.315	0.33	"	0.333	ND	94.6	39-139	13.3	30	
4-Nitrophenol	0.231	0.33	"	0.667	ND	34.6	0-132	8.30	30	
N-Nitrosodi-n-propylamine	0.327	0.33	"	0.333	ND	98.2	0-230	6.96	30	
Pentachlorophenol	0.226	0.33	"	0.667	ND	33.9	14-176	11.7	30	
Phenol	0.401	0.33	"	0.667	ND	60.1	5-112	4.59	30	
Pyrene	0.322	0.33	"	0.333	ND	96.7	52-115	7.07	30	
1,2,4-Trichlorobenzene	0.284	0.33	"	0.333	ND	85.3	44-142	0.353	30	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1812 - EPA 3550B Solid Ext										
Blank (B2A1812-BLK1)				Prepared: 01/18/12 Analyzed: 01/20/12						
Naphthalene	ND	40.0	µg/kg							
Acenaphthylene	ND	200	"							
Acenaphthene	ND	50.0	"							
Fluorene	ND	5.00	"							
Phenanthrene	ND	5.00	"							
Anthracene	ND	2.00	"							
Fluoranthene	ND	5.00	"							
Pyrene	ND	5.00	"							
Benzo (a) anthracene	ND	2.00	"							
Chrysene	ND	5.00	"							
Benzo (b) fluoranthene	ND	5.00	"							
Benzo (k) fluoranthene	ND	2.00	"							
Benzo (a) pyrene	ND	2.00	"							
Dibenzo(a,h)anthracene	ND	5.00	"							
Benzo (g,h,i) perylene	ND	5.00	"							
Indeno (1,2,3-cd) pyrene	ND	5.00	"							
Surrogate: Decafluorobiphenyl	*422*		*"*	*500*		*84.4*	*30-140*			
LCS (B2A1812-BS1)				Prepared: 01/18/12 Analyzed: 01/20/12						
Naphthalene	62.2	40.0	µg/kg	50.0		124	60-130			
Fluorene	52.4	5.00	"	50.0		105	60-130			
Pyrene	51.4	5.00	"	50.0		103	60-130			
Benzo (a) pyrene	48.6	2.00	"	50.0		97.2	60-130			
Indeno (1,2,3-cd) pyrene	52.1	5.00	"	50.0		104	60-130			
Surrogate: Decafluorobiphenyl	*346*		*"*	*500*		*69.2*	*30-140*			
Matrix Spike (B2A1812-MS1)	**Source: 1201143-03**			Prepared: 01/18/12 Analyzed: 01/20/12						
Naphthalene	51.4	40.0	µg/kg	50.0	ND	103	60-140			
Fluorene	54.8	5.00	"	50.0	ND	110	60-140			
Pyrene	53.3	5.00	"	50.0	ND	107	60-140			
Benzo (a) pyrene	48.2	2.00	"	50.0	ND	96.4	60-140			
Indeno (1,2,3-cd) pyrene	49.6	5.00	"	50.0	ND	99.2	60-140			
Surrogate: Decafluorobiphenyl	*412*		*"*	*500*		*82.4*	*30-140*			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2A1812 - EPA 3550B Solid Ext										
Matrix Spike Dup (B2A1812-MSD1)	**Source: 1201143-03**			Prepared: 01/18/12 Analyzed: 01/20/12						
Naphthalene	50.4	40.0	µg/kg	50.0	ND	101	60-140	1.96	20	
Fluorene	53.2	5.00	"	50.0	ND	106	60-140	2.96	20	
Pyrene	49.0	5.00	"	50.0	ND	98.0	60-140	8.41	20	
Benzo (a) pyrene	45.7	2.00	"	50.0	ND	91.4	60-140	5.32	20	
Indeno (1,2,3-cd) pyrene	46.3	5.00	"	50.0	ND	92.6	60-140	6.88	20	
Surrogate: Decafluorobiphenyl	*214*		*"*	*500*		*42.8*	*30-140*			

26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
TELEPHONE: (949) 348-9389 FAX: (949) 348-9115
E-MAIL: SIERRALABS @ SIERRALABS.NET

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF20710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	01/23/12 09:46

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CHAIN OF CUSTODY RECORD

SIERRA ANALYTICAL
TEL: 949•348•9389
FAX: 949•348•9115
26052 Merit Circle• Suite 105•Laguna Hills, CA•92653

Date: 1/10/12 Page 1 of 1

Lab Project No.: 1201143

Client: County of Los Angeles Dep Pub. Wks.
Client Address: 900 S Fremont Ave
Alhambra, CA 91803-1331

Client Tel. No.: 626 458 4923
Client Fax. No.: 626 458 4913
Client Proj. Mgr.: Geir Mathisen

Client Project ID: HF00710003
ENCM 12C00000299
Big T Res. Sed. Char. Program

Turn Around Time Requested: ☐ Immediate ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4 Day ☐ 5 Day ☑ Normal ☐ Mobile

Analysis Requested

Client Sample ID.	Sierra No.	Date	Time	Matrix	Preservative	Container Type	No. of Containers	6010B/7470 Title 22 Metals + Mercury	8310 / PAHs	8260B / VOCs + OXYs + EDB DBCP	8270C/8321 SVOCs + carbonhydrates	8081A Pesticides	8082 / PCBs	8270C 1,4 Dioxane	8250A / Dioxin	8151 / Herbicides	8270C or Kepone/Mirex 8081	Geotracker EDD Info: Client LOGCODE / Site Global ID / Field Point Names/ Comments
B-6	01	1/10/12	9:45	SOIL	ICE	3VOAs/1JAR	4	X	X	X	X	X	X	X	X	X	X	
B-7	02	"	10:10	"	"	"	"	X	X	X	X	X	X	X	X	X	X	
B-8	03	"	10:35	"	"	"	"	X	X	X	X	X	X	X	X	X	X	

1 Sampler Signature: [signature] Printed Name: GEIR MATHISEN

Shipped Via: (Carrier/Waybill No.)

12 Total Number of Containers Submitted to Laboratory

2 Relinquished By: GEIR MATHISEN Date: 1-11-12 Time: 1340 Company: — Received By: [signature] Date: 1-11-12 Time: 1340 Company: Sierra

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analysis specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT. * - Samples determined to be hazardous by SIERRA will be returned to CLIENT.

3 Relinquished By: Date: Time: Company: Received By: Date: Time: Company:

12 Total Number of Containers Received by Laboratory

4 Relinquished By: Date: Time: Company: Received By: Date: Time: Company:

Sample Disposal:
☐ Return to Client
☑ Lab Disposal*
☐ Archive ____ mos.
☐ Other ____

FOR LABORATORY USE ONLY - Sample Receipt Conditions:

☑ Intact ☑ Chilled - Temp. (°C) 4.0
☐ Sample Seals ☐ Preservatives - Verified By
☐ Properly Labelled ☐ Other
☑ Appropriate Sample Container ☑ Storage Location A-5 SOIC / V25A

Special Instructions: See your bid proposal dated Dec. 5, 2011 including Table 1A and 1B for minimum required analytes to be tested. (attached).

Rev: 102005

DISTRIBUTION: White - To Accompany Samples, Yellow - Laboratory Copy, Pink - Field Personnel Copy

FRONTIER
ANALYTICAL LABORATORY

February 17, 2012

FAL Project ID: 7209

Ms. Marcheal Brady
Sierra Analytical Labs, Inc.
26052 Merit Circle, Suite 104
Laguna Hills, CA 92653

Dear Ms. Brady,

Attached are the results for Frontier Analytical Laboratory project **7209**. This corresponds to your subcontract order number **1202005**. Four soil samples were received at Frontier Analytical Laboratory on 2/2/2012 in good condition. These samples were extracted and analyzed by EPA Method 8280 for 2,3,7,8 TCDD only. Sierra Analytical Labs, Inc. requested a turnaround time of fifteen business days for project **7209**.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our project-sample tracking log and the analytical results. The Sample Receipt section contains your chain of custody, our sample login form and a sample photo. The attached results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full. This report has been emailed to you as a PDF file. A hardcopy will not be sent to you unless specifically requested.

If you have any questions regarding project **7209**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Tom Crabtree
Director

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **7209**

Received on: **02/02/2012** Project Due: **02/24/2012** Storage: **R1**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
7209-001-SA	0	1202005	1202005-01	EPA 8280 TCDD	Soil	01/09/2012	09:30 am	02/08/2012
7209-002-SA	0	1202005	1202005-02	EPA 8280 TCDD	Soil	01/09/2012	09:50 am	02/08/2012
7209-003-SA	0	1202005	1202005-03	EPA 8280 TCDD	Soil	01/09/2012	11:00 am	02/08/2012
7209-004-SA	0	1202005	1202005-04	EPA 8280 TCDD	Soil	01/10/2012	10:35 am	02/09/2012

5172 Hillsdale Circle • El Dorado Hills, CA 95762 • Tel (916) 934-0900 • Fax (916) 934-0999 • www.frontieranalytical.com

EPA Method 8280
TCDD

FRONTIER ANALYTICAL LABORATORY

FAL ID: 7209-001-MB
Client ID: Method Blank
Matrix: Soil
Batch No: X2516

Date Extracted: 02-07-2012
Date Received: NA
Amount: 5.00 g

ICal: 8280fal3-1-12-12
GC Column: DB5
Units: pg/g

Acquired: 02-09-2012
WHO TEQ: NA

Compound	Conc	DL	Qual	MDL
2,3,7,8-TCDD	ND	1.58		0.0676

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.5	25.0 - 150	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	101	25.0 - 150	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 2/9/12

Reviewed By: _____
Date: 2/14/12

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EPA Method 8280
TCDD

FRONTIER ANALYTICAL LABORATORY

FAL ID: 7209-001-OPR
Client ID: OPR
Matrix: Soil
Batch No: X2516

Date Extracted: 02-07-2012
Date Received: NA
Amount: 5.00 g

ICal: 8280fal3-1-12-12
GC Column: DB5
Units: ng/ml

Acquired: 02-08-2012
WHO TEQ: NA

Compound	Conc	QC Limits
2,3,7,8-TCDD	52.0	35.0 - 65.0

Internal Standards	% Rec	QC Limits
13C-2,3,7,8-TCDD	84.7	25.0 - 150

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	90.0	25.0 - 150

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 2/9/12

Reviewed By: _____
Date: 2/14/12

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EPA Method 8280
TCDD

FRONTIER ANALYTICAL LABORATORY

FAL ID: 7209-001-SA
Client ID: 1202005-01
Matrix: Soil
Batch No: X2516

Date Extracted: 02-07-2012
Date Received: 02-02-2012
Amount: 5.06 g
% Solids: 91.59

ICal: 8280fal3-1-12-12
GC Column: DB5
Units: pg/g

Acquired: 02-09-2012
WHO TEQ: NA

Compound	Conc	DL	Qual	MDL
2,3,7,8-TCDD	ND	2.02		0.0676

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	87.5	25.0 - 150	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	91.8	25.0 - 150	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 2/9/12

Reviewed By: _____
Date: 2/14/12

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EPA Method 8280
TCDD

FRONTIER ANALYTICAL LABORATORY

FAL ID: 7209-002-SA
Client ID: 1202005-02
Matrix: Soil
Batch No: X2516

Date Extracted: 02-07-2012
Date Received: 02-02-2012
Amount: 5.08 g
% Solids: 88.42

ICal: 8280fal3-1-12-12
GC Column: DB5
Units: pg/g

Acquired: 02-09-2012
WHO TEQ: NA

Compound	Conc	DL	Qual	MDL
2,3,7,8-TCDD	ND	1.65		0.0676

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	97.6	25.0 - 150	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	100	25.0 - 150	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 2/9/12

Reviewed By: _____
Date: 2/14/12

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EPA Method 8280
TCDD

FRONTIER ANALYTICAL LABORATORY

FAL ID: 7209-003-SA
Client ID: 1202005-03
Matrix: Soil
Batch No: X2516

Date Extracted: 02-07-2012
Date Received: 02-02-2012
Amount: 5.01 g
% Solids: 81.66

ICal: 8280fal3-1-12-12
GC Column: DB5
Units: pg/g

Acquired: 02-09-2012
WHO TEQ: NA

Compound	Conc	DL	Qual	MDL
2,3,7,8-TCDD	ND	2.55		0.0676

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.7	25.0 - 150	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	94.5	25.0 - 150	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 2/9/12

Reviewed By: _____
Date: 2/14/12

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EPA Method 8280
TCDD

FRONTIER ANALYTICAL LABORATORY

FAL ID: 7209-004-SA
Client ID: 1202005-04
Matrix: Soil
Batch No: X2516

Date Extracted: 02-07-2012
Date Received: 02-02-2012
Amount: 5.04 g
% Solids: 84.08

ICal: 8280fal3-1-12-12
GC Column: DB5
Units: pg/g

Acquired: 02-09-2012
WHO TEQ: NA

Compound	Conc	DL	Qual	MDL
2,3,7,8-TCDD	ND	2.15		0.0676

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.0	25.0 - 150	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	90.1	25.0 - 150	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 2/9/12

Reviewed By: _____
Date: 2/14/12

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SUBCONTRACT ORDER

Sierra Analytical Labs, Inc.

Sierra Project #: 1202005

7209 20c

Comments

SENDING LABORATORY:

Sierra Analytical Labs, Inc.
26052 Merit Circle, Suite 104
Laguna Hills, CA 92653
Phone: (949) 348-9389
Fax: (949) 348-9115
Laboratory Contact: Nick Forsyth

Turn Around Time Requested: ■ Normal ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4 Day ☐ 5 Day

RECEIVING LABORATORY:

Frontier Analytical Labs
5172 Hillsdale Circle
Eldorado Hills, CA 95762
Phone :
Fax:

Analysis	Expires	Sampled:	Laboratory ID	Comments
Sample ID: B-1 (1202005-01)	**Soil**	**01/09/12 09:30**		
Dioxin 8280 (2378-TCDD)	02/08/12 09:30			
Containers Supplied: 8 oz. Jar (A)				
Sample ID: B-2 (1202005-02)	**Soil**	**01/09/12 09:50**		
Dioxin 8280 (2378-TCDD)	02/08/12 09:50			
Containers Supplied: 8 oz. Jar (A)				
Sample ID: B-4 (1202005-03)	**Soil**	**01/09/12 11:00**		
Dioxin 8280 (2378-TCDD)	02/08/12 11:00			
Containers Supplied: 8 oz. Jar (A)				
Sample ID: B-8 (1202005-04)	**Soil**	**01/10/12 10:35**		
Dioxin 8280 (2378-TCDD)	02/09/12 10:35			
Containers Supplied: 8 oz. Jar (A)				

Special Instructions :
PLEASE SHIP TRACE ICE CHEST! THANK YOU

☐ Intact ☐ Sample Seals
☐ Properly Labeled ☐ Chilled TEMP (°C) ____
☐ Appropriate Container ☐ Preservatives - Verified By

Relinquished By	Date / Time	Received By	Date / Time
	2/4/12 1530		2-2-12 1042
Relinquished By	Date / Time	Received By	Date / Time
Relinquished By	Date / Time	Received By	Date / Time

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **7209**

Client:	Sierra Analytical Laboratories
Client Project ID:	1202005
Date Received:	02/02/2012
Time Received:	10:42 am
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	4
Duplicates:	0
Storage Location:	R1

Method of Delivery:	UPS
Tracking Number:	1Z693W100143959111
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	2
Cooling Method	Blue Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test for residual Chlorine	No
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	02/08/2012
Adequate Sample Volume	Yes
pH Range	N/A
Anomalies or additional comments:	

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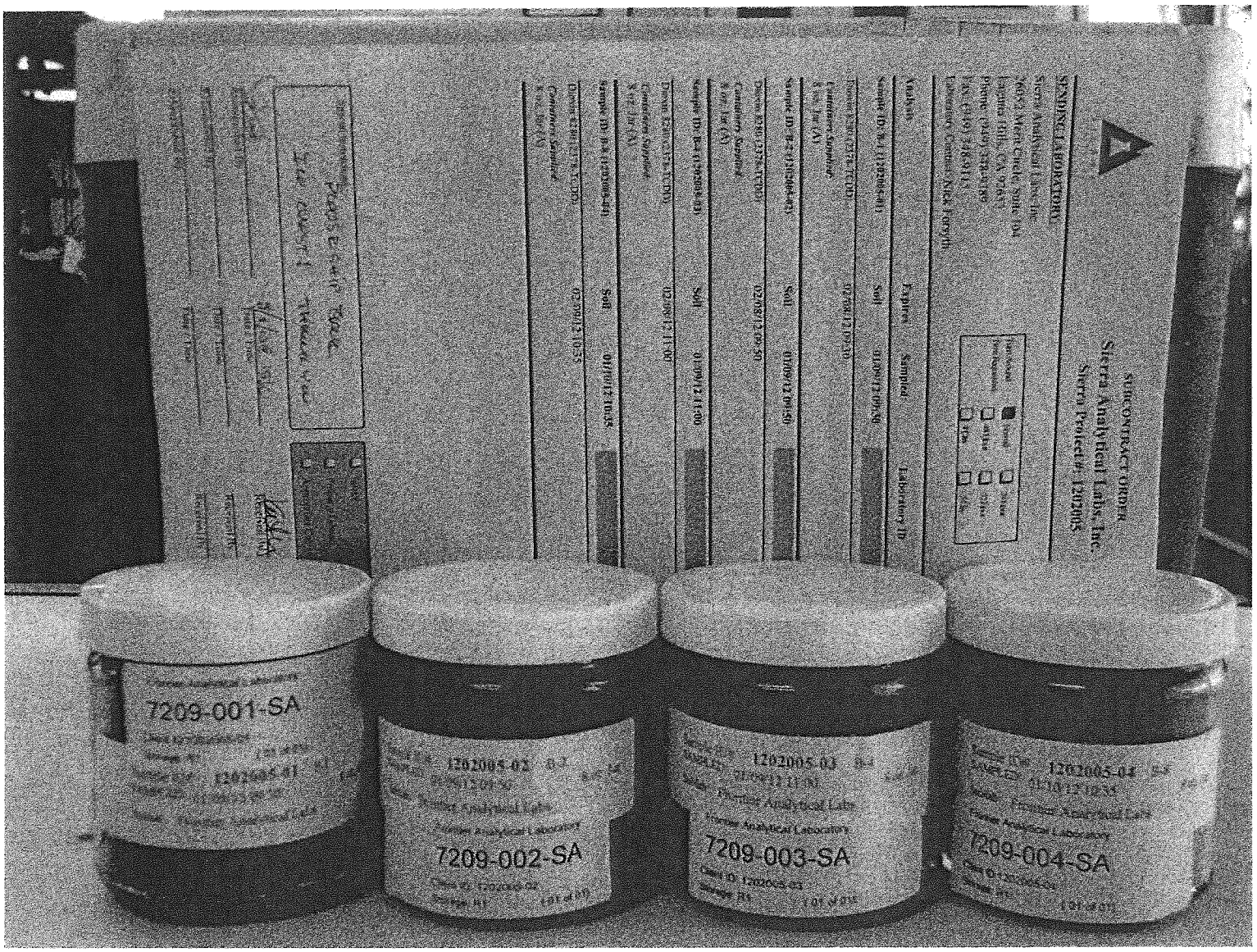

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Certificate of Analysis

Report Date: Tuesday, March 13, 2012
Received Date: Friday, February 10, 2012
Received Time: 10:00 am
Turnaround Time: Normal

Client: Sierra Analytical
26052 Merit Circle, Suite 105
Laguna Hills, CA 92653

Phones: (949) 348-9389
Fax: (949) 348-9115

Attn: Nick Forsyth
Project: 1202005

P.O. #:

Lab Sample ID: 2B10027-01 **Sample ID: B-1 (1202005-01)** **Matrix:** Soil
Sampled by: Client **Sampled: 01/09/12 09:30**

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
1,4-Dioxane	ND		230	ug/kg	1	EPA 8270M	2/13/12	2/15/12 14:49	W2B0498	O-09
3-Hydroxycarbofuran	ND	11	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Aldicarb	ND	5.0	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Aldicarb sulfone	ND	3.7	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Carbaryl	ND	13	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Carbofuran	ND	5.4	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Methiocarb	ND	5.0	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Methomyl	ND	3.8	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Oxamyl	ND	16	50	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Propoxur (Baygon)	ND	5.1	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05

Lab Sample ID: 2B10027-02 **Sample ID: B-2 (1202005-02)** **Matrix:** Soil
Sampled by: Client **Sampled: 01/09/12 09:50**

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
1,4-Dioxane	ND		250	ug/kg	1	EPA 8270M	2/13/12	2/15/12 15:08	W2B0498	O-09
3-Hydroxycarbofuran	ND	11	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Aldicarb	ND	5.0	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Aldicarb sulfone	ND	3.7	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Carbaryl	ND	13	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Carbofuran	ND	5.4	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Methiocarb	ND	5.0	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Methomyl	ND	3.8	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Oxamyl	ND	16	50	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Propoxur (Baygon)	ND	5.1	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05

Lab Sample ID: 2B10027-03 **Sample ID: B-4 (1202005-03)** **Matrix:** Soil
Sampled by: Client **Sampled: 01/09/12 11:00**

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
1,4-Dioxane	ND		250	ug/kg	1	EPA 8270M	2/13/12	2/15/12 15:27	W2B0498	O-09
3-Hydroxycarbofuran	ND	11	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Aldicarb	ND	5.0	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05

Certificate of Analysis

Lab Sample ID: 2B10027-03 **Sample ID:** B-4 (1202005-03) **Matrix:** Soil
Sampled by: Client **Sampled:** 01/09/12 11:00

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Aldicarb sulfone	ND	3.7	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Carbaryl	ND	13	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Carbofuran	ND	5.4	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Methiocarb	ND	5.0	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Methomyl	ND	3.8	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Oxamyl	ND	16	50	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Propoxur (Baygon)	ND	5.1	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05

Lab Sample ID: 2B10027-04 **Sample ID:** B-8 (1202005-04) **Matrix:** Soil
Sampled by: Client **Sampled:** 01/10/12 10:35

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
1,4-Dioxane	ND		250	ug/kg	1	EPA 8270M	2/13/12	2/15/12 15:46	W2B0498	O-09
3-Hydroxycarbofuran	ND	11	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Aldicarb	ND	5.0	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Aldicarb sulfone	ND	3.7	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Carbaryl	ND	13	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Carbofuran	ND	5.4	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Methiocarb	ND	5.0	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Methomyl	ND	3.8	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Oxamyl	ND	16	50	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05
Propoxur (Baygon)	ND	5.1	25	ug/kg	1	EPA 8318	3/9/12	3/12/12 19:00	W2B0499	O-05

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Quality Control Section

1,4-Dioxane Low Level by isotopic dilution GC/MS - Quality Control

Batch W2B0498 - EPA 8270M

Blank (W2B0498-BLK1) — **Prepared: 02/13/12 Analyzed: 02/15/12 13:33**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
1,4-Dioxane		ND		ug/kg					

LCS (W2B0498-BS1) — **Prepared: 02/13/12 Analyzed: 02/15/12 13:52**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
1,4-Dioxane		512		ug/kg	500	102	67-130		

Matrix Spike (W2B0498-MS1) — **Source: 2B10027-01** — **Prepared: 02/13/12 Analyzed: 02/15/12 14:11**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
1,4-Dioxane	0.00	5130		ug/kg	4850	106	55-143		

Matrix Spike Dup (W2B0498-MSD1) — **Source: 2B10027-01** — **Prepared: 02/13/12 Analyzed: 02/15/12 14:30**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
1,4-Dioxane	0.00	5240		ug/kg	4980	105	55-143	2	30

Carbamates and Urea Pesticides - Quality Control

Batch W2B0499 - EPA 8318

Blank (W2B0499-BLK1) — **Prepared: 03/09/12 Analyzed: 03/12/12 19:00**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Aldicarb sulfone		ND		ug/kg					
Methomyl		ND		ug/kg					
3-Hydroxycarbofuran		ND		ug/kg					
Aldicarb		ND		ug/kg					
Propoxur (Baygon)		ND		ug/kg					
Carbofuran		ND		ug/kg					
Carbaryl		ND		ug/kg					
Methiocarb		ND		ug/kg					
Oxamyl		ND		ug/kg					

LCS (W2B0499-BS1) — **Prepared: 03/09/12 Analyzed: 03/12/12 19:00**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Aldicarb sulfone		50.1		ug/kg	50.0	100	52-137		
Methomyl		43.1		ug/kg	50.0	86	45-153		
3-Hydroxycarbofuran		50.4		ug/kg	50.0	101	47-130		
Aldicarb		18.7	BS-03	ug/kg	50.0	37	47-142		
Propoxur (Baygon)		43.5		ug/kg	50.0	87	58-127		
Carbofuran		39.2		ug/kg	50.0	78	64-128		
Carbaryl		23.2		ug/kg	50.0	46	34-130		
Methiocarb		ND	BS-03	ug/kg	50.0	NR	17-153		

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Carbamates and Urea Pesticides - Quality Control

Batch W2B0499 - EPA 8318

Matrix Spike (W2B0499-MS1) **Source: 2B10027-02** **Prepared: 03/09/12** **Analyzed: 03/12/12 19:00**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Aldicarb sulfone	ND	47.0		ug/kg	50.0	94	45-147		
Methomyl	ND	39.8		ug/kg	50.0	80	28-156		
3-Hydroxycarbofuran	ND	43.5		ug/kg	50.0	87	47-130		
Aldicarb	ND	34.1		ug/kg	50.0	68	46-119		
Propoxur (Baygon)	ND	40.5		ug/kg	50.0	81	45-144		
Carbofuran	ND	35.8		ug/kg	50.0	72	66-139		
Carbaryl	ND	21.6		ug/kg	50.0	43	34-130		
Methiocarb	ND	ND		ug/kg	50.0	NR	17-153		

Matrix Spike Dup (W2B0499-MSD1) **Source: 2B10027-02** **Prepared: 03/09/12** **Analyzed: 03/12/12 19:00**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Aldicarb sulfone	ND	47.9		ug/kg	50.0	96	45-147	2	20
Methomyl	ND	40.5		ug/kg	50.0	81	28-156	2	20
3-Hydroxycarbofuran	ND	47.0		ug/kg	50.0	94	47-130	8	20
Aldicarb	ND	32.6		ug/kg	50.0	65	46-119	4	20
Propoxur (Baygon)	ND	42.7		ug/kg	50.0	85	45-144	5	20
Carbofuran	ND	39.4		ug/kg	50.0	79	66-139	10	20
Carbaryl	ND	25.5		ug/kg	50.0	51	34-130	16	20
Methiocarb	ND	ND	QR-04	ug/kg	50.0	NR	17-153	200	20

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Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Authorized Signature

Contact: Kim G Tu (Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

BS-03	The recovery of this analyte in the BS/LCS was outside the control limits. The sample result was accepted based on another acceptable BS/LCS and/or MS and MSD that meet BS criteria.
O-05	The extraction for this analyte was performed outside of the EPA recommended holding time.
O-09	This sample was received with the EPA recommended holding time expired.
QR-04	The RPD value for the MS/MSD was outside of QC acceptance limits however both recoveries were acceptable. The QC batch was accepted based on acceptable results for the recoveries and RPD for the LCS and LCSD.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity
NR	Not Reportable

Weck Laboratories, Inc 14859 East Clark Avenue, City of Industry, California 91745-1396 (626) 336-2139 FAX (626) 336-2634
www.wecklabs.com

SIERRA ANALYTICAL
TEL: 949•348•9389
FAX: 949•348•9115
26052 Merit Circle• Suite 105•Laguna Hills, CA•92653

CHAIN OF CUSTODY RECORD

Date: 2/1/12 Page 1 of 1

Lab Project No.: 1202005

Client: County of LA, Dep. Public Works
Client Address: 900 S Fremont Ave, Alhambra, CA 91803-1331
Client Tel. No.: 626 458 4923
Client Fax. No.: 626 458 4913
Client Proj. Mgr.: Geir Mathisen

Client Project ID: HF00710003
ENC#: 12C00000299
B&T. Res. Sed. Chor. Program

Turn Around Time Requested: ☐ Immediate ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4 Day ☐ 5 Day ☑ Normal ☐ Mobile

Analysis Requested

Geotracker EDD Info:
Client LOGCODE
Site Global ID

Client Sample ID.	Sierra No.	Date	Time	Matrix	Preservative	Container Type	No. of Containers	1,4-Dioxane	Dioxin	Carbamate Pesticide	Field Point Names/ Comments
B-1	01	1/9/12	9:30	SOIL	ICE	JAR 802	1	X	X	X	
B-2	02	1/9/12	9:50	"	"	"	1	X	X	X	
B-4	03	1/9/12	11:00	"	"	"	1	X	X	X	
B-8	04	1/10/12	10:35	"	"	"	1	X	X	X	

1 Sampler Signature: [signature] Printed Name: GEIR MATHISEN
Shipped Via:
(Carrier/Waybill No.)

4 Total Number of Containers Submitted to Laboratory

Sample Disposal:
☐ Return to Client
☑ Lab Disposal*
☐ Archive ____ mos.
☐ Other ____

2 Relinquished By: Geir Mathisen Date: 2/1/12 Time: 11:00 Company: LACDPW
Received By: [signature] Date: 2/1/12 Time: 11:00 Company: Sierra

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analysis specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT.
* - Samples determined to be hazardous by SIERRA will be returned to CLIENT.

3 Relinquished By: Date: Time: Company:
Received By: Date: Time: Company:

4 Total Number of Containers Received by Laboratory

4 Relinquished By: Date: Time: Company:
Received By: Date: Time: Company:

FOR LABORATORY USE ONLY - Sample Receipt Conditions:

☑ Intact ☑ Chilled - Temp. (°C) 4.0
☐ Sample Seals ☐ Preservatives - Verified By
☑ Properly Labelled ☐ Other
☑ Appropriate Sample Container ☑ Storage Location Room 124BS / Environmental 124BS

Special Instructions: Test for remainder analytes according to attached quote and tables.

DISTRIBUTION: White - To Accompany Samples, Yellow - Laboratory Copy, Pink - Field Personnel Copy

SIERRA ANALYTICAL

25 April 2012

Geir Mathisen
Los Angeles County Dept. of Public Works
900 S. Fremont Ave.
Alhambra, CA 91803

RE:Big T Res. Sed. Char. Program

Work Order No.: 1204233

Attached are the results of the analyses for samples received by the laboratory on 04/19/12 11:00.

The samples were received by Sierra Analytical Labs, Inc. with a chain of custody record attached or completed at the submittal of the samples.

The analyses were performed according to the prescribed method as outlined by EPA, Standard Methods, and A.S.T.M.

The remaining portions of the samples will be disposed of within 30 days from the date of this report.
If you require any additional retaining time, please advise us.

Sincerely,

Richard K. Forsyth

Richard K. Forsyth

Laboratory Director

Sierra Analytical Labs, Inc. is certified by the California Department of Health Services (DOHS),
Environmental Laboratory Accredidation Program (ELAP) No. 2320.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-10-2	1204233-01	Soil	04/18/12 11:50	04/19/12 11:00

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 4°C, and accompanied by chain of custody documentation.
PRESERVATION: Samples requiring preservation were verified prior to sample preparation and analysis.
HOLDING TIMES: All holding times were met, unless otherwises noted in the report with data qualifiers.
QA/QC CRITERIA: All quality objective criteria were met, except as noted in the report with data qualifiers.

26052 MERIT CIRCLE SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
TELEPHONE: (949) 348-9389 FAX: (949) 348-9115
E-MAIL: SIERRALABS @ SIERRALABS.NET

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Metals by EPA 6000/7000 Series Methods

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-10-2 (1204233-01) Soil Sampled: 04/18/12 11:50 Received: 04/19/12 11:00									
Silver	ND	1.0	mg/kg	1	B2D2002	04/20/12	04/23/12 15:42	EPA 6010B	
Arsenic	ND	3.5	"	"	"	"	04/23/12 15:43	"	
Barium	**37**	6.5	"	"	"	"	04/23/12 15:42	"	
Beryllium	ND	0.50	"	"	"	"	"	"	
Cadmium	ND	0.50	"	"	"	"	04/23/12 15:43	"	
Cobalt	**7.3**	2.5	"	"	"	"	"	"	
Chromium	**4.8**	3.0	"	"	"	"	"	"	
Copper	**12**	2.0	"	"	"	"	04/23/12 15:42	"	
Mercury	ND	0.15	"	"	B2D2004	04/20/12	04/20/12 18:47	EPA 7471A	
Molybdenum	ND	1.0	"	"	B2D2002	04/20/12	04/23/12 15:43	EPA 6010B	
Nickel	**6.5**	4.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Antimony	ND	2.5	"	"	"	"	"	"	
Selenium	ND	6.0	"	"	"	"	"	"	
Thallium	ND	2.5	"	"	"	"	"	"	
Vanadium	**9.1**	6.0	"	"	"	"	04/23/12 15:42	"	
Zinc	**11**	10	"	"	"	"	04/23/12 15:43	"	

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Los Angeles County Dept. of Public Works	Project:	Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number:	HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager:	Geir Mathisen	04/25/12 13:42

Organochlorine Pesticides by EPA Method 8081A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-10-2 (1204233-01) Soil Sampled: 04/18/12 11:50 Received: 04/19/12 11:00									
Aldrin	ND	0.0020	mg/kg	1	B2D2104	04/21/12	04/23/12 08:09	EPA 8081A	
HCH-alpha	ND	0.0020	"	"	"	"	"	"	
HCH-beta	ND	0.0040	"	"	"	"	"	"	
HCH-delta	ND	0.0020	"	"	"	"	"	"	
HCH-gamma (Lindane)	ND	0.0020	"	"	"	"	"	"	
Chlordane	ND	0.0040	"	"	"	"	"	"	
4,4´-DDD	ND	0.0030	"	"	"	"	"	"	
4,4´-DDE	ND	0.0020	"	"	"	"	"	"	
4,4´-DDT	ND	0.0030	"	"	"	"	"	"	
Dieldrin	ND	0.0020	"	"	"	"	"	"	
Endosulfan I	ND	0.0020	"	"	"	"	"	"	
Endosulfan II	ND	0.0040	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.0020	"	"	"	"	"	"	
Endrin	ND	0.0020	"	"	"	"	"	"	
Endrin aldehyde	ND	0.0020	"	"	"	"	"	"	
Endrin ketone	ND	0.0020	"	"	"	"	"	"	
Heptachlor	ND	0.0020	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.0020	"	"	"	"	"	"	
Methoxychlor	ND	0.010	"	"	"	"	"	"	
Toxaphene	ND	0.040	"	"	"	"	"	"	
Mirex	ND	0.0040	"	"	"	"	"	"	
Kepone	ND	0.0040	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*139 %*	*42-147*		*"*	*"*	*"*	*"*	
Surrogate: Tetrachloro-meta-xylene		*76.8 %*	*42-147*		*"*	*"*	*"*	*"*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project:	Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number:	HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager:	Geir Mathisen	04/25/12 13:42

Polychlorinated Biphenyls by EPA Method 8082

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-10-2 (1204233-01) Soil Sampled: 04/18/12 11:50 Received: 04/19/12 11:00									
PCB-1016	ND	0.020	mg/kg	1	B2D2104	04/21/12	04/23/12 08:09	EPA 8082	
PCB-1221	ND	0.020	"	"	"	"	"	"	
PCB-1232	ND	0.020	"	"	"	"	"	"	
PCB-1242	ND	0.020	"	"	"	"	"	"	
PCB-1248	ND	0.020	"	"	"	"	"	"	
PCB-1254	ND	0.020	"	"	"	"	"	"	
PCB-1260	ND	0.020	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*139 %*		*42-147*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*76.8 %*		*42-147*	"	"	"	"	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Chlorinated Herbicides by EPA Method 8151A

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-10-2 (1204233-01) Soil Sampled: 04/18/12 11:50 Received: 04/19/12 11:00									
2,4,5-T	ND	1.6	µg/kg	1	B2D2302	04/23/12	04/23/12 08:40	EPA 8151A	
2,4,5-TP (Silvex)	ND	1.6	"	"	"	"	"	"	
2,4-D	ND	1.6	"	"	"	"	"	"	
2,4-DB	ND	4.0	"	"	"	"	"	"	
3,5-Dichlorobenzoic acid	ND	2.0	"	"	"	"	"	"	
4-Nitrophenol	ND	2.0	"	"	"	"	"	"	
Acifluorfen	ND	1.6	"	"	"	"	"	"	
Bentazon	ND	1.6	"	"	"	"	"	"	
Chloramben	ND	1.6	"	"	"	"	"	"	
Dalapon	ND	20	"	"	"	"	"	"	
DCPA diacid	ND	1.6	"	"	"	"	"	"	
Dicamba	ND	1.6	"	"	"	"	"	"	
Dichlorprop	ND	1.6	"	"	"	"	"	"	
Dinoseb	ND	1.6	"	"	"	"	"	"	
Pentachlorophenol	ND	1.6	"	"	"	"	"	"	
Picloram	ND	1.6	"	"	"	"	"	"	
Surrogate: 2,4-Dichlorophenylacetic Acid		*124 %*		*35-150*	"	"	"	"	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-10-2 (1204233-01) Soil Sampled: 04/18/12 11:50 Received: 04/19/12 11:00									
Benzene	**58**	5.0	µg/kg	1	B2D2102	04/21/12	04/21/12 10:25	EPA 8260B	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-10-2 (1204233-01) Soil Sampled: 04/18/12 11:50 Received: 04/19/12 11:00									
Methylene chloride	ND	5.0	µg/kg	1	B2D2102	04/21/12	04/21/12 10:25	EPA 8260B	
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	5.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	25	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*		*80-120*	"	"	"	"	
Surrogate: Toluene-d8		*94.4 %*		*81-117*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*		*74-121*	"	"	"	"	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-10-2 (1204233-01) Soil Sampled: 04/18/12 11:50 Received: 04/19/12 11:00									
Acenaphthene	ND	0.33	mg/kg	1	B2D1107	04/20/12	04/20/12 19:09	EPA 8270C	
Acenaphthylene	ND	0.33	"	"	"	"	"	"	
Anthracene	ND	0.33	"	"	"	"	"	"	
Benzidine	ND	0.33	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.33	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.33	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.33	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.33	"	"	"	"	"	"	
Benzyl alcohol	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	0.33	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	0.33	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	0.33	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	0.33	"	"	"	"	"	"	
4-Chloroaniline	ND	0.33	"	"	"	"	"	"	
2-Chlorophenol	ND	0.33	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	0.33	"	"	"	"	"	"	
2-Chloronaphthalene	ND	0.33	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	0.33	"	"	"	"	"	"	
Chrysene	ND	0.33	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.33	"	"	"	"	"	"	
Dibenzofuran	ND	0.33	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.33	"	"	"	"	"	"	
3,3´-Dichlorobenzidine	ND	0.33	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	0.33	"	"	"	"	"	"	
Diethyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	0.33	"	"	"	"	"	"	
Dimethyl phthalate	ND	0.33	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	0.33	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	0.33	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	0.33	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	0.33	"	"	"	"	"	"	
1,2-Diphenylhydrazine	ND	0.33	"	"	"	"	"	"	
Fluoranthene	ND	0.33	"	"	"	"	"	"	
Fluorene	ND	0.33	"	"	"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Semivolatile Organic Compounds by EPA Method 8270C

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-10-2 (1204233-01) Soil Sampled: 04/18/12 11:50 Received: 04/19/12 11:00									
Hexachlorobenzene	ND	0.33	mg/kg	1	B2D1107	04/20/12	04/20/12 19:09	EPA 8270C	
Hexachlorobutadiene	ND	0.33	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	0.33	"	"	"	"	"	"	
Hexachloroethane	ND	0.33	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.33	"	"	"	"	"	"	
Isophorone	ND	0.33	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.33	"	"	"	"	"	"	
2-Methylphenol	ND	0.33	"	"	"	"	"	"	
4-Methylphenol	ND	0.33	"	"	"	"	"	"	
Naphthalene	ND	0.33	"	"	"	"	"	"	
2-Nitroaniline	ND	0.33	"	"	"	"	"	"	
3-Nitroaniline	ND	0.33	"	"	"	"	"	"	
4-Nitroaniline	ND	0.33	"	"	"	"	"	"	
Nitrobenzene	ND	0.33	"	"	"	"	"	"	
2-Nitrophenol	ND	0.33	"	"	"	"	"	"	
4-Nitrophenol	ND	0.33	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	0.33	"	"	"	"	"	"	
Diphenylamine	ND	0.33	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	0.33	"	"	"	"	"	"	
Pentachlorophenol	ND	0.33	"	"	"	"	"	"	
Phenanthrene	ND	0.33	"	"	"	"	"	"	
Phenol	ND	0.33	"	"	"	"	"	"	
Pyrene	ND	0.33	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.33	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	0.33	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*80.4 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*79.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*95.2 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*91.3 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*69.8 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-d14		*96.7 %*	*18-137*		"	"	"	"	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Polynuclear Aromatic Compounds by EPA Method 8310

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-10-2 (1204233-01) Soil Sampled: 04/18/12 11:50 Received: 04/19/12 11:00									
Naphthalene	ND	40.0	µg/kg	1	B2D2408	04/24/12	04/25/12 10:19	EPA 8310	
Acenaphthylene	ND	200	"	"	"	"	"	"	
Acenaphthene	ND	50.0	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	2.00	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	2.00	"	"	"	"	"	"	
Chrysene	ND	5.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	2.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	2.00	"	"	"	"	"	"	
Dibenzo(a,h)anthracene	ND	5.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	5.00	"	"	"	"	"	"	
Surrogate: Decafluorobiphenyl		*59.2 %*	*30-140*		*"*	*"*	*"*	*"*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2002 - EPA 3050B										
Blank (B2D2002-BLK1)				Prepared: 04/20/12 Analyzed: 04/23/12						
Antimony	ND	2.5	mg/kg							
Arsenic	ND	3.5	"							
Barium	ND	6.5	"							
Beryllium	ND	0.50	"							
Cadmium	ND	0.50	"							
Chromium	ND	3.0	"							
Cobalt	ND	2.5	"							
Copper	ND	2.0	"							
Lead	ND	3.0	"							
Molybdenum	ND	1.0	"							
Nickel	ND	4.0	"							
Selenium	ND	6.0	"							
Silver	ND	1.0	"							
Thallium	ND	2.5	"							
Vanadium	ND	6.0	"							
Zinc	ND	10	"							
LCS (B2D2002-BS1)				Prepared: 04/20/12 Analyzed: 04/23/12						
Antimony	97.8	2.5	mg/kg	100		97.8	75-125			
Arsenic	97.2	3.5	"	100		97.2	78-122			
Barium	102	6.5	"	100		102	80-120			
Beryllium	95.8	0.50	"	100		95.8	80-120			
Cadmium	96.4	0.50	"	100		96.4	80-120			
Chromium	101	3.0	"	100		101	80-120			
Cobalt	104	2.5	"	100		104	80-120			
Copper	99.9	2.0	"	100		99.9	78-122			
Lead	99.8	3.0	"	100		99.8	80-120			
Molybdenum	99.5	1.0	"	100		99.5	80-120			
Nickel	105	4.0	"	100		105	80-120			
Selenium	90.5	6.0	"	100		90.5	76-124			
Silver	96.1	1.0	"	100		96.1	60-140			
Thallium	98.6	2.5	"	100		98.6	80-120			
Vanadium	96.7	6.0	"	100		96.7	80-120			
Zinc	94.7	10	"	100		94.7	80-120			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2002 - EPA 3050B										
LCS Dup (B2D2002-BSD1)				Prepared: 04/20/12 Analyzed: 04/23/12						
Antimony	101	2.5	mg/kg	100		101	75-125	3.22	20	
Arsenic	99.9	3.5	"	100		99.9	78-122	2.74	20	
Barium	104	6.5	"	100		104	80-120	1.94	20	
Beryllium	98.1	0.50	"	100		98.1	80-120	2.37	20	
Cadmium	97.9	0.50	"	100		97.9	80-120	1.54	20	
Chromium	102	3.0	"	100		102	80-120	0.985	20	
Cobalt	106	2.5	"	100		106	80-120	1.90	20	
Copper	104	2.0	"	100		104	78-122	4.02	20	
Lead	103	3.0	"	100		103	80-120	3.16	20	
Molybdenum	101	1.0	"	100		101	80-120	1.50	20	
Nickel	106	4.0	"	100		106	80-120	0.948	20	
Selenium	92.9	6.0	"	100		92.9	76-124	2.62	20	
Silver	98.7	1.0	"	100		98.7	60-140	2.67	40	
Thallium	103	2.5	"	100		103	80-120	4.37	20	
Vanadium	98.2	6.0	"	100		98.2	80-120	1.54	20	
Zinc	96.9	10	"	100		96.9	80-120	2.30	20	
Matrix Spike (B2D2002-MS1)		**Source: 1204233-01**		Prepared: 04/20/12 Analyzed: 04/23/12						
Antimony	79.6	2.5	mg/kg	97.0	0.41	81.6	47.8-140			
Arsenic	93.1	3.5	"	97.0	ND	96.0	70-130			
Barium	151	6.5	"	97.0	37	118	70-130			
Beryllium	95.0	0.50	"	97.0	ND	97.9	70-130			
Cadmium	93.0	0.50	"	97.0	ND	95.9	70-130			
Chromium	98.7	3.0	"	97.0	4.8	96.8	70-130			
Cobalt	102	2.5	"	97.0	7.3	97.6	70-130			
Copper	106	2.0	"	97.0	12	96.9	70-130			
Lead	96.5	3.0	"	97.0	1.1	98.4	70-130			
Molybdenum	94.2	1.0	"	97.0	0.52	96.6	70-130			
Nickel	105	4.0	"	97.0	6.5	102	70-130			
Selenium	89.5	6.0	"	97.0	ND	92.3	62.6-130			
Silver	92.8	1.0	"	97.0	ND	95.7	60-140			
Thallium	94.3	2.5	"	97.0	ND	97.2	56.9-130			
Vanadium	100	6.0	"	97.0	9.1	93.7	70-130			
Zinc	101	10	"	97.0	11	92.8	70-130			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2002 - EPA 3050B										
Matrix Spike Dup (B2D2002-MSD1)	**Source: 1204233-01**			Prepared: 04/20/12 Analyzed: 04/23/12						
Antimony	81.6	2.5	mg/kg	94.7	0.41	85.7	47.8-140	2.48	20	
Arsenic	93.8	3.5	"	94.7	ND	99.0	70-130	0.749	20	
Barium	137	6.5	"	94.7	37	106	70-130	9.72	20	
Beryllium	94.4	0.50	"	94.7	ND	99.7	70-130	0.634	20	
Cadmium	92.6	0.50	"	94.7	ND	97.8	70-130	0.431	20	
Chromium	98.6	3.0	"	94.7	4.8	99.0	70-130	0.101	20	
Cobalt	104	2.5	"	94.7	7.3	102	70-130	1.94	20	
Copper	105	2.0	"	94.7	12	98.2	70-130	0.948	30	
Lead	97.9	3.0	"	94.7	1.1	102	70-130	1.44	30	
Molybdenum	94.0	1.0	"	94.7	0.52	98.7	70-130	0.213	20	
Nickel	103	4.0	"	94.7	6.5	102	70-130	1.92	20	
Selenium	90.4	6.0	"	94.7	ND	95.5	62.6-130	1.00	20	
Silver	92.6	1.0	"	94.7	ND	97.8	60-140	0.216	40	
Thallium	95.0	2.5	"	94.7	ND	100	56.9-130	0.740	20	
Vanadium	102	6.0	"	94.7	9.1	98.1	70-130	1.98	20	
Zinc	102	10	"	94.7	11	96.1	70-130	0.985	20	
Batch B2D2004 - EPA 7471A										
Blank (B2D2004-BLK1)				Prepared & Analyzed: 04/20/12						
Mercury	ND	0.15	mg/kg							
LCS (B2D2004-BS1)				Prepared & Analyzed: 04/20/12						
Mercury	0.17	0.15	mg/kg	0.167		102	70-130			
Matrix Spike (B2D2004-MS1)	**Source: 1204233-01**			Prepared & Analyzed: 04/20/12						
Mercury	0.20	0.15	mg/kg	0.166	ND	120	70-130			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Metals by EPA 6000/7000 Series Methods - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2004 - EPA 7471A										
Matrix Spike Dup (B2D2004-MSD1)	**Source: 1204233-01**			Prepared & Analyzed: 04/20/12						
Mercury	0.18	0.15	mg/kg	0.156	ND	115	70-130	10.5	30	

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Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2104 - EPA 3550B Solid Ext										
Blank (B2D2104-BLK1)				Prepared: 04/21/12 Analyzed: 04/23/12						
Aldrin	ND	0.0020	mg/kg							
HCH-alpha	ND	0.0020	"							
HCH-beta	ND	0.0040	"							
HCH-delta	ND	0.0020	"							
HCH-gamma (Lindane)	ND	0.0020	"							
Chlordane	ND	0.0040	"							
4,4´-DDD	ND	0.0030	"							
4,4´-DDE	ND	0.0020	"							
4,4´-DDT	ND	0.0030	"							
Dieldrin	ND	0.0020	"							
Endosulfan I	ND	0.0020	"							
Endosulfan II	ND	0.0040	"							
Endosulfan sulfate	ND	0.0020	"							
Endrin	ND	0.0020	"							
Endrin aldehyde	ND	0.0020	"							
Endrin ketone	ND	0.0020	"							
Heptachlor	ND	0.0020	"							
Heptachlor epoxide	ND	0.0020	"							
Methoxychlor	ND	0.010	"							
Toxaphene	ND	0.040	"							
Mirex	ND	0.0040	"							
Kepone	ND	0.0040	"							
Surrogate: Decachlorobiphenyl	*0.0106*		*"*	*0.00833*		*127*	*42-147*			
Surrogate: Tetrachloro-meta-xylene	*0.00759*		*"*	*0.00833*		*91.1*	*42-147*			
LCS (B2D2104-BS1)				Prepared: 04/21/12 Analyzed: 04/23/12						
Aldrin	0.00290	0.0020	mg/kg	0.00267		109	80-120			
HCH-gamma (Lindane)	0.00302	0.0020	"	0.00267		113	80-120			
4,4´-DDT	0.00739	0.0030	"	0.00667		111	80-120			
Dieldrin	0.00592	0.0020	"	0.00667		88.8	80-120			
Heptachlor	0.00282	0.0020	"	0.00267		106	80-120			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2104 - EPA 3550B Solid Ext										
Matrix Spike (B2D2104-MS1)		**Source: 1204233-01**		Prepared: 04/21/12		Analyzed: 04/23/12				
Aldrin	0.00249	0.0020	mg/kg	0.00267	ND	93.3	50-150			
HCH-gamma (Lindane)	0.00314	0.0020	"	0.00267	ND	118	50-150			
4,4´-DDT	0.00530	0.0030	"	0.00667	ND	79.5	50-150			
Dieldrin	0.00622	0.0020	"	0.00667	ND	93.3	50-150			
Heptachlor	0.00215	0.0020	"	0.00267	ND	80.5	50-150			
Matrix Spike Dup (B2D2104-MSD1)		**Source: 1204233-01**		Prepared: 04/21/12		Analyzed: 04/23/12				
Aldrin	0.00273	0.0020	mg/kg	0.00267	ND	102	50-150	9.20	30	
HCH-gamma (Lindane)	0.00293	0.0020	"	0.00267	ND	110	50-150	6.92	30	
4,4´-DDT	0.00666	0.0030	"	0.00667	ND	99.9	50-150	22.7	30	
Dieldrin	0.00772	0.0020	"	0.00667	ND	116	50-150	21.5	30	
Heptachlor	0.00261	0.0020	"	0.00267	ND	97.8	50-150	19.3	30	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2104 - EPA 3550B Solid Ext										
Blank (B2D2104-BLK1)				Prepared: 04/21/12 Analyzed: 04/23/12						
PCB-1016	ND	0.020	mg/kg							
PCB-1221	ND	0.020	"							
PCB-1232	ND	0.020	"							
PCB-1242	ND	0.020	"							
PCB-1248	ND	0.020	"							
PCB-1254	ND	0.020	"							
PCB-1260	ND	0.020	"							
Surrogate: Decachlorobiphenyl	*0.0111*		*"*	*0.00833*		*133*	*42-147*			
Surrogate: Tetrachloro-meta-xylene	*0.0111*		*"*	*0.00833*		*133*	*42-147*			
LCS (B2D2104-BS1)				Prepared: 04/21/12 Analyzed: 04/23/12						
PCB-1260	0.0662	0.020	mg/kg	0.0667		99.3	80-120			
Matrix Spike (B2D2104-MS1)		**Source: 1204233-01**		Prepared: 04/21/12 Analyzed: 04/23/12						
PCB-1260	0.0683	0.020	mg/kg	0.0667	ND	102	50-150			
Matrix Spike Dup (B2D2104-MSD1)		**Source: 1204233-01**		Prepared: 04/21/12 Analyzed: 04/23/12						
PCB-1260	0.0692	0.020	mg/kg	0.0667	ND	104	50-150	1.31	30	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Chlorinated Herbicides by EPA Method 8151A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2302 - EPA 8151A Herbicides										
Blank (B2D2302-BLK1)				Prepared & Analyzed: 04/23/12						
2,4,5-T	ND	1.6	µg/kg							
2,4,5-TP (Silvex)	ND	1.6	"							
2,4-D	ND	1.6	"							
2,4-DB	ND	4.0	"							
3,5-Dichlorobenzoic acid	ND	2.0	"							
4-Nitrophenol	ND	2.0	"							
Acifluorfen	ND	1.6	"							
Bentazon	ND	1.6	"							
Chloramben	ND	1.6	"							
Dalapon	ND	20	"							
DCPA diacid	ND	1.6	"							
Dicamba	ND	1.6	"							
Dichlorprop	ND	1.6	"							
Dinoseb	ND	1.6	"							
Pentachlorophenol	ND	1.6	"							
Picloram	ND	1.6	"							
Surrogate: 2,4-Dichlorophenylacetic Acid	*106*		*"*	*100*		*106*	*35-150*			
LCS (B2D2302-BS1)				Prepared & Analyzed: 04/23/12						
2,4,5-T	10.1	1.6	µg/kg	10.0		101	20-150			
2,4,5-TP (Silvex)	8.96	1.6	"	10.0		89.6	20-150			
Dichlorprop	9.63	1.6	"	10.0		96.3	20-150			
Dinoseb	6.48	1.6	"	10.0		64.8	20-150			
Matrix Spike (B2D2302-MS1)	**Source: 1204233-01**			Prepared & Analyzed: 04/23/12						
2,4,5-T	4.78	1.6	µg/kg	10.0	ND	47.8	20-150			
2,4,5-TP (Silvex)	9.65	1.6	"	10.0	ND	96.5	20-150			
Dichlorprop	13.5	1.6	"	10.0	ND	135	20-150			
Dinoseb	3.43	1.6	"	10.0	ND	34.3	20-150			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Chlorinated Herbicides by EPA Method 8151A - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2302 - EPA 8151A Herbicides										
Matrix Spike Dup (B2D2302-MSD1)	**Source: 1204233-01**			Prepared & Analyzed: 04/23/12						
2,4,5-T	4.67	1.6	µg/kg	10.0	ND	46.7	20-150	2.33	30	
2,4,5-TP (Silvex)	8.40	1.6	"	10.0	ND	84.0	20-150	13.9	30	
Dichlorprop	10.4	1.6	"	10.0	ND	104	20-150	25.9	30	
Dinoseb	3.46	1.6	"	10.0	ND	34.6	20-150	0.871	30	

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Los Angeles County Dept. of Public Works	Project:	Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number:	HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager:	Geir Mathisen	04/25/12 13:42

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2102 - EPA 5035 P & T										
Blank (B2D2102-BLK1)				Prepared: 04/20/12 Analyzed: 04/21/12						
Benzene	ND	5.0	µg/kg							
Bromobenzene	ND	5.0	"							
Bromochloromethane	ND	5.0	"							
Bromodichloromethane	ND	5.0	"							
Bromoform	ND	5.0	"							
Bromomethane	ND	5.0	"							
n-Butylbenzene	ND	5.0	"							
sec-Butylbenzene	ND	5.0	"							
tert-Butylbenzene	ND	5.0	"							
Carbon tetrachloride	ND	5.0	"							
Chlorobenzene	ND	5.0	"							
Chloroethane	ND	5.0	"							
Chloroform	ND	5.0	"							
Chloromethane	ND	5.0	"							
2-Chlorotoluene	ND	5.0	"							
4-Chlorotoluene	ND	5.0	"							
Dibromochloromethane	ND	5.0	"							
1,2-Dibromo-3-chloropropane	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	5.0	"							
Dibromomethane	ND	5.0	"							
1,2-Dichlorobenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	5.0	"							
1,4-Dichlorobenzene	ND	5.0	"							
Dichlorodifluoromethane	ND	5.0	"							
1,1-Dichloroethane	ND	5.0	"							
1,2-Dichloroethane	ND	5.0	"							
1,1-Dichloroethene	ND	5.0	"							
cis-1,2-Dichloroethene	ND	5.0	"							
trans-1,2-Dichloroethene	ND	5.0	"							
1,2-Dichloropropane	ND	5.0	"							
1,3-Dichloropropane	ND	5.0	"							
2,2-Dichloropropane	ND	5.0	"							
1,1-Dichloropropene	ND	5.0	"							
cis-1,3-Dichloropropene	ND	5.0	"							
trans-1,3-Dichloropropene	ND	5.0	"							
Di-isopropyl ether	ND	5.0	"							
Ethyl tert-butyl ether	ND	5.0	"							

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2102 - EPA 5035 P & T										
Blank (B2D2102-BLK1)				Prepared: 04/20/12 Analyzed: 04/21/12						
Ethylbenzene	ND	5.0	µg/kg							
Hexachlorobutadiene	ND	5.0	"							
Isopropylbenzene	ND	5.0	"							
p-Isopropyltoluene	ND	5.0	"							
Methylene chloride	ND	5.0	"							
Methyl tert-butyl ether	ND	5.0	"							
Naphthalene	ND	5.0	"							
n-Propylbenzene	ND	5.0	"							
Styrene	ND	5.0	"							
Tert-amyl methyl ether	ND	5.0	"							
Tert-butyl alcohol	ND	25	"							
1,1,1,2-Tetrachloroethane	ND	5.0	"							
1,1,2,2-Tetrachloroethane	ND	5.0	"							
Tetrachloroethene	ND	5.0	"							
Toluene	ND	5.0	"							
1,2,3-Trichlorobenzene	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
1,1,1-Trichloroethane	ND	5.0	"							
1,1,2-Trichloroethane	ND	5.0	"							
Trichloroethene	ND	5.0	"							
Trichlorofluoromethane	ND	5.0	"							
1,2,3-Trichloropropane	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
Vinyl chloride	ND	5.0	"							
m,p-Xylene	ND	5.0	"							
o-Xylene	ND	5.0	"							
Surrogate: Dibromofluoromethane	*49.1*		*"*	*50.0*		*98.2*	*80-120*			
Surrogate: Toluene-d8	*49.0*		*"*	*50.0*		*98.0*	*81-117*			
Surrogate: 4-Bromofluorobenzene	*46.0*		*"*	*50.0*		*92.0*	*74-121*			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Volatile Organics & Fuel Oxygenates (GC/MS) by EPA Method 8260B - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2102 - EPA 5035 P & T										
LCS (B2D2102-BS1)				Prepared: 04/20/12 Analyzed: 04/21/12						
Benzene	55.6	5.0	µg/kg	50.0		111	80-120			
Chlorobenzene	54.4	5.0	"	50.0		109	80-120			
1,1-Dichloroethene	52.1	5.0	"	50.0		104	80-120			
Toluene	48.8	5.0	"	50.0		97.6	80-120			
Trichloroethene	53.9	5.0	"	50.0		108	80-120			
Matrix Spike (B2D2102-MS1)	**Source: 1204246-01**			Prepared: 04/20/12 Analyzed: 04/21/12						
Benzene	51.5	5.0	µg/kg	50.0	ND	103	37-151			
Chlorobenzene	56.0	5.0	"	50.0	ND	112	37-160			
1,1-Dichloroethene	59.0	5.0	"	50.0	ND	118	50-150			
Toluene	52.8	5.0	"	50.0	ND	106	47-150			
Trichloroethene	55.6	5.0	"	50.0	ND	111	71-157			
Matrix Spike Dup (B2D2102-MSD1)	**Source: 1204246-01**			Prepared: 04/20/12 Analyzed: 04/21/12						
Benzene	57.3	5.0	µg/kg	50.0	ND	115	37-151	10.7	30	
Chlorobenzene	55.1	5.0	"	50.0	ND	110	37-160	1.62	30	
1,1-Dichloroethene	44.3	5.0	"	50.0	ND	88.6	50-150	28.5	30	
Toluene	51.8	5.0	"	50.0	ND	104	47-150	1.91	30	
Trichloroethene	48.7	5.0	"	50.0	ND	97.4	71-157	13.2	30	

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D1107 - EPA 3550B Solid Ext										
Blank (B2D1107-BLK1)				Prepared: 04/09/12 Analyzed: 04/10/12						
Acenaphthene	ND	0.33	mg/kg							
Acenaphthylene	ND	0.33	"							
Anthracene	ND	0.33	"							
Benzidine	ND	0.33	"							
Benzo (a) anthracene	ND	0.33	"							
Benzo (b) fluoranthene	ND	0.33	"							
Benzo (k) fluoranthene	ND	0.33	"							
Benzo (a) pyrene	ND	0.33	"							
Benzo (g,h,i) perylene	ND	0.33	"							
Benzyl alcohol	ND	0.33	"							
Bis(2-chloroethyl)ether	ND	0.33	"							
Bis(2-chloroethoxy)methane	ND	0.33	"							
Bis(2-ethylhexyl)phthalate	ND	0.33	"							
Bis(2-chloroisopropyl)ether	ND	0.33	"							
4-Bromophenyl phenyl ether	ND	0.33	"							
Butyl benzyl phthalate	ND	0.33	"							
4-Chloroaniline	ND	0.33	"							
2-Chlorophenol	ND	0.33	"							
4-Chloro-3-methylphenol	ND	0.33	"							
2-Chloronaphthalene	ND	0.33	"							
4-Chlorophenyl phenyl ether	ND	0.33	"							
Chrysene	ND	0.33	"							
Dibenz (a,h) anthracene	ND	0.33	"							
Dibenzofuran	ND	0.33	"							
1,3-Dichlorobenzene	ND	0.33	"							
1,2-Dichlorobenzene	ND	0.33	"							
1,4-Dichlorobenzene	ND	0.33	"							
3,3´-Dichlorobenzidine	ND	0.33	"							
2,4-Dichlorophenol	ND	0.33	"							
Diethyl phthalate	ND	0.33	"							
2,4-Dimethylphenol	ND	0.33	"							
Dimethyl phthalate	ND	0.33	"							
Di-n-butyl phthalate	ND	0.33	"							
2,4-Dinitrophenol	ND	0.33	"							
4,6-Dinitro-2-methylphenol	ND	0.33	"							
2,4-Dinitrotoluene	ND	0.33	"							
2,6-Dinitrotoluene	ND	0.33	"							

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D1107 - EPA 3550B Solid Ext										
Blank (B2D1107-BLK1)				Prepared: 04/09/12 Analyzed: 04/10/12						
Di-n-octyl phthalate	ND	0.33	mg/kg							
1,2-Diphenylhydrazine	ND	0.33	"							
Fluoranthene	ND	0.33	"							
Fluorene	ND	0.33	"							
Hexachlorobenzene	ND	0.33	"							
Hexachlorobutadiene	ND	0.33	"							
Hexachlorocyclopentadiene	ND	0.33	"							
Hexachloroethane	ND	0.33	"							
Indeno (1,2,3-cd) pyrene	ND	0.33	"							
Isophorone	ND	0.33	"							
2-Methylnaphthalene	ND	0.33	"							
2-Methylphenol	ND	0.33	"							
4-Methylphenol	ND	0.33	"							
Naphthalene	ND	0.33	"							
2-Nitroaniline	ND	0.33	"							
3-Nitroaniline	ND	0.33	"							
4-Nitroaniline	ND	0.33	"							
Nitrobenzene	ND	0.33	"							
2-Nitrophenol	ND	0.33	"							
4-Nitrophenol	ND	0.33	"							
N-Nitrosodimethylamine	ND	0.33	"							
Diphenylamine	ND	0.33	"							
N-Nitrosodi-n-propylamine	ND	0.33	"							
Pentachlorophenol	ND	0.33	"							
Phenanthrene	ND	0.33	"							
Phenol	ND	0.33	"							
Pyrene	ND	0.33	"							
1,2,4-Trichlorobenzene	ND	0.33	"							
2,4,5-Trichlorophenol	ND	0.33	"							
2,4,6-Trichlorophenol	ND	0.33	"							
Surrogate: 2-Fluorophenol	*0.411*		*"*	*0.500*		*82.2*	*25-121*			
Surrogate: Phenol-d6	*0.427*		*"*	*0.500*		*85.4*	*24-113*			
Surrogate: Nitrobenzene-d5	*0.283*		*"*	*0.333*		*85.0*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*0.311*		*"*	*0.333*		*93.4*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*0.369*		*"*	*0.500*		*73.8*	*19-122*			
Surrogate: Terphenyl-d14	*0.291*		*"*	*0.333*		*87.4*	*18-137*			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D1107 - EPA 3550B Solid Ext										
LCS (B2D1107-BS1)				Prepared: 04/09/12 Analyzed: 04/10/12						
Acenaphthene	0.318	0.33	mg/kg	0.333		95.5	47-145			
2-Chlorophenol	0.407	0.33	"	0.667		61.0	23-134			
4-Chloro-3-methylphenol	0.411	0.33	"	0.667		61.6	22-147			
1,4-Dichlorobenzene	0.278	0.33	"	0.333		83.5	20-124			
2,4-Dinitrotoluene	0.311	0.33	"	0.333		93.4	39-139			
4-Nitrophenol	0.242	0.33	"	0.667		36.3	0-132			
N-Nitrosodi-n-propylamine	0.322	0.33	"	0.333		96.7	0-230			
Pentachlorophenol	0.230	0.33	"	0.667		34.5	14-176			
Phenol	0.417	0.33	"	0.667		62.5	5-112			
Pyrene	0.330	0.33	"	0.333		99.1	52-115			
1,2,4-Trichlorobenzene	0.308	0.33	"	0.333		92.5	44-142			
Matrix Spike (B2D1107-MS1)		**Source: 1204096-02**		Prepared: 04/09/12 Analyzed: 04/10/12						
Acenaphthene	0.325	0.33	mg/kg	0.333	ND	97.6	47-145			
2-Chlorophenol	0.395	0.33	"	0.667	ND	59.2	23-134			
4-Chloro-3-methylphenol	0.425	0.33	"	0.667	ND	63.7	22-147			
1,4-Dichlorobenzene	0.293	0.33	"	0.333	ND	88.0	20-124			
2,4-Dinitrotoluene	0.322	0.33	"	0.333	ND	96.7	39-139			
4-Nitrophenol	0.237	0.33	"	0.667	ND	35.5	0-132			
N-Nitrosodi-n-propylamine	0.297	0.33	"	0.333	ND	89.2	0-230			
Pentachlorophenol	0.237	0.33	"	0.667	ND	35.5	14-176			
Phenol	0.406	0.33	"	0.667	ND	60.9	5-112			
Pyrene	0.322	0.33	"	0.333	ND	96.7	52-115			
1,2,4-Trichlorobenzene	0.319	0.33	"	0.333	ND	95.8	44-142			
Matrix Spike Dup (B2D1107-MSD1)		**Source: 1204096-02**		Prepared: 04/09/12 Analyzed: 04/10/12						
Acenaphthene	0.311	0.33	mg/kg	0.333	ND	93.4	47-145	4.40	30	
2-Chlorophenol	0.393	0.33	"	0.667	ND	58.9	23-134	0.508	30	
4-Chloro-3-methylphenol	0.417	0.33	"	0.667	ND	62.5	22-147	1.90	30	
1,4-Dichlorobenzene	0.285	0.33	"	0.333	ND	85.6	20-124	2.77	30	
2,4-Dinitrotoluene	0.306	0.33	"	0.333	ND	91.9	39-139	5.10	30	
4-Nitrophenol	0.255	0.33	"	0.667	ND	38.2	0-132	7.32	30	
N-Nitrosodi-n-propylamine	0.308	0.33	"	0.333	ND	92.5	0-230	3.64	30	
Pentachlorophenol	0.236	0.33	"	0.667	ND	35.4	14-176	0.423	30	
Phenol	0.398	0.33	"	0.667	ND	59.7	5-112	1.99	30	
Pyrene	0.324	0.33	"	0.333	ND	97.3	52-115	0.619	30	
1,2,4-Trichlorobenzene	0.316	0.33	"	0.333	ND	94.9	44-142	0.945	30	

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E-MAIL: SIERRALABS @ SIERRALABS.NET

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2408 - EPA 3550B Solid Ext										
Blank (B2D2408-BLK1)				Prepared: 04/24/12 Analyzed: 04/25/12						
Naphthalene	ND	40.0	µg/kg							
Acenaphthylene	ND	200	"							
Acenaphthene	ND	50.0	"							
Fluorene	ND	5.00	"							
Phenanthrene	ND	5.00	"							
Anthracene	ND	2.00	"							
Fluoranthene	ND	5.00	"							
Pyrene	ND	5.00	"							
Benzo (a) anthracene	ND	2.00	"							
Chrysene	ND	5.00	"							
Benzo (b) fluoranthene	ND	5.00	"							
Benzo (k) fluoranthene	ND	2.00	"							
Benzo (a) pyrene	ND	2.00	"							
Dibenzo(a,h)anthracene	ND	5.00	"							
Benzo (g,h,i) perylene	ND	5.00	"							
Indeno (1,2,3-cd) pyrene	ND	5.00	"							
Surrogate: Decafluorobiphenyl	*323*		*"*	*500*		*64.6*	*30-140*			
LCS (B2D2408-BS1)				Prepared: 04/24/12 Analyzed: 04/25/12						
Naphthalene	53.0	40.0	µg/kg	50.0		106	60-130			
Fluorene	49.8	5.00	"	50.0		99.6	60-130			
Pyrene	51.1	5.00	"	50.0		102	60-130			
Benzo (a) pyrene	57.7	2.00	"	50.0		115	60-130			
Indeno (1,2,3-cd) pyrene	46.7	5.00	"	50.0		93.4	60-130			
Surrogate: Decafluorobiphenyl	*507*		*"*	*500*		*101*	*30-140*			
Matrix Spike (B2D2408-MS1)	**Source: 1204233-01**			Prepared: 04/24/12 Analyzed: 04/25/12						
Naphthalene	58.9	40.0	µg/kg	50.0	ND	118	60-140			
Fluorene	55.6	5.00	"	50.0	ND	111	60-140			
Pyrene	57.5	5.00	"	50.0	ND	115	60-140			
Benzo (a) pyrene	32.4	2.00	"	50.0	ND	64.8	60-140			
Indeno (1,2,3-cd) pyrene	32.1	5.00	"	50.0	ND	64.2	60-140			
Surrogate: Decafluorobiphenyl	*199*		*"*	*500*		*39.8*	*30-140*			

Los Angeles County Dept. of Public Works	Project: Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number: HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager: Geir Mathisen	04/25/12 13:42

Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control

Sierra Analytical Labs, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2D2408 - EPA 3550B Solid Ext										
Matrix Spike Dup (B2D2408-MSD1)	**Source: 1204233-01**			Prepared: 04/24/12 Analyzed: 04/25/12						
Naphthalene	54.2	40.0	µg/kg	50.0	ND	108	60-140	8.31	20	
Fluorene	57.1	5.00	"	50.0	ND	114	60-140	2.66	20	
Pyrene	49.9	5.00	"	50.0	ND	99.8	60-140	14.2	20	
Benzo (a) pyrene	30.7	2.00	"	50.0	ND	61.4	60-140	5.39	20	
Indeno (1,2,3-cd) pyrene	34.2	5.00	"	50.0	ND	68.4	60-140	6.33	20	
Surrogate: Decafluorobiphenyl	*383*		*"*	*500*		*76.6*	*30-140*			

Los Angeles County Dept. of Public Works	Project:	Big T Res. Sed. Char. Program	
900 S. Fremont Ave.	Project Number:	HF00710003	**Reported:**
Alhambra CA, 91803	Project Manager:	Geir Mathisen	04/25/12 13:42

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Certificate of Analysis

Client: Sierra Analytical
26052 Merit Circle, Suite 105
Laguna Hills, CA 92653

Report Date: 05/08/12 16:07
Received Date: 04/23/12 12:50
Turnaround Time: Normal

Phones: (949) 348-9389
Fax: (949) 348-9115

Attn: Nick Forsyth
Project: 1204233

P.O. #:

Dear Nick Forsyth :

Enclosed are the results of analyses for samples received 4/23/2012 with the Chain of Custody document. The samples were received in good condition, at 3.3 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab Sample ID: 2D23040-01 **Sample ID:** B-10-2 (1204233-01) **Matrix:** Soil
Sampled by: Client **Sampled:** 04/18/12 11:50

Analyte	Result	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
1,4-Dioxane	ND	61	ug/kg	1	EPA 8270M	4/23/12	4/25/12 19:14	W2D0993	
3-Hydroxycarbofuran	ND	25	ug/kg	1	EPA 8318	4/24/12	5/7/12 12:54	W2D0999	
Aldicarb	ND	25	ug/kg	1	EPA 8318	4/24/12	5/7/12 12:54	W2D0999	
Aldicarb sulfone	ND	25	ug/kg	1	EPA 8318	4/24/12	5/7/12 12:54	W2D0999	
Carbaryl	ND	25	ug/kg	1	EPA 8318	4/24/12	5/7/12 12:54	W2D0999	
Carbofuran	ND	25	ug/kg	1	EPA 8318	4/24/12	5/7/12 12:54	W2D0999	
Methiocarb	ND	25	ug/kg	1	EPA 8318	4/24/12	5/7/12 12:54	W2D0999	
Methomyl	ND	25	ug/kg	1	EPA 8318	4/24/12	5/7/12 12:54	W2D0999	
Oxamyl	ND	50	ug/kg	1	EPA 8318	4/24/12	5/7/12 12:54	W2D0999	
Propoxur (Baygon)	ND	25	ug/kg	1	EPA 8318	4/24/12	5/7/12 12:54	W2D0999	

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Certificate of Analysis

Quality Control Section

1,4-Dioxane Low Level by isotopic dilution GC/MS - Quality Control

Batch W2D0993 - EPA 8270M

Blank (W2D0993-BLK1) — Prepared: 04/23/12 — Analyzed: 04/25/12 18:01

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
1,4-Dioxane		ND		ug/kg					

LCS (W2D0993-BS1) — Prepared: 04/23/12 — Analyzed: 04/25/12 18:19

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
1,4-Dioxane		492		ug/kg	500	98	67-130		

Matrix Spike (W2D0993-MS1) — Source: 2D23040-01 — Prepared: 04/23/12 — Analyzed: 04/25/12 18:37

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
1,4-Dioxane	0.00	1500		ug/kg	1470	102	55-143		

Matrix Spike Dup (W2D0993-MSD1) — Source: 2D23040-01 — Prepared: 04/23/12 — Analyzed: 04/25/12 18:55

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
1,4-Dioxane	0.00	1480		ug/kg	1460	101	55-143	1	30

Carbamates and Urea Pesticides - Quality Control

Batch W2D0999 - EPA 8318

Blank (W2D0999-BLK1) — Prepared: 04/24/12 — Analyzed: 05/06/12 23:59

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Aldicarb sulfone		ND		ug/kg					
Methomyl		ND		ug/kg					
3-Hydroxycarbofuran		ND		ug/kg					
Aldicarb		ND		ug/kg					
Propoxur (Baygon)		ND		ug/kg					
Carbofuran		ND		ug/kg					
Carbaryl		ND		ug/kg					
Methiocarb		ND		ug/kg					
Oxamyl		ND		ug/kg					

LCS (W2D0999-BS1) — Prepared: 04/24/12 — Analyzed: 05/06/12 23:59

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Aldicarb sulfone		48.7		ug/kg	50.0	97	52-137		
Methomyl		41.3		ug/kg	50.0	83	45-153		
3-Hydroxycarbofuran		44.5		ug/kg	50.0	89	47-130		
Aldicarb		28.7		ug/kg	50.0	57	47-142		
Propoxur (Baygon)		44.7		ug/kg	50.0	89	58-127		
Carbofuran		41.4		ug/kg	50.0	83	64-128		
Carbaryl		18.9		ug/kg	50.0	38	34-130		
Methiocarb		7.20	BS-03	ug/kg	50.0	14	17-153		

Matrix Spike (W2D0999-MS1) — Source: 2D23040-01 — Prepared: 04/24/12 — Analyzed: 05/07/12 15:00

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Aldicarb sulfone	ND	52.3		ug/kg	50.0	105	45-147		

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Carbamates and Urea Pesticides - Quality Control

Batch W2D0999 - EPA 8318

Matrix Spike (W2D0999-MS1) **Source: 2D23040-01** **Prepared: 04/24/12** **Analyzed: 05/07/12 15:00**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methomyl	ND	46.0		ug/kg	50.0	92	28-156		
3-Hydroxycarbofuran	ND	51.2		ug/kg	50.0	102	47-130		
Aldicarb	ND	31.1		ug/kg	50.0	62	46-119		
Propoxur (Baygon)	ND	45.7		ug/kg	50.0	91	45-144		
Carbofuran	ND	42.3		ug/kg	50.0	85	66-139		
Carbaryl	ND	21.4		ug/kg	50.0	43	34-130		
Methiocarb	ND	8.68		ug/kg	50.0	17	17-153		

Matrix Spike Dup (W2D0999-MSD1) **Source: 2D23040-01** **Prepared: 04/24/12** **Analyzed: 05/07/12 15:00**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Aldicarb sulfone	ND	51.5		ug/kg	50.0	103	45-147	2	20
Methomyl	ND	45.1		ug/kg	50.0	90	28-156	2	20
3-Hydroxycarbofuran	ND	48.1		ug/kg	50.0	96	47-130	6	20
Aldicarb	ND	31.6		ug/kg	50.0	63	46-119	2	20
Propoxur (Baygon)	ND	44.9		ug/kg	50.0	90	45-144	2	20
Carbofuran	ND	41.1		ug/kg	50.0	82	66-139	3	20
Carbaryl	ND	20.1		ug/kg	50.0	40	34-130	6	20
Methiocarb	ND	9.32		ug/kg	50.0	19	17-153	200	20

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Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Authorized Signature
Contact: Kim G Tu (Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

BS-03	The recovery of this analyte in the BS/LCS was outside the control limits. The sample result was accepted based on another acceptable BS/LCS and/or MS and MSD that meet BS criteria.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity
NR	Not Reportable

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SUBCONTRACT ORDER

Sierra Analytical Labs, Inc.

Sierra Project #: 1204233

Comments 2d23040

SENDING LABORATORY:

Sierra Analytical Labs, Inc.
26052 Merit Circle, Suite 104
Laguna Hills, CA 92653
Phone: (949) 348-9389
Fax: (949) 348-9115
Laboratory Contact: Nick Forsyth

Turn Around Time Requested: ☒ Normal ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4 Day ☐ 5 Day

RECEIVING LABORATORY:

Weck Laboratories
14859 E. Clark Ave.
City of Industry, CA 91745
Phone : (626) 336-2139
Fax: (626) 336-2634

Analysis	Expires	Sampled:	Laboratory ID	Comments
Sample ID: B-10-2 (1204233-01)	**Soil**	**04/18/12 11:50**		
8270C 14-Dioxane (Low Level)	04/25/12 11:50			
8321 Carbamate Pesticides	05/02/12 11:50			

9318 (W 4/25/12

Containers Supplied:
8 oz. Jar (C) ~~8 oz. Jar (D)~~

Special Instructions :

☐ Intact ☐ Sample Seals
☐ Properly Labeled ☐ Chilled TEMP (°C) 3.3 °C
☐ Appropriate Container ☐ Preservatives - Verified By

Relinquished By	4/23/12 @ 5:50 Date / Time	Stephanie Received By	4.23.12 12:50 Date / Time
Relinquished By	Date / Time	Received By	Date / Time
Relinquished By	Date / Time	Received By	Date / Time

SCO4 2412

Weck Laboratories, Inc.
Environmental and Analytical Services - Since 1964

Sample Receipt Acknowledgement

WORK ORDER: 2D23040

Printed: 4/24/2012 11:53:42AM

Client: Sierra Analytical
Project: 1,4-Dioxane, RSK-175

Project Manager: Kim G Tu
Project Number: 1204233

Report To:
Sierra Analytical
Nick Forsyth
26052 Merit Circle, Suite 105
Laguna Hills, CA 92653
Phone: (949) 348-9389
Fax: (949) 348-9115

Invoice To:
Sierra Analytical
Andrew Kim
26052 Merit Circle, Suite 105
Laguna Hills, CA 92653
Phone :(949) 348-9389
Fax: (949) 348-9115

Date Due: **05/07/12 15:00 (10 day TAT)**

Received By: Stephanie J Gochez
Logged In By: Jaime Gomez

Date Received: 04/23/12 12:50
Date Logged In: 04/23/12 13:35

Samples Received at:	**3.3°C**	All containers intact:	**Yes**	Chain of custody completed:	**Yes**
Number of Ice chests/packages:	**1**	Custody seals preser	**NA**	Sample labels & COC agree:	**Yes**
		Custody seals intact:	**NA**	Samples preserved properly:	**Yes**
Appropriate Sample Containers:	**Yes**	Samples received on ic	**Yes**	Sample volume sufficient:	**Yes**
		Custody Seals	**No**	Sufficient holding time for all tests:	**Yes**

Analysis	TAT	Expires	Comments
2D23040-01 B-10-2 (1204233-01) [Soil] Sampled 04/18/12 11:50 Pacific			
8318 Solid	10	04/25/12 11:50	
1,4-Dioxane_s	10	04/25/12 11:50	

Comments:

Authorized Signature

4/24/2012
Date

Note:
If any of the information included in this sample receipt acknowledgement is incorrect (sample information, analysis, etc), please contact the lab at (626) 336-2139. Thank you.

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www.wecklabs.com

May 09, 2012 Service Request No: E1200403

Richard Forsyth
Sierra Analytical Laboratory, Inc
26052 Merit Circle, Suite 104
Laguna Hills, CA 92653

Laboratory Results for: 1204233

Dear Richard:

Enclosed are the results of the sample(s) submitted to our laboratory on April 25, 2012. For your reference, these analyses have been assigned our service request number **E1200403**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the final complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the TNI 2009 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 2962. You may also contact me via email at MCosson@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc. dba ALS Environmental

Digitally signed by
Michael Cosson
Date: 2012.05.11
10:52:57 -05'00'

Michael Cosson
Project Manager

Page 1 of _____

For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com.

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dba ALS Environmental

Client:	Sierra Analytical Laboratory, Inc	**Service Request No.:**	E1200403
Project:	1204233	**Date Received:**	04/25/12
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One soil sample was received for analysis at Columbia Analytical Services on 04/25/12.

The following discrepancies were noted upon initial sample inspection: no custody seals on cooler. The exceptions are also noted on the cooler receipt and preservation form included in this data package.

The sample was received at 4°C in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

MS/MSD

EQ1200231: A Laboratory Control Spike (LCS) sample was analyzed and reported in addition to an MS/MSD for this extraction batch. The batch quality control criteria were met.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

Client: Sierra Analytical Laboratory, Inc **Service Request:** E1200403
Project: 1204233

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E1200403-001	B-10-2 (1204233-01)	4/18/12	11:50

Laboratory Certifications
2012-2013

STATE/PROGRAM	AGENCY	CERT#	EXP DATE	CERTIFIED?
DoD ELAP	A2LA	2897.01	11/30/12	Yes
ISO 17025	A2LA	2897.01	11/30/12	Yes
ARIZONA	AZ-DHS	AZ0725	05/27/12	Yes
ARKANSAS	ADEQ	10-035-0	06/16/12	Yes
CALIFORNIA	CA-ELAP	2452	02/28/13	Yes
FLORIDA/NELAP	FL-DOHS	E87611	06/30/12	Yes
HAWAII	HI-DOH	N/A	06/30/12	Yes
ILLINOIS/NELAP	IL-EPA	002611	10/26/12	Yes
LOUISIANA/NELAP	LELAP	03048	06/30/12	Yes
LOUISIANA/NELAP	LDHH	LA100032	12/31/12	Yes
MAINE	ME-DOHS	2010041	06/05/12	Yes
MICHIGAN	MIDEQ	9971	06/30/12	Yes
MINNESOTA	MDH	048-999-427	12/31/12	Yes
NEVADA	NDEP	TX014112010A	07/31/12	Yes (Extension)
NEW JERSEY	NJDEP	TX008	06/30/12	Yes
NEW MEXICO	NMED-DWB	N/A	06/30/12	Yes
NEW YORK/NELAP	NY-DOH	11707	04/1/12	Yes
OKLAHOMA	OKDEQ	2010-022	08/31/12	Yes
OREGON/NELAP	ORELAP	TX200002-006	03/24/12	Yes
PENNSYLVANIA/NELAP	PLAP	002	06/30/12	Yes
TENNESSEE	TNDEC	04016	06/30/12	Yes
TEXAS/NELAP	TCEQ	T104704216-10-1	06/30/12	Yes
UTAH/NELAP	UTELCP	COLU2	06/30/12	Yes
SOIL IMPORT PERMIT	USDA	P330-12-00002	01/13/15	Yes
WASHINGTON/NELAP	WA-Ecology	C819-10	11/14/12	Yes
WEST VIRGINIA	WVDEP	347	06/30/12	Yes

Abbreviations, Acronyms & Definitions

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
MRL	Method Reporting Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent Recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
RRT	Relative Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-Noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

Data Qualifier Flags – Dioxin/Furans

- **B** Indicates the associated analyte is found in the method blank, as well as in the sample.

- **C** Confirmation of the TCDF compound: When 2378-TCDF is detected on the DB-5 column, confirmation analyses are performed on a second column (DB-225). The results from both the DB-5 column and the DB-225 column are included in this data package. The results from the DB-225 analyses should be used to evaluate the 2378-TCDF in the samples. The confirmed result should be used in determining the TEQ value for TCDF.

- **E** Indicates an estimated value – used when the analyte concentration exceeds the upper end of the linear calibration range.

- **J** Indicates an estimated value – used when the analyte concentration is below the method reporting limit (MRL) and above the estimated detection limit (EDL).

- **K** EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

- **U** Indicates the compound was analyzed and not detected.

- **Y** Samples that had recoveries of labeled standards outside the acceptance limits are flagged with 'Y'. In all cases, the signal-to-noise ratios are greater than 10:1, making these data acceptable.

- **ND** Indicates concentration is reported as 'Not Detected.'

- **S** Peak is saturated; data not reportable.

- **P** Indicates chlorodiphenyl ether interference present at the retention time of the target compound.

- **Q** Lock-mass interference by chlorodiphenyl ether compounds.

COLUMBIA ANALYTICAL SERVICES, INC. – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: EQ1200231 | (DB-5) | DB-225 | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
05/02/12	TC	-03, -04

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
05/02/12	UKL	-03, -04

EQ1200231_03 → E1200403_001MS
EQ1200231_04 → E1200403_001DMS

COLUMBIA ANALYTICAL SERVICES, INC. – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E1200403 (DB-5) DB-225 SPB-Octyl

First Level - Data Processing – to be filled by person generating the forms

Date:	Analyst:	Samples:
05/02/12	JC	-001

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
05/02/12	LKL	-001

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Analytical Results

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Client:	Sierra Analytical Laboratory, Inc	**Service Request:**	E1200403
Project:	1204233	**Date Collected:**	4/18/12 1150
Sample Matrix:	Soil	**Date Received:**	4/25/12
Sample Name:	B-10-2 (1204233-01)	**Units:**	ng/Kg
Lab Code:	E1200403-001	**Basis:**	Dry
		Percent Solids:	97.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor	Date Analyzed	Time Analyzed	Date Extracted
2,3,7,8-TCDD	ND	U	0.0633	0.976			1	5/1/12	1948	4/27/12

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	629.419	63		40-135	0.80	1.008
37Cl-2,3,7,8-TCDD	800	528.484	66		40-135	NA	1.009

Client:	Sierra Analytical Laboratory, Inc	**Service Request:**	E1200403
Project:	1204233	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1200231-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor	Date Analyzed	Time Analyzed	Date Extracted
2,3,7,8-TCDD	ND	U	0.0761	0.927			1	5/1/12	1900	4/27/12

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	646.860	65		40-135	0.81	1.008
37Cl-2,3,7,8-TCDD	800	568.605	71		40-135	NA	1.009

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Accuracy and Precision

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Client:	c Rqpust Nuα E1uos2 u04qu E4q 3sMl	**Service Request:**	a Ser r vr i
Project:	Ser vei i	**Date Analyzed:**	F9S9Se
Sample Matrix:	c4 o		

Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	Lebr	**Units:**	N59C5
Prep Method:	A REn4l	**Basis:**	I q
		Extraction Lot:	sSF6F6L

Lab Control Sample
a y Ser r ei Sgr e

Analyte Name	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
e3 3f 3Lgm, I I	eeH	SbH	SS6	Fr sgsSFr

Results flagged with an asterisk (*) indicate values outside control criteria.

TRq1RNsqR14- Rq RPsuN sqRuE- RsdRq1RNsl ..RqRN1RPsxh TI zsuqRsl RERq(NRl s0: sEnRsP4.E uqRs) P N5s- uo) RPs NsEnRs1uol) ouE4Ns' n 1nsnu- RsN4Es0RRNsq4) N Rl H

Client:	Sierra Analytical Laboratory, Inc	**Service Request:**	E1200403
Project:	1204233	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1200231-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor	Date Analyzed	Time Analyzed	Date Extracted
2,3,7,8-TCDD	**22.3**		0.0892	0.963	0.80	1.001	1	5/1/12	2347	4/27/12

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	644.210	64		40-135	0.81	1.008
37Cl-2,3,7,8-TCDD	800	530.080	66		40-135	NA	1.009

Client:	Sierra Analytical Laboratory, Inc	**Service Request:**	E1200403
Project:	1204233	**Date Collected:**	4/18/12
Sample Matrix:	Soil	**Date Received:**	4/25/12
		Date Analyzed:	5/ 1/12

Matrix Spike Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Sample Name:	B-10-2 (1204233-01)	**Units:**	ng/Kg
Lab Code:	E1200403-001	**Basis:**	Dry

Analytical Method: 8290
Prep Method: Method

		B-10-2 (1204233-01)MS			B-10-2 (1204233-01)DMS					
		Matrix Spike			**Duplicate Matrix Spike**					
		EQ1200231-03			EQ1200231-04					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,3,7,8-TCDD	ND	24.2	19.0	127	23.4	18.8	124	50 - 150	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Sierra Analytical Laboratory, Inc	**Service Request:**	E1200403
Project:	1204233	**Date Collected:**	4/18/12 1150
Sample Matrix:	Soil	**Date Received:**	4/25/12
Sample Name:	B-10-2 (1204233-01)	**Units:**	ng/Kg
Lab Code:	EQ1200231-03	**Basis:**	Dry
Run Type:	Matrix Spike	**Percent Solids:**	97.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor	Date Analyzed	Time Analyzed	Date Extracted
2,3,7,8-TCDD	**24.2**		0.0691	0.950	0.82	1.001	1	5/1/12	2211	4/27/12

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	678.614	68		40-135	0.81	1.008
37Cl-2,3,7,8-TCDD	800	617.856	77		40-135	NA	1.009

Client:	Sierra Analytical Laboratory, Inc	**Service Request:**	E1200403
Project:	1204233	**Date Collected:**	4/18/12 1150
Sample Matrix:	Soil	**Date Received:**	4/25/12
Sample Name:	B-10-2 (1204233-01)	**Units:**	ng/Kg
Lab Code:	EQ1200231-04	**Basis:**	Dry
Run Type:	Duplicate Matrix Spike	**Percent Solids:**	97.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor	Date Analyzed	Time Analyzed	Date Extracted
2,3,7,8-TCDD	**23.4**		0.0642	0.942	0.80	1.001	1	5/1/12	2259	4/27/12

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	692.695	69		40-135	0.81	1.008
37Cl-2,3,7,8-TCDD	800	600.845	75		40-135	NA	1.009

Columbia Analytical Services

Now part of the ALS Group

Chain of Custody

19408 Park Row, Suite 320, Houston, TX 77084
Phone (713)266-1599 Fax (713)266-0130
www.caslab.com

An Employee Owned Company

SUBCONTRACT ORDER

Sierra Analytical Labs, Inc.

Sierra Project #: 1204233

Comments

SENDING LABORATORY:

Sierra Analytical Labs, Inc.
26052 Merit Circle, Suite 104
Laguna Hills, CA 92653
Phone: (949) 348-9389
Fax: (949) 348-9115
Laboratory Contact: Nick Forsyth

Turn Around Time Requested: ☐ Normal ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4 Day ☐ 5 Day

RECEIVING LABORATORY:

Columbia Analytical Services, Inc.
19408 Park Row Suite 320
Houston, TX 77084
Phone : (713) 266-1599
Fax:

Analysis	Expires	Sampled:	Laboratory ID	Comments
Sample ID: B-10-2 (1204233-01)	**Soil**	**04/18/12 11:50**		
Dioxin 8280 (2378-TCDD)	05/18/12 11:50			

Containers Supplied:
8 oz. Jar (E)

No seals 4°C
Blue ice / Bubble wrap
Tr# 126a3w10 or 48417867

Special Instructions :
PLEASE SHIP BACK ICE CHEST!
THANK YOU

☐ Intact ☐ Sample Seals
☐ Properly Labeled ☐ Chilled TEMP (°C) _____
☐ Appropriate Container ☐ Preservatives - Verified By _____

Relinquished By	Date / Time	Received By	Date / Time
	4/04/12 @ 1500		
Relinquished By	Date / Time	Received By	Date / Time
Relinquished By	Date / Time	Received By	Date / Time
			4-05-12 937

Columbia Analytical Services
Now part of the ALS Group

Cooler Receipt Form

Project Chemist: MC

Client/Project: Sierra Analytical; 1204233

Service Request: E1200403

Date/Time Received: 4/25/12 09:37:00

Date/Time Logged in: 4/25/12 10:35:00

Technician: TL

Technician: TL

1. Method of delivery: ○ US Mail ○ Fed Ex ◉ UPS ○ DHL ○ Courier ○ Client

2. Samples received in: ◉ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ◉ No ○ N/A

Were they intact? ○ Yes ○ No ◉ N/A

Were they signed and dated? ○ Yes ○ No ◉ N/A

If yes, how many and where?

4. Method of delivery: ○ Inserts ○ Baggies ☑ Bubble Wrap ☑ Gel Packs ○ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No

Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?	Filed
1Z693W100148417867		Apr 25, 2012	0937	TL	4/4	☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ◉ Yes ○ No ○ N/A

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ◉ Yes ○ No ○ N/A

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ◉ Yes ○ No ○ N/A

9. Were appropriate bottles/containers and volumes received for the requested tests? ◉ Yes ○ No ○ N/A

10. Did sample labels and tags agree with custody documents? ◉ Yes ○ No ○ N/A

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Out of Temp	Broken	Date	Technician
			☐	☐		
			☐	☐		
			☐	☐		
			☐	☐		

Notes, Discrepancies, & Resolutions:

Print Form

Reset Form

Columbia Analytical Services INC

Sample Acceptance Policy

This policy outlines the criteria samples must meet to be accepted by CAS/ Houston.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample
- ✓ The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, CAS/Houston will complete a COC, which must be approved by the client, in writing, prior to proceeding with the analysis.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples can be shipped and stored at ambient temperature, ~23°C.
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder.

Service Request Summary

Folder #: **E1200403**

y ,verREc1 vs n,viicRCec 5r,: c Rbc2NicrNi5pRSe:
t iNov: rREc1 vs 043M4aa
t iNov: rREu1 2vis

Report To: f ,: 9ciI RgNih5r9
n,viicRCec 5r,: c Rbc2NicrNi5pRSe:
4' 3P4R vi,rRy,i: vpRu,rvR03M
bcLuecRd, hpRyCRR4' Pa

t 9NevREu1 2vis -M4TaM4T-ax-
yv REu1 2vis
gczREu1 2vis -M4TaM4T-00P
HTl c, s i,: Y)@h,viic c2hjevr

t iNov: rRy 9v1 ,hrsR . ,: 9cv RyNhhNe
F i,L,ecr,eLRbc2sR d F Anl F E
bNLLvI R65sR l bCggHf l m
q crvRCv: v,vvI s M4P/04
Serviec RquvRq crvsR P/0'/04
(Ct sR bC6 R(Ct
(uc ,),viRnvrsR yCnRnrceI ciI
gNi l hvrsR yCnRnrceI ciI
. viLvI DsR m
f vwNirRNR. q bDsR m
t jF jREu1 2visR 043M4aa
Hq q sR ENRHq q Rnwv: ,),vI

R0 TMRN_TG chhRciRRV. RybHCf R v) NeRb,eviRAewivhvivvI

Location: HTWSyF 4T6NzR0'

CAS Samp No	Client Samp No.	Matrix	Collected		SVM x4-3/RyqqR tyqg	SVM yCnRFt/RNrcR nN,Ih
H0433M3aT330	6T03T4R(043M4aaT30)	nN,	M0x/04	00P3	II	II

Preparation Information Benchsheet

Prep Run#: 156568 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped
Team: Semivoa GCMS/EBAUCH **Prep Method:** Method **Prep Date/Time:** 4/27/12 11:46 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Sample Description
1	E1200403-001	B-10-2 (1204233-01)	.01	8290/PCDD PCDF		Soil	10.533g	wet sand
2	E1200409-001	B215-08	.01	8290/PCDD PCDF		Soil	10.658g	dark brown sand
3	E1200410-001	B218-08	.01	8290/PCDD PCDF		Soil	10.704g	dark brown sand
4	EQ1200231-01	MB		8290/PCDD PCDF		Solid	10.793g	
5	EQ1200231-02	LCS		8290/PCDD PCDF		Solid	10.385g	
6	EQ1200231-03	B-10-2 (1204233-01) MS	.01	8290/PCDD PCDF		Solid	10.820g	
7	EQ1200231-04	B-10-2 (1204233-01) DMS	.01	8290/PCDD PCDF		Solid	10.907g	

Spiking Solutions

Name: 8290 Matrix Working Standard Inventory ID 41918 Logbook Ref: D13-6-3 (41918) Expires On: 04/02/2013

EQ1200231-02 100.00µL EQ1200231-03 100.00µL EQ1200231-04 100.00µL

Name: 8290/1613B Cleanup Working Standard Inventory ID 43357 Logbook Ref: D13-9-2 (43357) Expires On: 04/13/2013

E1200403-001 100.00µL E1200409-001 100.00µL E1200410-001 100.00µL EQ1200231-01 100.00µL EQ1200231-02 100.00µL EQ1200231-03 100.00µL
EQ1200231-04 100.00µL

Name: 8290 Internal Working Standard Inventory ID 44132 Logbook Ref: D13-11-5 (44132) Expires On: 10/24/2012

E1200403-001 100.00µL E1200409-001 100.00µL E1200410-001 100.00µL EQ1200231-01 100.00µL EQ1200231-02 100.00µL EQ1200231-03 100.00µL
EQ1200231-04 100.00µL

Preparation Materials

Carbon, High Purity	C2-71-3 (3107002) (43223)	Ethyl Acetate 99.9% Minimum EtOAc	C2-62-5 (35709)	Glass Wool	C2-70-3 (K93168686) (43370)
Sulfuric Acid Reagent Grade H2SO4	C2-70-7 (51182) (42520)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	C2-71-5 (51266) (43224)	Sodium Chloride Reagent Grade NaCl	C2-65-5 (38670)
Sodium Hydroxide Reagent Grade NaOH	C2-53-6 (27838)	Sodium Sulfate Anhydrous Reagent Grade Na2SO4	C2-69-4 (2351C512) (40800)	Tridecane (n-Tridecane)	C2-69-3 (MKBG6777V) (40799)
Hexane (n-Hexane) 98.5% Minimum	C2-70-4 (51300) (42518)	Nonane (n-Nonane) 99%	C2-48-7 (STBB5477) (39812)	Silica Gel Reagent Grade	C2-70-1 (TH02H2EMS) (42517)
Toluene 99.9% Minimum	C2-70-5 (51195) (42519)				

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	4/27/12 11:46	Started:	4/30/12 17:10	Started:	4/30/12 19:18	Started:	5/1/12 07:05
Finished:	4/30/12 08:20	Finished:	4/30/12 17:23	Finished:	4/30/12 20:34	Finished:	5/1/12 11:15
By:	EBAUCH	By:	EBAUCH	By:	EBAUCH	By:	CDIAZ
Comments		Comments		Comments		Comments	

Preparation Information Benchsheet

Prep Run#: 156568 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped
Team: Semivoa GCMS/EBAUCH **Prep Method:** Method **Prep Date/Time:** 4/27/12 11:46 AM

Comments: _____

Reviewed By: EB Date: 5/1/12

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

E1200403 25 of 25

CHAIN OF CUSTODY RECORD

SIERRA ANALYTICAL
TEL: 949•348•9389
FAX: 949•348•9115
26052 Merit Circle• Suite 105•Laguna Hills, CA•92653

Date: 4/18/12 Page 1 of 1

Lab Project No.: 120437

Client: County of LA, Dept. Public Wks
Client Address: 900 S Fremont Ave, Alhambra, CA 91803-1331
Client Tel. No.: (626) 458-4923
Client Fax. No.: (626) 458-4913
Client Proj. Mgr.: Geir Mathisen

Client Project ID: HF00710003
ENC#12C00000299
Big T Res. Sed. Char. Program

Turn Around Time Requested: ☐ Immediate ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 4 Day ☐ 5 Day ☒ Normal ☐ Mobile

Analysis Requested

Client Sample ID.	Sierra No.	Date	Time	Matrix	Preservative	Container Type	No. of Containers	6010B/7470 Title 22 Metals + Mercury	8310 / PAHs	8260B/VOCs+OXYS EDB DBCP	8270C/8321 SVOCs + carbonyls	8081A Pesticides	8082 / PCBs	8270C 1,4 Dioxane	8280A / Dioxin	8151 / Herbicides 8270C or Kepone/Mirex 8081	Geotracker EDD Info: Client LOGCODE / Site Global ID / Field Point Names/ Comments
B-10-2	01	4/18/12	11:50	SOIL	ICE	2 oz JAR/ 3 VOAs	4	X	X	X	X	X	X	X	X	X	

1 Sampler Signature: [signature] Printed Name: GEIR MATHISEN
Shipped Via: (Carrier/Waybill No.)

2 Relinquished By: [signature] Date: 4/18/12 Time: 11:00 Company: LA COUNTY DPW
Received By: [signature] Date: 4/18/12 Time: 11:00 Company: Sierra

3 Relinquished By: Date: Time: Company:
Received By: Date: Time: Company:

4 Relinquished By: Date: Time: Company:
Received By: Date: Time: Company:

Special Instructions: See your bid proposal dated Dec. 5, 2011 including Table 1A and 1B for minimum required analyses to be tested.

Total Number of Containers Submitted to Laboratory:

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analysis specified above under SIERRA's Terms and Conditions, unless otherwise agreed upon in writing between SIERRA and CLIENT.
* - Samples determined to be hazardous by SIERRA will be returned to CLIENT.

Total Number of Containers Received by Laboratory:

Sample Disposal:
☐ Return to Client
☒ Lab Disposal*
☐ Archive _____ mos.
☐ Other _____

FOR LABORATORY USE ONLY - Sample Receipt Conditions:

☒	Intact	☒	Chilled - Temp. (°C) 4.0
☐	Sample Seals	☐	Preservatives - Verified By
☒	Properly Labelled	☐	Other
☒	Appropriate Sample Container	☒	Storage Location 250 / VOAs SOIL / 500 - WATER

Rev: 102005

DISTRIBUTION: White - To Accompany Samples, Yellow - Laboratory Copy, Pink - Field Personnel Copy

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331

BID REQUEST

FOR: ***ENVIRONMENTAL LABORATORY SERVICE***

CONTRACTOR:	Sierra Analytical Labs, Inc.	ATTENTION:	Richard Forsyth
ADDRESS:	26052 Merit Circle, Suite 104	PHONE:	(949) 348-9389
	Laguna Hills, California 92653	EMAIL:	rickf@sierralabs.net

Please return completed Bid Quotations by email with identifying job name, to the following contacts:
Attention: Geir Mathisen and Charles Nestle **Email:** gmathisen@dpw.lacounty.gov, cnestle@dpw.lacounty.gov
FAX: (626) 458-4913 **PHONE:** (626) 458-4923
Bid Quotations must be received by: **4 p. m. on December 6, 2011.**

JOB NAME:	**Big Tujunga Reservoir Sedimentation Characterization Program**
JOB LOCATION:	**Los Angeles County, California (TB Guide Page: 4725 Grid: C5)**
SAMPLE PICK-UP:	**Samples to be picked up by the laboratory at the site or at Alhambra Headquarters.**
TURN-AROUND TIME:	**Five-day turn-around-time is required for all samples (except Dioxane and Dioxin).**

SCOPE OF WORK INCLUDES:
Laboratory services for the analysis of approximately **twenty soil** samples for listed tests below. Samples may consist of a mixture of soil, fine gravel and organic material. The samples will be picked-up by the laboratory over a period of ten to thirteen calendar days.

Number	Analyte*	EPA Method	Unit Cost	Total Cost	Detection Limits (ppm/ppb)
20	Title 22 Metals+mercury	EPA 6010B/7470	65.00	1300.00	D.L.'s will
20	PAHs	EPA 8310	80.00	1600.00	meet 7II
20	VOCs+Oxygenates .	EPA 8260B (5035 Method)	55.00	1100.00	regulatory
20	SVOCs including carbofurans * (HPLC 8321B)	EPA 8270C/8321	85.00/135.00	1700.00/2700.00	requirements
20	Organochlorine Pesticides	EPA 8081A	35.00	700.00	
20	Polychlorinated Biphenyls	EPA 8082	30.00	600.00	
20	1,4 Dioxane - Sub lab	EPA ~~8260B~~ $270C	175.00	3500.00	
20	Dioxin (2,3,7,8-TCDD) - Sub lab	EPA 8280A	375.00	7500.00	
20	EDB and DBCP - included in above analysis	EPA 8260B	—	—	
20	Herbicides	EPA 8151	75.00	1500.00	
20	Kepone and Mirex	EPA 8270C or 8081	35.00	700.00	

***See attached list of minimum required analytes to be tested (Table 1A & 1B). If additional tests are required please include the costs in your bid. Lowest possible detection limit required and meet listed levels on Table 1A &1B.**

*Carbofurans - Sub lab

Signature of Preparer: Rebekah J Arnitz

Total Cost of Completed Job:* 22,900.00

Printed Name of Preparer: Rebekah J Arnitz

Applicable detection limits shall meet LARWQCB requirements for petroleum hydrocarbon impacted sites (09/2006). See *http://www.waterboards.ca.gov/losangeles/publications_forms/forms/ust/lab_forms/labreq9-06.pdf* .

Additional Requirements: Maintain Proof of General Liability, Professional (Errors & Omissions) Liability/Pollution Liability; Auto Liability; and Workers Comp. Liability with Los Angeles County named as additional insured on the certificate. Service is to include sample container delivery, laboratory reports, laboratory consultations, courier service, sample disposal and storage, and any additional required supplements.

This request for a Bid Quotation does not constitute a guarantee of any work. Consultants work is subject to the terms of their current as-needed contract.

TABLE 1A
Soil Sampling Parameters, Vulcan Developed Soil Concentration Levels (VDSCL), and EPA Test Methods

Parameter	Vulcan Developed Soil Concentration Levels (mg/kg)	EPA Test Method (or equivalent)
METALS		
Antimony	31.0	6010
Arsenic	10.0	6010
Barium	5300	6010
Beryllium	1.4	6010
Cadmium	9.0	6010
Chromium (total)	210.0	6010
Cobalt	4600.0	6010
Copper	2800.0	6010
Lead	400.0	239.2
Mercury (methyl)	6.1	7471
Molybdenum	380.0	6010
Nickel	150.0	6010
Selenium	380.0	6010
Silver	380.0	6010
Thallium sulfate	5.2	6010
Vanadium	540.0	6010
Zinc	23000.0	6010
POLYNUCLEAR AROMATIC HYDROCARBONS		
Acenaphthene	3700	8310
Anthracene	20000	8310
Benz(a)anthracene	0.62	8310
Benzo(A)pyrene	0.061	8310
Benzo(B)fluroanthene	0.62	8310
Benzo(K)fluoranthene	6.2	8310
Chrysene	62	8310
Dibenz(A,H) anthracene	0.062	8310
Flouranthene	2300	8310
Flourene	2600	8310
Indenopyrene	0.62	8310
Napthalene	56	8310
Pyrene	2000	8310
BTEX		
Benzene	0.65	8021
Toluene	520	8021
Ethylbenzene	1500	8021
Xylenes	210	8021
ORGANICS		
Carbon tetrachloride	0.24	8260
o-Dichlorobenzene	370	8260
1,2-Dichloroethane	0.35	8260
1,2-Dichloropropane	0.35	8260
Styrene	1700	8260
Tetrachloroethylene	5.7	8260
1,2,4-Trichlorobenzene	570	8260

TABLE 1A (continued)
Soil Sampling Parameters, Vulcan Developed Soil Concentration Levels (VDSCL), and EPA Test Methods

Parameter	Vulcan Developed Soil Concentration Levels (mg/kg)	EPA Test Method (or equivalent)
ORGANICS (continued)		
1,1,1-Trichloroethane	1200	8260
1,1,2-Trichloroethane	0.84	8260
Trichloroethylene	2.8	8260
p-Dichlorobenzene	3.4	8260
1,1-Dichloroethylene	0.054	8260
cis-1,2-Dichloroethylene	31.0	8021A
trans-1,2-Dichloroethylene	63.0	8260
Vinyl Chloride	0.016	8260
Chlorobenzene	65.0	8260
Dichloromethane (Methylene Chloride)	8.9	8260
Trichlorofluoromethane	390	8260
1,1-Dichloroethane	3.3	8260
1,3-Dichloropropene	0.7	8260
1,1,2,2-Tetrachloroethane	0.38	8260
1,1,2-Trichloro-1,2,2-Trifluoroethane	5600	8260
Alachlor	6	8081
Atrazine	2.2	8081
2,4-D	690	8151
Dalapon	1800	8151
Dibromochloropropane (DBCP)	0.06	8260
Di(2-ethylhexyl)adipate	410	525
Dinoseb	61	8151
Endrin	18	8081
Ethylene dibromide (1,2-Dibromoethane)	0.0069	8260
Hexachlorobenzene	0.3	8081
Hexachloro-cyclopentadiene	420	8081
Lindane (HCH gamma)	0.044	8081
Methoxychlor	310	625
Oxamyl (Vydate)	1500	632
Pentachlorophenol	3	8151
Picloram	4300	8151
PCBs (Polychlorinated Biphenyls)	0.22	8081
Simazine	4.1	505
Toxaphene	0.44	505
2,4,5-TP (Silvex]	490	8151
Carbofuran	310	632
Chlordane	1.6	625
Di(2-ethylhexyl)phthalate	35	625
Heptachlor	0.11	625
Heptachlor epoxide	0.053	625

TABLE 1B
Soil Sampling Parameters, California Human Health Screening Levels , and EPA Test Methods

Parameter	California Human Health Screening Levels (mg/kg)	EPA Test Method (or equivalent)
Organic Neutral Chemicals		
Aldrin	0.033	80801A
DDD	2.3	80801A
DDE	1.6	80801A
DDT	1.6	80801A
Dieldrin	0.035	80801A
1, 4 Dioxane	18	8270C
Dioxin (2, 3, 7, 8-TCDD)	0.0000046	8280A
Kepone	0.035	8270C
Mirex	0.031	80801A

APPENDIX C
VULCAN DEVELOPED SOIL CONCENTRATION LEVES AND CALIFORNIA HUMAN HEALTH SCREENING LEVELS

TABLE 1A
Soil Sampling Parameters, Vulcan Developed Soil Concentration Levels (VDSCL), and EPA Test Methods

Parameter	Vulcan Developed Soil Concentration Levels (mg/kg)	EPA Test Method (or equivalent)
METALS		
Antimony	31.0	6010
Arsenic	10.0	6010
Barium	5300	6010
Beryllium	1.4	6010
Cadmium	9.0	6010
Chromium (total)	210.0	6010
Cobalt	4600.0	6010
Copper	2800.0	6010
Lead	400.0	239.2
Mercury (methyl)	6.1	7471
Molybdenum	380.0	6010
Nickel	150.0	6010
Selenium	380.0	6010
Silver	380.0	6010
Thallium sulfate	5.2	6010
Vanadium	540.0	6010
Zinc	23000.0	6010
POLYNUCLEAR AROMATIC HYDROCARBONS		
Acenaphthene	3700	8310
Anthracene	20000	8310
Benz(a)anthracene	0.62	8310
Benzo(A)pyrene	0.061	8310
Benzo(B)fluroanthene	0.62	8310
Benzo(K)fluoranthene	6.2	8310
Chrysene	62	8310
Dibenz(A,H) anthracene	0.062	8310
Flouranthene	2300	8310
Flourene	2600	8310
Indenopyrene	0.62	8310
Napthalene	56	8310
Pyrene	2000	8310
BTEX		
Benzene	0.65	8021
Toluene	520	8021
Ethylbenzene	1500	8021
Xylenes	210	8021
ORGANICS		
Carbon tetrachloride	0.24	8260
o-Dichlorobenzene	370	8260
1,2-Dichloroethane	0.35	8260
1,2-Dichloropropane	0.35	8260
Styrene	1700	8260
Tetrachloroethylene	5.7	8260
1,2,4-Trichlorobenzene	570	8260

TABLE 1A (continued)
Soil Sampling Parameters, Vulcan Developed Soil Concentration Levels (VDSCL), and EPA Test Methods

Parameter	Vulcan Developed Soil Concentration Levels (mg/kg)	EPA Test Method (or equivalent)
ORGANICS (continued)		
1,1,1-Trichloroethane	1200	8260
1,1,2-Trichloroethane	0.84	8260
Trichloroethylene	2.8	8260
p-Dichlorobenzene	3.4	8260
1,1-Dichloroethylene	0.054	8260
cis-1,2-Dichloroethylene	31.0	8021A
trans-1,2-Dichloroethylene	63.0	8260
Vinyl Chloride	0.016	8260
Chlorobenzene	65.0	8260
Dichloromethane (Methylene Chloride)	8.9	8260
Trichlorofluoromethane	390	8260
1,1-Dichloroethane	3.3	8260
1,3-Dichloropropene	0.7	8260
1,1,2,2-Tetrachloroethane	0.38	8260
1,1,2-Trichloro-1,2,2-Trifluoroethane	5600	8260
Alachlor	6	8081
Atrazine	2.2	8081
2,4-D	690	8151
Dalapon	1800	8151
Dibromochloropropane (DBCP)	0.06	8260
Di(2-ethylhexyl)adipate	410	525
Dinoseb	61	8151
Endrin	18	8081
Ethylene dibromide (1,2-Dibromoethane)	0.0069	8260
Hexachlorobenzene	0.3	8081
Hexachloro-cyclopentadiene	420	8081
Lindane (HCH gamma)	0.044	8081
Methoxychlor	310	625
Oxamyl (Vydate)	1500	632
Pentachlorophenol	3	8151
Picloram	4300	8151
PCBs (Polychlorinated Biphenyls)	0.22	8081
Simazine	4.1	505
Toxaphene	0.44	505
2,4,5-TP (Silvex]	490	8151
Carbofuran	310	632
Chlordane	1.6	625
Di(2-ethylhexyl)phthalate	35	625
Heptachlor	0.11	625
Heptachlor epoxide	0.053	625

TABLE 1B
Soil Sampling Parameters, California Human Health Screening Levels , and EPA Test Methods

Parameter	California Human Health Screening Levels (mg/kg)	EPA Test Method (or equivalent)
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DDT	1.6	80801A
Dieldrin	0.035	80801A
1, 4 Dioxane	18	8270C
Dioxin (2, 3, 7, 8-TCDD)	0.0000046	8280A
Kepone	0.035	8270C
Mirex	0.031	80801A

TABLE 1C

The following waste materials are not accepted to any Vulcan Facility under any circumstances:

- Asbestos
- Liquid Wastes
- Tires
- Liquid Paint Containers
- Aerosol Paint Containers
- Motor Oil Containers
- Roofing Cement Containers
- Cloth
- Cardboard
- Plywood
- Tree Branches, Roots, Leaves
- Auto Parts, Air and Oil Filters
- Roofing Tar Containers
- Lumber
- Wood Pallets
- Paper
- Plastic Containers
- Plastic Straps and Packaging
- Miscellaneous Plastic Pieces
- Gypsum Board
- Styrofoam
- Materials Containing Asbestos
- Asphalt Roof Shingles
- Foam Rubber
- Fiberglass
- Antifreeze Containers
- Carpets and Rugs
- Municipal Household Waste
- Rubber Products
- Duct Tape
- Oil Soaked Soil or Debris
- PVC Pipe
- Felt Tar Paper
- Metal and Plastic Drums
- Petroleum Contaminated Soil

COOPERATIVE AGREEMENT BETWEEN THE
LOS ANGELES DISTRICT FLOOD CONTROL DISTRICT AND
THE VULCAN MATERIALS COMPANY
REGARDING EXCHANGE OF EXCAVATED MATERIAL
FOR SEDIMENT PLACEMENT RIGHTS

A G R E E M E N T

THIS cooperative agreement (hereinafter referred to as AGREEMENT) is entered into between the Los Angeles County Flood Control District (hereinafter referred to as DISTRICT) and the Vulcan Materials Company (hereinafter referred to as VULCAN).

W I T N E S S E T H

WHEREAS, DISTRICT is a special district organized and operating under the provisions of the Los Angeles County Flood Control Act; and

WHEREAS, pursuant to the Los Angeles County Flood Control Act, DISTRICT owns and/or manages flood control and water conservation facilities in the County of Los Angeles, and said efforts result in the capture of storm flows used to replenish groundwater basins in the County of Los Angeles; and

WHEREAS, DISTRICT is proposing an improvement project to enlarge the groundwater recharge basins at its Hansen Spreading Grounds facility; and

WHEREAS, DISTRICT estimates that approximately 1.25 million cubic yards of material will be excavated from the groundwater recharge basins in connection with said improvement project; and

WHEREAS, VULCAN operates an inert quarry, including a conveyor system and loading apparatus, adjacent to the Hansen Spreading Grounds; and

WHEREAS, a preliminary soil investigation of the Hansen Spreading Grounds conducted by VULCAN indicates that some or all of the material to be excavated from the groundwater recharge basins may be useful to VULCAN; and

WHEREAS, DISTRICT, from time to time, must remove sediment that has accumulated in various flood control and water conservation facilities (e.g., debris basins) throughout the County of Los Angeles and dispose of that sediment at landfills and other facilities authorized to accept such material; and

WHEREAS, VULCAN owns and operates an inert landfill on Glenoaks Boulevard and the Sheldon and Boulevard gravel pits in Sun Valley, which facilities are authorized to accept sediment that meets the requirements for the exemption from Construction and Demolition waste or inert debris operations set forth in 14 California Administrative Code § 17388.2(a)(5), and that does not contain any hazardous substances;

NOW, THEREFORE, in consideration of the mutual benefits to be derived by the parties, it is hereby agreed as follows:

1. DEFINITIONS. The following definitions shall apply to this AGREEMENT, including all exhibits hereto

1.1. The term "PROJECT" shall mean the improvement project by DISTRICT to enlarge the groundwater recharge basins at its Hansen Spreading Grounds facility.

1.2. The term "EXCAVATED MATERIAL" shall mean the material excavated from the groundwater recharge basins in connection with PROJECT, estimated to be approximately 1.25 million cubic yards.

1.3. The term "CONVEYOR SYSTEM" shall mean the conveyor system and loading apparatus operated by VULCAN at its inert quarry adjacent to DISTRICT'S Hansen Spreading Grounds facility.

1.4. The term "VULCAN FACILITIES" shall mean, collectively, the inert landfill on Glenoaks Boulevard and the Sheldon and Boulevard gravel pits in Sun Valley, operated by VULCAN.

1.5. The term "SEDIMENT" shall mean any earthen material that is removed from DISTRICT'S various flood control and water conservation facilities (e.g., debris basins).

1.6. The term "DESIGNATED AREA" shall mean the area, within the Hansen Spreading Grounds, depicted in Exhibit C.

1.7. The term "HAZARDOUS MATERIALS" shall mean any hazardous or toxic substance, material, or waste, which is or becomes regulated by the United States government, the State of California, or any other governmental authority, including, without limitation, any material or substance which (a) is defined or listed as a “hazardous material,” “toxic pollutant,” “hazardous waste,” “hazardous substance” or “hazardous pollutant” under applicable Federal, State, or local law or administrative code promulgated thereunder, (b) contains hydrocarbons of any kind, nature or description, including but not limited to gas, oil, and similar petroleum products other than reclaimed asphalt pavement, (c) contains asbestos, (d) contains PCBs, or (e) contains radioactive materials.

1.8. The term “CPI” shall mean the U.S. Department of Labor, Bureau of Labor Statistics’ All Urban Consumers’ Price Index for the Los Angeles-Riverside-Orange County area, as published in the U.S. Department of Labor, Bureau of Labor Statistics’ Consumer Price Indices, Pacific Cities and U.S. City Average, or such superceding document published by the U.S. Department of Labor, Bureau of Labor Statistics.

2. REMOVAL OF EXCAVATED MATERIAL FROM PROJECT

2.1. Upon the commencement of PROJECT, DISTRICT shall deposit EXCAVATED MATERIAL at the DESIGNATED AREA, in accordance with the procedures and conditions specified in Exhibit A to this AGREEMENT. DISTRICT shall provide written notice of the commencement of PROJECT to VULCAN.

2.2. Commencing on the date of the written notice from DISTRICT that the PROJECT has commenced, VULCAN shall be authorized to enter and use the DESIGNATED AREA for the storage, sorting, and preliminary processing of the EXCAVATED MATERIAL, in accordance with and subject to the procedures and conditions specified in Exhibit A to this AGREEMENT.

2.3. VULCAN shall remove all EXCAVATED MATERIAL deposited at the DESIGNATED AREA, using the CONVEYOR SYSTEM, in accordance with the procedures and conditions specified in Exhibit A to this AGREEMENT.

2.4. Upon the completion or earlier termination of the excavation operations in connection with PROJECT, DISTRICT shall provide written notice thereof to VULCAN. VULCAN shall cease all use of and vacate the DESIGNATED AREA not later than 2 weeks from the date of said notice. Prior to vacating the DESIGNATED AREA VULCAN shall restore the DESIGNATED AREA to a condition similar to its condition as of the date of the written notice of the commencement of the PROJECT.

2.5. Upon completion or earlier termination of the excavation operations in connection with the PROJECT, DISTRICT and VULCAN shall jointly determine the actual volume of EXCAVATED MATERIAL deposited at the DESIGNATED AREA by DISTRICT and removed by VULCAN (hereafter referred to as the "ACTUAL PROJECT VOLUME").

3. PLACEMENT OF ACCUMULATED SEDIMENT AT VULCAN FACILITIES

3.1. DISTRICT may, as it deems necessary, transport SEDIMENT to the VULCAN FACILITIES, or any of them, in accordance with the procedures and conditions specified in Exhibit B to this AGREEMENT.

3.2. VULCAN shall accept and place all SEDIMENT transported to the VULCAN FACILITIES by DISTRICT, up to an amount equal to the ACTUAL PROJECT VOLUME, and subject to the procedures and conditions specified in Exhibit B to this Agreement.

3.3. VULCAN may, prior to having accepted and placed an amount of SEDIMENT equal to the ACTUAL PROJECT VOLUME, terminate its obligation, described in subsection 3.2, above; provided, however, that if

VULCAN does so, it shall compensate DISTRICT for the difference between the ACTUAL PROJECT VOLUME and the volume of SEDIMENT accepted and placed at the VULCAN FACILITIES as of the date of VULCAN'S termination, at a rate to be calculated at the time of the termination that will be equivalent to a $15 per cubic yard on the effective date of this AGREEMENT, adjusted for inflation at a rate of the CPI.

3.4. DISTRICT'S entitlement to transport SEDIMENT to the VULCAN FACILITIES and VULCAN'S obligation to accept and place all such SEDIMENT, as described in this Section 3, shall continue for a period of 25 years from and after the effective date of this AGREEMENT, as described in subsection 4.1, below, and shall automatically expire thereafter, unless extended by mutual agreement of DISTRICT and VULCAN.

4. GENERAL TERMS AND PROVISIONS:

4.1. This AGREEMENT shall be effective on the date it is executed by all parties

4.2. Insurance.

4.2.1. As of the effective date of this AGREEMENT and during the entire period that VULCAN is authorized to use the DESIGNATED AREA under this AGREEMENT, VULCAN shall procure and maintain in full force and effect insurance policies providing for the following insurance coverage:

- Comprehensive General Liability coverage of not less than five million dollars ($5,000,000) combined single limit for third party liability and one million dollars ($1,000,000) per occurrence.

- Automobile Liability coverage of not less than one million dollars ($1,000,000) per accident.

- Worker’s Compensation coverage in such amount as will fully comply with the laws of the State of California and that shall indemnify, insure, and provide legal defense for both VULCAN and DISTRICT against any loss, claim or damage arising from any injuries or occupation diseases occurring to any worker employed by or any person retained by VULCAN in the course of carrying out the work or services to be performed on the DESIGNATED AREA contemplated in this AGREEMENT.

4.2.2. DISTRICT and the County of Los Angeles, their governing boards, officers, agents, contractors, and employees shall be named as

Additional Insureds on all policies of insurance. VULCAN shall furnish to DISTRICT a Certificate of Insurance evidencing VULCAN'S insurance coverage no later than ten (10) working days after execution of the Agreement by VULCAN. Upon renewal of said policy, VULCAN shall furnish to DISTRICT a Certificate evidencing VULCAN'S continued insurance coverage as required by this AGREEMENT.

4.2.3. 4.2.3. All DISTRICT contractors transporting SEDIMENT to VULCAN FACILITES shall maintain the following insurance throughout the duration of the agreement contemplated herein:

- Comprehensive General Liability coverage of not less than one million dollars ($1,000,000) per occurrence.

- Automobile Liability coverage of not less than one million dollars ($1,000,000) per accident.

- Worker's Compensation coverage in such amount as will fully comply with the laws of the State of California and that shall indemnify, insure, and provide legal defense for both VULCAN and DISTRICT against any loss, claim or damage arising from any injuries or occupation diseases occurring to any worker employed by or any person retained by DISTRICT's contractors in the course of carrying out the work or services to be performed at DISTRICT's facilities, VULCAN FACILITIES contemplated in this AGREEMENT and the associated haul routes.

4.3. Indemnification

4.3.1. DISTRICT shall indemnify, defend, and hold VULCAN and its respective officers, employees, and agents harmless from and against any claims, demands, liability, damages, costs and expenses, including, without limitation, involving bodily injury, death, or personal injury of any person or property damage of any nature whatsoever, arising from or related to the following:

(i) A breach of DISTRICT'S obligations under this Agreement, or

(ii) Any act or omission of DISTRICT or its officers, agents, employees, contractors, or subcontractors in the performance of this AGREEMENT, including (a) the transportation of SEDIMENT to the VULCAN FACILITIES, (b) a breach of any representation, warranty, covenant, or certification made by DISTRICT to VULCAN; (c) the investigation or monitoring of site conditions or any cleanup, containment, restoration, removal, or other remedial work

required under any applicable Federal, State, or local law, by any judicial order or by any governmental entity arising from or related to SEDIMENT transported to and placed at the VULCAN FACILITES by the DISTRICT, its agents or employees; and (d) any claim of liability under the Comprehensive Environmental Response, Compensation, and Liability Act, the Solid Waste Disposal Act, the Toxic Substances Control Act, the Federal Water Pollution Control Act, or any State counterparts or extensions of the foregoing arising from or related to SEDIMENT transported to and placed at the VULCAN FACILITIES.

4.3.2. VULCAN shall indemnify, defend, and hold DISTRICT and the County of Los Angeles, and their respective officers, employees, and agents harmless from and against any claims, demands, liability, damages, costs, and expenses; including, without limitation, involving bodily injury, death, or personal injury of any person or property damage of any nature whatsoever, arising from or related to the following:

(i) A breach of VULCAN'S obligations under this Agreement, or

(ii) Any act or omission of VULCAN or its officers, agents, employees, contractors, or subcontractors in the performance of this AGREEMENT, including (a) VULCAN'S use the DESIGNATED AREA for the storage, sorting, and preliminary processing of the EXCAVATED MATERIAL and (b) VULCAN'S removal of EXCAVATED MATERIAL from the DESIGNATED AREA using the CONVEYOR SYSTEM.

4.4. Notices

4.4.1. All notices provided under this AGREEMENT must be in writing and, unless otherwise provided herein, shall be deemed validly given on the date either: (1) personally delivered to the address indicated below; or (2) on the third business day following deposit, postage prepaid, using certified mail, return receipt requested, in any U.S. Postal mailbox or at any U.S. Post Office; or (3) on the date of transmission by facsimile to the facsimile number provided below.

4.4.2. All notices, demands, or requests made in connection with this AGREEMENT shall be addressed to the following:

VULCAN MATERIAL COMPANY
Contact person?
Address?

DISTRICT

Mr. Donald L. Wolfe, Director
County of Los Angeles
Department of Public Works
P.O. Box 1460
Alhambra, CA 91802-1460

IN WITNESS WHEREOF, each party hereto has caused this AGREEMENT to be executed by its duly authorized officer or official.

ATTEST:

LOS ANGELES DISTRICT
FLOOD CONTROL DISTRICT,
a body corporate and politic

By _____
Chief Engineer

APPROVED AS TO FORM:

RAYMOND G. FORTNER, JR.
County Counsel

By_____
Deputy

VULCAN MATERIAL COMPANY

Date_____ By_____
VULCAN MATERIALS COMPANY
Title:

APPROVED AS TO FORM:

By_____
VULCAN MATERIALS COMPANY
Title:

Exhibit A

PROCEDURES AND CONDITIONS REGARDING REMOVAL OF EXCAVATED MATERIAL FROM PROJECT

A.1. DISTRICT or its contractor will deposit the EXCAVATED MATERIAL in the DESIGNATED AREA in accordance with the approved plans and specifications for PROJECT.

A.2. VULCAN shall be responsible for all costs associated with testing, loading, and transporting the EXCAVATED MATERIAL from the DESIGNATED AREA to its ultimate destination (as determined by VULCAN).

A.3. VULCAN is responsible for obtaining all permits from the proper regulatory agencies necessary for the removal of the EXCAVATED MATERIAL from the DESIGNATED AREA, including any permits required in connection with VULCAN'S loading equipment and CONVEYOR SYSTEM.

A.4. The soil density to be used to convert cubic yards to tons shall be ?

A.5. VULCAN shall conduct its operations for the removal of the EXCAVATED MATERIAL from the PROJECT, up to 14 hours per day, 6 days a week. On average, VULCAN will remove 5,000 to 6,000 tons of EXCAVATED MATERIAL per day.

A.6. VULCAN shall conduct its operations for the removal of the EXCAVATED MATERIAL in accordance with all procedures, conditions and limitations contained in the approved specifications for PROJECT, including but not limited to maximum stockpile, minimum EXCAVATED MATERIAL transported, and staging requirements.

A.7. VULCAN shall install and operate primary crusher/processing equipment in the DESIGNATED AREA and be responsible for all costs associated with the erection, operation, and dismantling of the loading and processing equipments at no cost to the DISTRICT.

A.8. VULCAN may inspect and test all EXCAVATED MATERIAL delivered to the DESIGNATED AREA prior to loading such EXCAVATED MATERIAL onto the CONVEYOR SYSTEM, at no cost to the DISTRICT.

Exhibit B

PROCEDURES AND CONDITIONS REGARDING PLACEMENT OF ACCUMULATED SEDIMENT AT VULCAN FACILITIES

B.1. Notice Of Proposed Delivery Of SEDIMENT

Prior to transporting any SEDIMENT to the VULCAN FACILITIES, DISTRICT shall provide VULCAN with written notice of the date of the proposed delivery and the source and approximate volume of the SEDIMENT proposed to be delivered. DISTRICT shall provide said notice to VULCAN at least 21 business days prior to the proposed delivery date.

B. 2. SEDIMENT Testing

No later than two (2) business days from the date of the written notice from DISTRICT described in paragraph B.1., VULCAN may, in its discretion and at its sole cost, initiate inspection and testing of the SEDIMENT proposed to be delivered to the VULCAN FACILITIES to determine: (1) whether the SEDIMENT proposed to be delivered exceeds any of the Vulcan Developed Soil Concentration Levels (VDSCL) specified in Tables 1A and 1B of this AGREEMENT, and (2) whether the SEDIMENT proposed to be delivered contains any of the unacceptable waste material specified in Table 1C of this AGREEMENT. If VULCAN performs such an inspection and/or test, it shall provide to DISTRICT copies of the reports of such inspection and testing within two (2) business days of VULCAN'S receipt of said reports .

B.3. SEDIMENT Rejection

B.3.1. VULCAN may reject any of SEDIMENT proposed to be delivered to the VULCAN FACILITIES to the extent that: (1) the SEDIMENT that exceeds any of the VDSCL, (2) the SEDIMENT contains any unacceptable waste material as specified in Table 1C, or (3) the SEDIMENT contains volatile organic compounds.

B.3.2. Prior to rejecting any SEDIMENT, VULCAN shall do all of the following:

(a) Inform DISTRICT, both verbally and in writing, of VULCAN'S reason(s) for the proposed rejection; and

(b) Meet with DISTRICT and attempt, in good faith, to resolve any dispute DISTRICT may have with the reasons for VULCAN'S proposed rejection of the SEDIMENT.

B.3.3. If, after complying with the provisions of Section B.3.2., above, VULCAN determines to reject any SEDIMENT, VULCAN shall provide DISTRICT written notice thereof, not later than two (2) business days prior to the date of the proposed delivery specified in the written notice specified in paragraph B.1, above.

B.3.4. Upon receipt of a timely written notice of rejection from VULCAN, DISTRICT shall not transport or deliver the SEDIMENT identified in the written notice of rejection to the VULCAN FACILITIES.

B.4. SEDIMENT Delivery

B.4.1 If VULCAN has not provided DISTRICT with a timely written notice of rejection, VULCAN shall, not later than two (2) business days prior to the date of the proposed delivery, designate and notify the DISTRICT of the VULCAN FACILITIES which will receive the SEDIMENT. SEDIMENT shall be deposited only in the area(s) designated by VULCAN personnel, during VULCAN'S approved hours of operation, and in accordance with VULCAN'S specified procedures.

B.4.2. DISTRICT or its contractor shall be solely responsible for the transportation of SEDIMENT from DISTRICT'S facilities to the VULCAN FACILITIES. DISTRICT and DISTRICT'S contractors shall comply with all applicable transportation laws, including load limit and tarp laws, and all applicable safety rules while transporting SEDIMENT to the VULCAN FACILITIES.

B.4.3. All SEDIMENT transported to the VULCAN FACILITIES shall be subject to inspection by VULCAN personnel prior to deposition at the VULCAN FACILITIES. VULCAN may, in its discretion and at its sole cost, perform a visual and/or a video inspection of all incoming loads of SEDIMENT delivered to the VULCAN FACILITIES. All trucks delivering said SEDIMENT shall be required to remove their tarps prior to checking-in. VULCAN may check all SEDIMENT loads with a Photo Ionization Detector (PID) at the gate of the VULCAN FACILITY or at the disposal areas within the VULCAN FACILITY. VULCAN shall conduct all visual and PID inspections of SEDIMENT loads prior to their deposition by the DISTRICT. VULCAN shall log and record all PID records with the DISTRICT employee’s or DISTRICT contractor’s name, vehicle license number, date, time, and location of disposal. VULCAN may reject any load which appears to contain volatile organic compounds based on the PID reading and, if rejected, the load shall be removed by DISTRICT.

B.4.4. DISTRICT shall provide VULCAN a weekly truck count of sediment transported to VULCAN FACILITIES by DISTRICT, pursuant to this AGREEMENT. VULCAN may choose to compare ~~their~~ its own truck count

with the count provided by the DISTRICT. Both parties shall attempt, in good faith, to resolve any discrepancies that may arise.

B.4.5. VULCAN may choose to randomly weigh trucks loaded with SEDIMENT to determine the average weight / volume of SEDIMENT per truck. VULCAN shall present its findings to the DISTRICT for its approval. Otherwise, VULCAN and DISTRICT shall mutually agree on the unit weight / volume of one truck load.

B.4.6. DISTRICT shall be responsible for the acts and omissions of independent haulers bringing SEDIMENT into the VULCAN FACILITIES, and such independent haulers shall be deemed to be the agents of DISTRICT.

B.5. VULCAN shall be responsible for paying all disposal fees required by the State, County, and any other regulatory agencies.

B.6. The provisions of the AGREEMENT with respect to activities that may be undertaken by VULCAN, including but not limited to inspection of SEDIMENT and designation of areas for placement of SEDIMENT at the VULCAN FACILITES, shall not constitute a limitation or waiver of any of the rights and remedies of VULCAN or DISTRICT'S responsibilities hereunder.