November 16, 2005



City of Livermore City Hall, Engineering Division 1052 South Livermore Avenue Livermore, California 94550-4899

Attention: Robert Tingley, Associate Engineering Technician

Subject: Environmental Sampling, Testing and Evaluation of Soil

Livermore Airport Jet Fuel Line Replacement

Livermore, California

CEL Proposal No. 81-01824-PW (10-00431-PW-CS)

Dear Mr. Tingley:

Pursuant to your request, Consolidated Engineering Laboratories (CEL) has provided environmental testing services for onsite soil at the subject site. Our representative visited the site on November 10, 2005, and collected 15 individual soil samples at various locations within and near a jet fuel line excavation located at the airport of Livermore, California. Soil samples were collected by hand near the surface of the excavations and nearby stockpiles. Sampling was performed at the site under the direction of the local Fire Department. The sample locations are shown on the attached Figure 1.

The soil samples were transported to a California state-certified laboratory for testing. Proper chain-of-custody procedures were followed. The six soil samples were analyzed for the presence of Volatile Organic Compounds (EPA 8260B), Nonhalogenated Organics (EPA8015B), and Inductively Coupled Plasma – Atomic Emission Spectrometry (EPA 6010B/7471A).

Analytical results are compared to pertinent Soluble Threshold Limit Concentration (STLC), Total Threshold Limit Concentration (TTLC), Environmental Screening Levels (ESL's) for surface soil, and Preliminary Remediation Goals (PRG). Copies of the laboratory reports are attached.

Contaminant concentrations in soil are generally considered to be nonhazardous if they are equal or less than the TTLC, and less than 10 times the STLC as defined by the State of California in Title 22. Two other screening tools used to assess the acceptability of soils are the Preliminary Remediation Goals (PRGs) for industrial soil provided by the US EPA, and the Environmental Screening Levels provided by the San Francisco Bay Regional Water Quality Control Board for shallow soils where groundwater is not a current or potential source of drinking water (commercial/industrial land use area).

Gasoline concentrations in Samples 1-1, 1-8, 1-9, 1-10 and 1-11 were high. Concentrations ranged from 6,000 ppm to 360,000 ppm. Toluene was detected over the ESL limit in Samples 1-1, 1-9, and 1-11. In particular, the concentration of Toluene in Sample 1-11 was almost 420% higher than the ESL limit. The concentration of Total Xylenes in Sample 1-1 well exceeded the ESL. Motor oil was non-detectable in all the samples, however, Diesel Range Organics were detectable above the ESL limit. The ESL for DRO is 500 ppm, and concentrations reported in Samples 1-7, 1-8, 1-9, 1-10, and 1-11 ranged from 710 to 1,100 ppm. The soil in these locations can be considered highly contaminated and remediation is probable.

Concentrations of metals were generally below the screening levels. However, the concentration of Cobalt was above the ESL of 10 ppm in Samples 1-1, 1-2, 1-3, 1-5, 1-13, 1-14, and 1-15. High Chromium levels were detected in Samples 1-1 and 1-14. The STLC limit for Chromium is 50 ppm, and concentrations were detected at 54 and 55 ppm in the two high samples

It should be noted that the above screening tools are generally for action levels for contaminants in soil that is to remain in place, and different criteria may apply for soil that is to be transferred to or from a site. The local landfill or other location of proposed exported soil should be contacted to determine their requirements for accepting this material. The reported results are from representative samples of the soil, and do not necessarily represent the cleanliness of the entire site. These results should not be considered a clean bill of health, or prognosis of soil cleanliness. Local governing agencies may have stricter guideline standards that will govern this disposal of the soil.

It is our pleasure to be of service to you. If you should have any questions regarding this letter, please contact the undersigned at (925) 314-7100.

Sincerely, CONSOLIDATED ENGINEERING LABORATORIES

William R. Stevens, PE 43010, GE 2339

Principal Geotechnical Engineer

Marc Hachey, P.G. 7833

Project Geologist

Attachments: Figure 1 Site plan

STL San Francisco lab report

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rctingley@ci.livermore.ca.us)

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TABLE 1 (Sample 1) SUMMARY OF ANALYTICAL DATA

		FANALYTICAL		Q=116=1=	HOFOL
Constituent	Reported Concentration	California Title	SFBRWQCB	Callfornia	US EPA
	(ppm)	22	Environmental	Title 22	Residential
]	STLC (ppm)	Screening Levels -ESLs	TTLC (ppm)	PRG (ppm)
			(ppm)	NI A	NIA.
Gasoline Range Organic	İ	NA	400	NA	NA
1-1 (2)	8,000				
1-2	ND				
1-3	ND				
1-4	ND				
1-5	ND				
1-6	ND				
1-7	ND				
1-8 (2)	260,000				
1-9 (2)	6,000				
1-10 (2)	310,000				
		,			
1-11 (2)	360,000				
1-12	ND ND				
1-13	ND				
1-14	ND				
1-15	ND				
Benzene		NA	0.38	NA	NA
1-1	ND				
1-2	ND				
1-3	ND				
1-4	ND				
1-5	ND				
1-6	ND				
1-7	ND				
1-8	ND				
1-9	ND				
1-10	ND				
1-11	ND		•		
1-12	ND				
1-13	ND				
1-13	ND				
1-15	ND				
		NA	9.3	NA	NA
Toluene	59	1471			
1-1 (2)	ND ND				
1-2	ND ND				
1-3				ĺ	
1-4	ND			ļ	
1-5	ND ND				
1-6	ND ND		,		
1-7	ND ND				
1-8	ND				
1-9 (2)	12				
1-10	ND				
1-11 (2)	3,900				
1-12	ND				
1-13	8.3				
1-14	5.6				
1-15	ND			l. <u>.</u>	
			· · · · · · · · · · · · · · · · · · ·		

Constituent	Reported Concentration	California Title 22	SFBRWQCB Environmental	California Title 22	US EPA Residential
1	(ppm)	STLC (ppm)	Screening Levels –ESLs	TTLC (ppm)	PRG (ppm)
			(ppm) 32		
Ethyl Benzene		NA	32	NA	NA
1-1	17				
1-2	ND				
1-3	ND				
1-4	ND				
1-5	ND				
1-6	ND				
1-7	ND				
1-8	ND		1		
1-9	ND]		
1-10	ND			l	
1-10	ND				
1-11	ND	1			
1-12	ND		[
1-13	ND	1			
1-14 1-15	ND				
Total Xylenes	, ND	NA	2.3	NA	NA
	210	""			
1-1 (2) 1-2	ND				
	ND ND				
1-3	ND		Į.		
1-4	ND ND				
1-5	ND				
1-6	DND				
1-7	ND ND				
1-8	ND ND				
1-9	ND ND				
1-10	ND ND]		[
1-11	ND ND				
1-12					
1-13	ND ND				
1-14					
1-15	ND	NA	500	NA	NA NA
Diesel Range Organics	200	14/4	300	1 '"'	'*'
1-1	200			1	
1-2	ND ND				
1-3	ND 6.4				
1-4	6.1		1		
1-5	61 ND				
1-6	ND ND				
1-7	ND 4.400	1	1	1	
1-8 (2)	1,100		1		
1-9 (2)	710		1		
1-10 (2)	750		1		
1-11 (2)	800		Į.		
1-12	16				
1-13	15				
1-14	7.5		ļ]
1-15	3	<u> </u>	1	1	<u> </u>

Constituent	Reported Concentration (ppm)	California Title 22	SFBRWQCB Environmental	California Title 22	US EPA Residential
	(ppiii)	STLC (ppm)	Screening Levels ESLs	TTLC (ppm)	PRG (ppm)
1		4 · = # (-	(ppm)		
Motor Oil Range Organics		NA	1,000	NA	NA
1-1	ND				
1-2	ND			'	
1-3	ND				
1-4	ND				
1-5	ND				
1-6	ND				
1-7	ND				
1-8	ND				
1-9	ND				
1-10	ND				
	ND		-		
1-11	65				
1-12	68				
1-13	ND				
1-14	ND				
1-15	ND	NA	5.6	NA	620
MTBE	ND	INC.	0.0	l INC	020
1-1	ND				
1-2					
1-3	ND				
1-4	ND				
1-5	ND				
1-6	ND				
1-7	ND				
1-8	NA				
1-9	ND				
1-10	NA	İ			
1-11	NA				
1-12	ND				
1-13	ND				
1-14	ND				
1-15	ND				
Antimony		15	40	500	31
1-1	3.8				
1-2	ND				
1-3	ND				
1-4	ND				
1-5	ND				
1-6	ND				
1-7	ND				
1-8	ND				
1-9	ND				
1-10	ND				
1-11	ND				
1-12	ND				
1-12	ND				
1-13	ND				i
1-14	ND				,
1*15	142				·

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Constituent	Reported Concentration (ppm)	California Title 22 STLC (ppm)	SFBRWQCB Environmental Screening Levels –ESLs	California Title 22 TTLC (ppm)	US EPA Residential PRG (ppm)
		STEC (ppin)	(ppm)		
Arsenic		5	5.5	500	39
1-1	5.5				
1-2	3.9				
1-3	4.1		i		
1-4	2.1				
1-5	3.1				
1-6	2.7				
1-7	1.6				
1-8	ND				
1-9	1.2				
1-10	1.4			ļ	
1-11	1.3				
1-12	1.7				
1-13	4,2				
1-14	4.1			1	:
1-15	4.1				
Barium		100	1,500	10,000	5,400
	170				
1-1	190				
1-2 1-3	180	1			
1-3 1-4	35				
1- 4 1-5	140	Ì			
1-6	45			1	
1-7	26				
1-8	35				
1-9	27		1		
1-10	46				
1-11	46				ļ
1-12	49				
1-13	160				
1-14	170			1	
1-15	150				<u> </u>
		0.75	8.0	75	150
Beryllium 1-1	ND				
1-1 1-2	ND	1			
1-2 1-3	ND	1			1
	ND				
1-4	ND			1	1
1-5 1-6	ND				[
1-U 4 7	ND			1	1
1-7	ND				
1-8 1-9	ND				
1.40	ND				
1-10	ND				
1-11	ND		1	1	
1-12	ND				
1-13	ND]
1-14 1-15	ND	1	1	1	1

Constituent	Reported Concentration (ppm)	California Title 22 STLC (ppm)	SFBRWQCB Environmental Screening Levels -ESLs (ppm)	California Title 22 TTLC (ppm)	US EPA Residential PRG (ppm)
Cadmium		1	7.4	100	3.7
1-1	1.6		, , ,		
1-2	1.5		:		
	1.5				
1-3	1.0				
1-4	1.3				
1-5	1.3		·		
1-6	1.2				
1-7	0.8	ļ			
1-8	0.5				
1-9	0.5		•		
1-10	0.8				
1-11	1.2				
1-12	0.9			-	
1-13	1.5				
1-14	1.5	•			
1-15	1.4				
Chromium - Total		5	58	NA	210
1-1 (1)	54				
1-2	50				
1-3	48				
1-4	15				
1-5	41				
1-6	15				
1-7	14				
1-8	11	į		1	
1-9	11				
1-10	19				
1-10	41				
	18				
1-12	48				
1-13					
1-14 (1)	55				
1-15	50		40	0.000	4 700
Cobalt		80	10	8,000	4,700
1-1 (2)	14				
1-2 (2)	14				
1-3 (2)	14				
1-4	4.7				
1-5 (2)	11				
1-6	7.8				
1-7	3.4				
1-8	3.9				
1-9	3.9 3.5				
1-10	5.9	1			
1-11	8.2				
1-12	9.7			ţ	
1-13 (2)	13				
1-14 (2)					
1-15 (2)	14				
1-10 (2)	13	<u>[</u>		L	L;

Constituent	Reported Concentration (ppm)	California Title 22 STLC (ppm)	SFBRWQCB Environmental Screening LevelsESLs (ppm)	California Title 22 TTLC (ppm)	US EPA Residential PRG (ppm)
Copper 1-1 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9 1-10 1-11 1-12 1-13 1-14	35 30 31 11 26 15 8.3 9.1 7.5 13 17 19 27 29	25	230	2,500	2,900
1-15 Lead - Total 1-1 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9 1-10 1-11 1-12 1-13 1-14	7.5 6.6 6.9 4.0 6.1 4.4 3.0 10 8.7 10 5.2 2.6 7.3 7.4 7.8	5	750	1,000	400
Molybdenum 1-1 1-2 1-3 1-4 1-5 1-6 1-7 1-8 1-9 1-10 1-11 1-12 1-13 1-14 1-15	ND ND ND ND ND ND ND ND ND ND ND ND	350	40	3,500	390

Nickel 100	nia US EPA 22 Residential
Nickel 1-1 100 1-2 93 1-3 92 1-4 28 1-5 73 1-6 28 1-7 19 1-8 16 1-9 22 1-10 32 1-11 28 1-12 40 1-13 100 1-14 1-15 98 Selenium 1-1 1-2 ND 1-3 ND 1-4 ND 1-5 ND 1-6 ND 1-7 ND 1-8 ND 1-6 ND 1-7 ND 1-8 ND 1-8 ND 1-9 ND 1-10 ND 1-10 ND 1-10 ND 1-10 ND 1-10 ND 1-10 ND 1-11 ND 1-11 ND 1-10 ND 1-10 ND 1-11 ND 1-12 1-13 ND 1-14 ND 1-15 ND	ppm) PRG (ppm)
Nickel 1-1 1-2 1-3 1-3 1-4 1-5 1-6 1-7 1-8 1-9 22 1-10 32 1-11 28 1-12 40 1-12 1-13 100 1-14 1-15 Selenium 1-1 1-2 ND 1-3 ND 1-4 ND 1-5 ND 1-6 ND 1-7 ND 1-8 ND 1-8 ND 1-10 ND 1-17 ND 1-8 ND 1-10 ND 1-11 ND 1-17 ND 1-18 ND 1-19 ND 1-10 ND 1-11 ND 1-11 ND 1-11 ND 1-12 ND 1-13 ND 1-14 ND 1-15 ND ND 1-10 ND 1-11 ND 1-11 ND 1-11 ND 1-11 ND 1-11 ND 1-12 ND 1-11 ND 1-12 ND 1-13 ND 1-14 ND 1-15 ND 1-10 ND 1-11 ND 1-11 ND 1-11 ND 1-11 ND 1-12 ND 1-11 ND 1-11 ND 1-12 ND 1-11 ND 1-12 ND 1-11	, , , , , , , , , , , , , , , , , , ,
1-1	0 1,600
1-2 93 92 1-13 28 1-5 73 1-6 28 1-7 19 19 18 18 16 1-9 22 1-10 32 1-11 28 100 1-14 1-15 98 5elenium 1-1 ND 1-2 ND 1-8 ND 1-6 ND 1-8 ND 1-8 ND 1-8 ND 1-10 ND 1-11 ND 1	1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1-3 1-4 1-5 1-5 1-6 1-7 1-9 1-8 1-10 1-11 1-12 1-12 1-13 1-14 1-15 Selenium 1-1 1-2 ND 1-3 ND 1-4 ND 1-5 ND 1-6 ND 1-7 1-8 ND 1-7 1-8 ND 1-9 ND 1-10 ND 1-17 ND 1-18 ND 1-19 ND 1-10 ND 1-17 ND 1-10 ND 1-10 ND 1-11 ND 1-10 ND 1-11 ND ND 1-11 1-12 ND ND 1-15 ND 1-11 1-12 ND ND 1-15 ND 1-16 ND ND 1-17 ND 1-11 1-12 ND ND 1-11 1-12 ND ND 1-11	
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Selenium	
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1.15 ND	
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Silver	000
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1-2 ND	
1-3 ND	
1-4 ND ND	
1-5 ND ND	i .
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1-7 ND	ľ
1-8 ND	
1-9 ND	
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1-13 ND ND	
1-14 ND ND	
1-15 ND	

Constituent	Reported Concentration (ppm)	California Title	SFBRWQCB Environmental Screening Levels –ESLs	California Title 22 TTLC (ppm)	US EPA Residential PRG (ppm)
		STLC (ppm)	(ppm)	<u></u>	·
Thallium		7	13	700	5.2
1-1	ND				İ
1-2	ND		· ·		
1-3	ND				
1-4	ND				
1-5	ND				1
1-6	ND				1
1-7	ND				
1-8	ND		İ		
1-9	ND				
1-10	ND		1		
1-11	ND	1			
1-12	ND				
1-13	ND				
1-13	ND				
1-15	ND				
Vanadium		24	200	2,400	550
1-1	25				
1-2	25				i
	25				
1-3	12		[
1-4	22				
1-5	28				
1-6	11		1		
1-7	11				
1-8	6.7				
1-9	12				
1-10	28				:
1-11	13				
1-12	22				
1-13	22				
1-14	23				
1-15		250	600	5,000	23,000
Zinc	47				1
1-1	42				1
1-2	45				1
1-3	72				
1-4	39				
1-5	31				
1-6	20	1			
1-7	17				
1-8	20 17 22	ì	1		
1-9	24				
1-10	24 26			1	
1-11	30				
1-12	30 43				
1-13	43				
1-14	44 41				
1-15	41	<u> </u>			

	· · · · · · · · · · · · · · · · · · ·	0.2	10	20	2.3
Mercury	1 22	0.2	, ,		
1-1	0.06]			
1-2	0.06				
1-3	ND				
1-4	ND ND				
1-5	l ND				
1-6	ND				
1-7	ND				
	ND	1			
1-8	ND				
1-9	ND				
1-10	ND				
1-11					
1-12	ND				
1-13	0.06	1			
1-14	0.05				
	0.05				
1-15	0.05	NA Not Applicable	L-18 cellable		

ND Non Detectable

NA Not Applicable/Available

⁽¹⁾ More than 10 times the California STLC. However, the test results are below the California TTLC, San Francisco Bay Regional Water Quality Board ESLs, and the US EPA PRG.

⁽²⁾ More than the San Francisco Bay Regional Water Quality Board ESLs. However, the test results are below the California TTLC, STLC and US EPA PRG.

Job Number: 720-385-1 Client: Consolidated Engineering Lab

Client Sample ID:

1-9

Lab Sample ID:

720-385-9

Client Matrix:

Solid

Date Sampled:

11/10/2005:0000

Date Received:

11/10/2005 | 1220

8260B Volatile Organic Compounds by GC/MS

Method:

8260B

Analysis Batch: 720-1694

Instrument ID:

Varian 3900E

Preparation:

5030B

Lab File ID:

c:\varianws\data\200511\11

Dilution:

1.0

Initial Weight/Volume:

5 g

Date Analyzed:

11/11/2005 1443

Final Weight/Volume:

10 mL

Date Prepared:

11/11/2005 1443

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
Benzene		ND		5.0
Ethylbenzene		ND		5.0
Toluene		12		5.0
MTBE		ND		5.0
Xylenes, Total		ND		10
Gasoline Range Organics (GRO)-C5-C12	6000		1000
Surrogate		%Rec		Acceptance Limits

Surrogate	%Rec	Acceptance Limit
Toluene-d8	96	70 - 130
1,2-Dichloroethane-d4	103	60 - 140

Job Number: 720-385-1 Client: Consolidated Engineering Lab

Client Sample ID: 1-1

Lab Sample ID: Client Matrix:

720-385-1

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Prep Batch: 720-1643

N/A Lab File ID:

30.23 g

Dilution:

1.0

Initial Weight/Volume: Final Weight/Volume:

5 mL

Date Analyzed: Date Prepared: 11/11/2005 1304 11/10/2005 1534

Injection Volume: Column ID:

PRIMARY

Analyte

DryWt Corrected: N

Result (mg/Kg)

Qualifier

RL 0.99

Diesel Range Organics [C10-C28] Motor Oil Range Organics [C24-C36] 200 ND

50

Surrogate

%Rec

Acceptance Limits

o-Terphenyl

91

Client: Consolidated Engineering Lab

Job Number: 720-385-1

Client Sample ID:

1-2

Lab Sample ID:

720-385-2

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Final Weight/Volume:

Prep Batch: 720-1643

Lab File ID:

N/A

Dilution:

1.0

Initial Weight/Volume:

30.02 g 5 mL

Date Analyzed: Date Prepared: 11/11/2005 1332 11/10/2005 1534

Injection Volume: Column ID:

PRIMARY

Analyte

DryWt Corrected: N

Result (mg/Kg)

Qualifier

RL

1.0

50

ND

Diesel Range Organics [C10-C28] Motor Oil Range Organics [C24-C36]

ND

Acceptance Limits

Surrogate

%Rec

60 - 130

o-Terphenyl

91

Job Number: 720-385-1 Client: Consolidated Engineering Lab

Client Sample ID:

1-3

Lab Sample ID: Client Matrix:

720-385-3

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Lab File ID:

Prep Batch: 720-1643

N/A

Dilution:

1.0

Initial Weight/Volume:

30.19 g

Date Analyzed:

Final Weight/Volume:

5 mL

Date Prepared:

11/11/2005 1142 11/10/2005 1534

Injection Volume: Column ID:

PRIMARY

Analyte

Result (mg/Kg)

Qualifier

RL

DryWt Corrected: N

ND

0.99

Diesel Range Organics [C10-C28] Motor Oil Range Organics [C24-C36]

ND

50

Surrogate

%Rec

Acceptance Limits 60 - 130

o-Terphenyl

83

Job Number: 720-385-1

Client Sample ID:

1-4

Client: Consolidated Engineering Lab

Lab Sample ID:

720-385-4

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005: 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Lab File ID:

N/A

Dilution:

1.0

Prep Batch: 720-1643

Initial Weight/Volume: Final Weight/Volume:

30.19 g 5 mL

Date Analyzed: Date Prepared: 11/11/2005 1359 11/10/2005 1534

Injection Volume:

Column ID:

PRIMARY

Analyte

DryWt Corrected: N

Result (mg/Kg)

Qualifier

RL

Diesel Range Organics [C10-C28]

6.1

0.99 50

Motor Oil Range Organics [C24-C36]

ND %Rec

Acceptance Limits

Surrogate o-Terphenyl

88

Job Number: 720-385-1 Client: Consolidated Engineering Lab

Client Sample ID:

1-5

Lab Sample ID:

720-385-5

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Lab File ID:

N/A

Prep Batch: 720-1643

Dilution:

1.0

Initial Weight/Volume: Final Weight/Volume: 30.02 g 5 mL

Date Analyzed: Date Prepared: 11/11/2005 1427

11/10/2005 1534

Injection Volume: Column ID:

PRIMARY

Result (mg/Kg)

Qualifier

Analyte

DryWt Corrected: N

RL

Diesel Range Organics [C10-C28] Motor Oil Range Organics [C24-C36] 61 ND

1.0 50

Surrogate

%Rec

Acceptance Limits

o-Terphenyl

93

Client: Consolidated Engineering Lab

Job Number: 720-385-1

Client Sample ID:

1-6

Lab Sample ID:

720-385-6

Client Matrix:

Solid

Date Sampled:

11/10/2005: 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Lab File ID:

N/A

Prep Batch: 720-1643

30.00 g

Dilution:

1.0

Initial Weight/Volume:

Final Weight/Volume:

5 mL

Date Analyzed: Date Prepared: 11/11/2005 1237 11/10/2005 1534

Injection Volume: Column ID:

PRIMARY

Analyte

Result (mg/Kg)

Qualifier

DryWt Corrected: N

RL 1.0

Diesel Range Organics [C10-C28] Motor Oil Range Organics [C24-C36]

ND ND

50

Surrogate

%Rec

Acceptance Limits

o-Terphenyl

87

Job Number: 720-385-1 Client: Consolidated Engineering Lab

Client Sample ID: 1-7

Lab Sample ID: **Client Matrix:**

720-385-7

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Prep Batch: 720-1643

Lab File ID: N/A

1.0

30.29 g

Dilution:

Initial Weight/Volume: Final Weight/Volume:

5 mL

Date Analyzed: Date Prepared: 11/11/2005 1209 11/10/2005 1534

Injection Volume: Column ID:

PRIMARY

Analyte

DryWt Corrected: N

Result (mg/Kg)

Qualifier

RL

Diesel Range Organics [C10-C28]

ND

0.99 50

Motor Oil Range Organics [C24-C36]

ND

Acceptance Limits

Surrogate o-Terphenyl %Rec 90

Client: Consolidated Engineering Lab Job Number: 720-385-1

Client Sample ID: 1-8

Lab Sample ID:

720-385-8

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received: 11/10/2

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Prep Batch: 720-1643

Lab File ID: N/A

30.16 d

Dilution:

5.0

5.0 11/14/2005 0251 Initial Weight/Volume: Final Weight/Volume:

30.16 g 5 mL

Date Analyzed: Date Prepared:

11/10/2005 1534

Injection Volume: Column ID:

PRIMARY

Analyte

DryWt Corrected: N

Result (mg/Kg)

Qualifier

RL

Diesel Range Organics [C10-C28] Motor Oil Range Organics [C24-C36] 1100 ND 5.0

250

Surrogate

%Rec

Acceptance Limits

o-Terphenyl

0

Ď

Job Number: 720-385-1 Client: Consolidated Engineering Lab

Client Sample ID:

1-9

Lab Sample ID:

720-385-9

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Lab File ID:

N/A

Dilution:

Motor Oil Range Organics [C24-C36]

Prep Batch: 720-1643

Initial Weight/Volume:

30.20 g

Date Analyzed:

5.0

Final Weight/Volume:

Column ID:

5 mL

Date Prepared:

11/14/2005 0318 11/10/2005 1534

Injection Volume:

PRIMARY

Analyte

Result (mg/Kg)

Qualifier

RL

Diesel Range Organics [C10-C28]

DryWt Corrected: N 710 ND

5.0 250

Surrogate o-Terphenyl

%Rec

Acceptance Limits

0

D

Job Number: 720-385-1 Client: Consolidated Engineering Lab

Client Sample ID: 1-10

Lab Sample ID:

720-385-10

11/14/2005 0345

11/10/2005 1534

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received: 11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method: Preparation:

Date Analyzed:

Date Prepared:

3550B

Analysis Batch: 720-1698

Instrument ID: HP DRO3

Lab File ID:

N/A

Dilution:

5.0

Prep Batch: 720-1643

Initial Weight/Volume:

30.36 g

Final Weight/Volume:

5 mL

Injection Volume:

Column ID:

PRIMARY

DryWt Corrected: N Analyte Diesel Range Organics [C10-C28] Motor Oil Range Organics [C24-C36]

Result (mg/Kg) 750

Qualifier

RL 4.9 250

ND

Acceptance Limits

Surrogate o-Terphenyl %Rec 0

D

Client: Consolidated Engineering Lab

Job Number: 720-385-1

Client Sample ID:

1-11

Lab Sample ID:

720-385-11

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

N/A

Dilution:

Prep Batch: 720-1643

Lab File ID:

Final Weight/Volume:

5.0

Initial Weight/Volume:

30.18 g 5 mL

Date Analyzed: Date Prepared: 11/14/2005 0412 11/10/2005 1534

Injection Volume:

Column ID:

PRIMARY

Analyte

DryWt Corrected: N

Result (mg/Kg)

Qualifier

Diesel Range Organics [C10-C28]

800

RL 5.0

Motor Oil Range Organics [C24-C36]

ND

250

Surrogate o-Terphenyl %Rec 0

D

Acceptance Limits 60 - 130

Client: Consolidated Engineering Lab

Job Number: 720-385-1

Client Sample ID:

1-12

Lab Sample ID:

720-385-12

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Prep Batch: 720-1643

Lab File ID: N/A

30.08 g

Dilution:

1.0

Initial Weight/Volume:

5 mL

Date Analyzed: Date Prepared:

11/11/2005 1454

Final Weight/Volume: Injection Volume:

Column ID:

PRIMARY

11/10/2005 1534

Result (mg/Kg)

Qualifier

Analyte

DryWt Corrected: N

RL 1.0

Diesel Range Organics [C10-C28] Motor Oil Range Organics [C24-C36]

16 65

50

Surrogate

%Rec

Acceptance Limits

o-Terphenyl

84

Job Number: 720-385-1 Client: Consolidated Engineering Lab

Client Sample ID:

1-13

Lab Sample ID:

720-385-13

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

Lab File ID:

3550B

Prep Batch: 720-1643

N/A

1.0 Dilution:

11/11/2005 1521

Initial Weight/Volume: Final Weight/Volume:

30.19 g 5 mL

Date Analyzed: Date Prepared:

11/10/2005 1534

Injection Volume: Column ID:

PRIMARY

Analyte

DryWt Corrected: N

Result (mg/Kg)

Qualifier

Diesel Range Organics [C10-C28] Motor Oil Range Organics [C24-C36]

15 68

RL.

0.99 50

Surrogate

%Rec

Acceptance Limits

o-Terphenyl

82

Job Number: 720-385-1

Client: Consolidated Engineering Lab

Client Sample ID:

1-14

Lab Sample ID:

720-385-14

Client Matrix:

Solid

Date Sampled:

11/10/2005 | 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

8015B

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Lab File ID:

N/A

Dilution:

Date Prepared:

Prep Batch: 720-1643

1.0 Date Analyzed:

11/11/2005 1454

11/10/2005 1534

Initial Weight/Volume: Final Weight/Volume:

30.05 g 5 mL

Injection Volume:

Column ID:

PRIMARY

Analyte

DryWt Corrected: N

Result (mg/Kg)

Qualifier

RL

Diesel Range Organics [C10-C28]

7.5

1.0 50

Motor Oil Range Organics [C24-C36]

ND

Surrogate o-Terphenyl %Rec 79

Acceptance Limits 60 - 130

Job Number: 720-385-1 Client: Consolidated Engineering Lab

Client Sample ID:

1-15

Lab Sample ID:

720-385-15

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method:

Analysis Batch: 720-1698

Instrument ID:

HP DRO3

Preparation:

3550B

Prep Batch: 720-1643

Lab File ID:

N/A

1.0

Initial Weight/Volume:

30.20 g

5 mL

Dilution: Date Analyzed:

11/11/2005 1521

Final Weight/Volume: Injection Volume:

Date Prepared:

11/10/2005 1534

Column ID:

PRIMARY

Analyte

DryWt Corrected: N Result (mg/Kg)

Qualifier

RL.

Diesel Range Organics [C10-C28] Motor Oil Range Organics [C24-C36] 3.0 ND 0.99 50

Surrogate

%Rec

Acceptance Limits

o-Terphenyl

89

Varian ICP

N/A

1.04 g

50 mL

Job Number: 720-385-1 Client: Consolidated Engineering Lab

Client Sample ID: 1-1

720-385-1 Date Sampled: 11/10/2005 0000 Lab Sample ID: Date Received: 11/10/2005 1220 Solid Client Matrix:

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry

Analysis Batch: 720-1683 6010B Method:

Prep Batch: 720-1648 3050B Preparation:

Dilution: 1.0 Date Analyzed: 11/11/2005 1838

Date Prepared: 11/11/2005 0823

Qualifier RL DryWt Corrected: N Result (mg/Kg) Analyte ND 0.96 Silver 0.96 5.5 Arsenic 170 0.96 Barium ND 0.48: Bervilium 0.48 1.6 Cadmium 0.96 14 Cobalt 54 0.96 Chromium 35 0.96 Copper ND 0.96 Molybdenum 100 0.96 Nickel 0.96 7.5 Lead 3.8 1.9 **Antimony** Selenium ND 1.9 Thallium ND 0.96 25 0.96 Vanadium 47 0.96 Zinc

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

7471A Method: Preparation:

7471A

1.0 11/11/2005 1427

Date Prepared:

Date Analyzed:

11/11/2005 0833

Analysis Batch: 720-1684

Prep Batch: 720-1650

Instrument ID:

Lab File ID:

Instrument ID:

Initial Weight/Volume:

Final Weight/Volume:

Lab File ID:

FIMS 100 N/A

Initial Weight/Volume: Final Weight/Volume: 1.00 g 50 mL

Analyte

Dilution:

DryWt Corrected: N

Result (mg/Kg)

Qualifier

RL

Mercury

0.057

Job Number: 720-385-1

Client: Consolidated Engineering Lab

Client Sample ID: 1-2

Lab Sample ID:

720-385-2

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry

Method:

6010B

Analysis Batch: 720-1683

Instrument ID:

Varian ICP

Preparation:

3050B

Prep Batch: 720-1648

Lab File ID:

N/A

Dilution: 1.0

11/11/2005 1849

Initial Weight/Volume:

1.00 g

Date Analyzed: Date Prepared:

11/11/2005 0823

Final Weight/Volume:

50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Silver Arsenic Barium Beryllium Cadmium Cobalt Chromium Copper Molybdenum Nickel Lead Antimony Selenium Thallium Vanadium Zinc		ND 3.9 190 ND 1.5 14 50 30 ND 93 6.6 ND ND ND ND ND ND ND ND ND ND ND ND ND		1.0 1.0 1.0 0.50 0.50 1.0 1.0 1.0 1.0 2.0 2.0 2.0 1.0

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: Preparation: 7471A 7471A Analysis Batch: 720-1684 Prep Batch: 720-1650

instrument ID: Lab File ID:

FIMS 100 N/A

Dilution:

1.0

Initial Weight/Volume:

1.05 g

Date Analyzed: Date Prepared: 11/11/2005 1430 11/11/2005 0833 Final Weight/Volume:

50 mL

Analyte

DryWt Corrected: N

Result (mg/Kg)

Qualifier

RL

Mercury

0.057

Job Number: 720-385-1

Client Sample ID: 1-3

Lab Sample ID:

720-385-3

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry

Method:

6010B

Client: Consolidated Engineering Lab

Analysis Batch: 720-1683

Instrument ID:

Varian ICP

Preparation:

3050B

Prep Batch: 720-1648

Lab File ID:

N/A

Dilution:

1.0

Initial Weight/Volume: Final Weight/Volume:

1.01 g

Date Analyzed: Date Prepared: 11/11/2005 1853 11/11/2005 0823

50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Silver Arsenic Barium Beryllium Cadmium Cobalt Chromium Copper Molybdenum Nickel Lead Antimony Selenium Thallium Vanadium Zinc		ND 4.1 180 ND 1.5 14 48 31 ND 92 6.9 ND ND ND ND ND 25 45		0.99 0.99 0.50 0.50 0.99 0.99 0.99 0.99

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method:

7471A

Analysis Batch: 720-1684

Instrument ID: Lab File ID:

FIMS 100

Preparation: Dilution:

7471A 1.0

Prep Batch: 720-1650

Initial Weight/Volume: Final Weight/Volume:

N/A 1.03 g 50 mL

Date Analyzed: Date Prepared: 11/11/2005 1431 11/11/2005 0833

DryWt Corrected: N

Result (mg/Kg)

Qualifier

RL

Analyte Mercury

ND

Client: Consolidated Engineering Lab Job Number: 720-385-1

Client Sample ID: 1-4

Lab Sample ID:

720-385-4

Client Matrix:

Solid

Date Sampled:

11/10/2005 0000

Date Received:

11/10/2005 1220

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry

Method:

6010B

Analysis Batch: 720-1683

Instrument ID:

Varian ICP

Preparation:

3050B

Prep Batch: 720-1648

Lab File ID:

N/A

Dilution:

1.03 g

Date Analyzed:

1.0

Initial Weight/Volume: Final Weight/Volume:

50 mL

Date Prepared:

11/11/2005 1857 11/11/2005 0823

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RL ND 0.97 Silver Arsenic 2.1 0.97 35 Barium 0.97 Beryllium ND

0.49 Cadmium 1.0 0.49 Cobalt 4.7 0.97 Chromium 15 0.97 Copper 11 0.97 Molybdenum ND 0.97 28 Nickel 0.97 4.0 Lead 0.97 Antimony ND 1.9 Selenium ND 1.9 Thallium ND 0.97

Zinc 72 7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method:

Vanadium

7471A 7471A Analysis Batch: 720-1684

12

Instrument ID:

FIMS 100

0.97

0.97

Preparation: Dilution:

1.0

Prep Batch: 720-1650

Lab File ID: Initial Weight/Volume: Final Weight/Volume:

N/A 1.03 g 50 mL

Date Analyzed: Date Prepared:

11/11/2005 1432 11/11/2005 0833

Analyte

DryWt Corrected: N

Result (mg/Kg)

Qualifier

RL

Mercury

ND

