CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
355 South Teller Street
Suite 300
Lakewood, CO 80226

Package ID T713PA4
Task Order 313150010
SDG No. IOJ0739
No. of Analyses 9

Laboratory Calscience Environmental Laboratories, Inc.
Reviewer K. Shadowlight
Analysis/Method PAHs by Method 8270/SIM

Date: December 8, 2005
Reviewer's Signature K Shadowlight

ACTION ITEMS[a]	
1. **Case Narrative Deficiencies**	
2. **Out of Scope Analyses**	
3. **Analyses Not Conducted**	
4. **Missing Hardcopy Deliverables**	
5. **Incorrect Hardcopy Deliverables**	
6. **Deviations from Analysis Protocol, e.g.,**	Qualifications were assigned for continuing calibration %D outliers
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS[b]	

[a] Subcontracted analytical laboratory is not meeting contract and/or method requirements.
[b] Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.

DATA VALIDATION REPORT

Topanga Fire Sampling

ANALYSIS: SEMIVOLATILES (PAHs)

SAMPLE DELIVERY GROUP: IOJ0739

Prepared by

AMEC Denver Operations
355 South Teller Street, Suite 300
Lakewood, Colorado 80226

1. INTRODUCTION

Task Order Title:	Topanga Fire Sampling
Contract Task Order #:	313150010
SDG#:	IOJ0739
Project Manager:	P. Costa
Matrix:	Soil/Solid
Analysis:	Semivolatiles (PAHs)
QC Level:	Level IV
No. of Samples:	9
No. of Reanalyses/Dilutions:	0
Reviewer:	K. Shadowlight
Date of Review:	December 8, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the *AMEC Data Validation Procedure for Levels C and D Semivolatile Organics (DVP-3, Rev. 2), SW-846 Method 8270C* , and the *National Functional Guidelines For Organic Data Review* (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
CF-1-Soil	WL008	IOJ0739-01	soil	8270C/SIM
CF-1-Ash	WL009	IOJ0739-02	solid	8270C/SIM
PCC-1-Soil	WL010	IOJ0739-03	soil	8270C/SIM
PCC-1-Ash	WL011	IOJ0739-04	solid	8270C/SIM
WC-1 Ash	WL014	IOJ0739-05	solid	8270C/SIM
WC-1-Soil	WL015	IOJ0739-06	soil	8270C/SIM
CRP-1-Soil	WL007	IOJ0739-07	soil	8270C/SIM
SC-1-Soil	WL012	IOJ0739-08	soil	8270C/SIM
SC-1-Ash	WL013	IOJ0739-09	solid	8270C/SIM

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The polyaromatic hydrocarbon analysis by 8270/SIM was subcontracted to Calscience Environmental Laboratories, Inc. The samples were received at both laboratories within the temperature limits of 4°C ±2°C, intact, and in good condition. The analysis did not require preservation, and no preservation was noted in the field. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were signed and dated by the appropriate field and laboratory personnel. The samples in this SDG were originally on "HOLD" status; however, the samples and analysis were requested for this SDG in memos from Montgomery Watson dated 10/12/05, 10/17/05, and 10/18/05. Custody seals were not present on the coolers or samples at either laboratory; however, as the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

The soil/solid samples were extracted within 14 days of collection and analyzed within 40 days of collection. No qualifications were required.

2.2 GC/MS TUNING

Tune criteria is not required for Single Ion Monitoring (SIM) analysis. No qualifications were required.

2.3 CALIBRATION

There was one initial calibration associated with this SDG dated 10/18/05. The average RRFs were ≥0.05 and the %RSDs were ≤15% in the initial calibration. An ICV was analyzed immediately following the initial calibration and the RRFs were ≥0.05 and %Ds were ≤20% for all target compounds. There were three continuing calibrations associated with the samples in this SDG dated 10/18/05, 10/19/05 (16:35), and 10/20/05. All RRFs were ≥0.05. The %D for benzo(g,h,i)perylene exceeded 20% in the continuing calibration dated 10/18/05. Nondetects for benzo(g,h,i)perylene were qualified as estimated, "UJ," in samples WL009, WL010, and WL011. The %Ds for pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene exceeded 20% in the continuing calibration dated 10/19/05; therefore, the results for the aforementioned target compounds were qualified as estimated "J," for detects and "UJ," for nondetects in sample WL008. The %Ds for the remaining target compounds were ≤20% in all calibrations.

A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibrations were checked from the raw data, and no calculation or transcription errors were noted. No further qualifications were required.

2.4 BLANKS

Two method blanks (051013L10-MB and 051019L09-MB) were extracted and analyzed with this SDG. There were no target compounds detected in either of the method blanks. Review of the raw data indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two laboratory control sample/laboratory control sample duplicate pairs (051013L10-LCS/LCSD and 051019L09-LCS/LCSD) were extracted and analyzed with this SDG. The recoveries and RPDs for spiked target compounds acenaphthene and pyrene were within the laboratory QC limits for both pairs. A representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The recovery of p-terphenyl-d14 exceeded QC limits in sample WL015; however, one base neutral recovery above 10% is permitted. The base-neutral surrogate recoveries were within the laboratory QC limits for the remaining samples in this SDG. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed for sample WL010 in this SDG. The recoveries and RPDs for spiked target compounds acenaphthene and pyrene were within the laboratory QC limits for the MS/MSD pair. A representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:

2.8.1 Field Blanks and Equipment Rinsates

There were no field QC samples identified for this SDG. No qualifications were required.

2.8.2 *Field Duplicates*

There were no field duplicate samples identified for this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and ±30 seconds for retention times. A representative number of recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for 18 polyaromatic hydrocarbons target compounds by SW-846 Method 8270/SIM. Review of the sample chromatograms and retention times indicated no problems with target compound identification. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The results and reporting limits were appropriately adjusted for sample amount and percent moisture. The reporting limits were supported by the low point of the initial calibration and the laboratory MDL. Any detects between the MDL and the reporting limit were qualified as estimated, "J," by the laboratory. The results were reported in ppm (mg/kg). No further qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs are not reported for SIM analysis. No qualifications were required.

2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.

Calscience Environmental Laboratories, Inc.

Analytical Report

Del Mar Analytical		Date Received:	10/13/05
17461 Derian Avenue, Suite 100		Work Order No:	05-10-0747
Irvine, CA 92614-5845		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: IOJ0739		Units:	mg/kg
			Page 1 of 3

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
IOJ0739-01	05-10-0747-1	10/07/05	Solid	10/13/05	10/19/05	051013L10

Comment(s): -Results are reported on a dry weight basis.
-Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Naphthalene	0.28	0.02	0.0042	1.13		Benzo (a) Anthracene	ND	0.023	0.0029	1.13	U
2-Methylnaphthalene	0.064	0.023	0.0027	1.13		Chrysene	ND	0.023	0.0053	1.13	
Acenaphthylene	ND	0.023	0.0027	1.13	U	Benzo (k) Fluoranthene	ND	0.023	0.0051	1.13	
Acenaphthene	ND	0.023	0.0056	1.13	U	Benzo (b) Fluoranthene	ND	0.023	0.0016	1.13	
Fluorene	0.0092	0.023	0.0034	1.13	J	Benzo (a) Pyrene	ND	0.023	0.0022	1.13	
Phenanthrene	0.032	0.023	0.0043	1.13		Benzo (g,h,i) Perylene	ND	0.023	0.0037	1.13	UJ
Anthracene	ND	0.023	0.0070	1.13	U	Indeno (1,2,3-c,d) Pyrene	ND	0.023	0.0039	1.13	U
Fluoranthene	ND	0.023	0.0022	1.13	U	Dibenz (a,h) Anthracene	ND	0.023	0.0030	1.13	UJ
Pyrene	0.012	0.023	0.0037	1.13	J	1-Methylnaphthalene	0.055	0.023	0.0048	1.13	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Nitrobenzene-d5	89	28-139				2-Fluorobiphenyl	78	33-144			
p-Terphenyl-d14	99	23-160									

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
IOJ0739-02	05-10-0747-2	10/07/05	Solid	10/13/05	10/18/05	051013L10

Comment(s): -Results are reported on a dry weight basis.
-Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Naphthalene	0.13	0.02	0.0038	1.02		Benzo (a) Anthracene	ND	0.020	0.0027	1.02	U
2-Methylnaphthalene	0.017	0.02	0.0024	1.02	J	Chrysene	0.022	0.02	0.0048	1.02	
Acenaphthylene	ND	0.020	0.0024	1.02	U	Benzo (k) Fluoranthene	ND	0.020	0.0046	1.02	U
Acenaphthene	0.11	0.02	0.0051	1.02		Benzo (b) Fluoranthene	ND	0.020	0.0014	1.02	
Fluorene	ND	0.020	0.0031	1.02	U	Benzo (a) Pyrene	ND	0.020	0.0020	1.02	
Phenanthrene	0.11	0.02	0.0039	1.02		Benzo (g,h,i) Perylene	ND	0.020	0.0033	1.02	UJ
Anthracene	ND	0.020	0.0063	1.02	U	Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0035	1.02	U
Fluoranthene	0.022	0.02	0.0020	1.02		Dibenz (a,h) Anthracene	ND	0.020	0.0027	1.02	U
Pyrene	0.019	0.02	0.0033	1.02	J	1-Methylnaphthalene	0.012	0.02	0.0044	1.02	J
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Nitrobenzene-d5	111	28-139				2-Fluorobiphenyl	130	33-144			
p-Terphenyl-d14	116	23-160									

Level IV

10/12/05

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Del Mar Analytical
17461 Derian Avenue, Suite 100
Irvine, CA 92614-5845

Date Received: 10/13/05
Work Order No: 05-10-0747
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: mg/kg

Project: IOJ0739

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
IOJ0739-03	05-10-0747-3	10/07/05	Solid	10/13/05	10/18/05	051013L10

Comment(s): -Results are reported on a dry weight basis.
-Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Naphthalene	0.071	0.02	0.0037	1.01		Benzo (a) Anthracene	ND	0.020	0.0026	1.01	U
2-Methylnaphthalene	0.025	0.02	0.0024	1.01		Chrysene	ND	0.020	0.0048	1.01	
Acenaphthylene	ND	0.020	0.0024	1.01	U	Benzo (k) Fluoranthene	ND	0.020	0.0045	1.01	
Acenaphthene	ND	0.020	0.0051	1.01		Benzo (b) Fluoranthene	ND	0.020	0.0014	1.01	
Fluorene	ND	0.020	0.0031	1.01		Benzo (a) Pyrene	ND	0.020	0.0020	1.01	
Phenanthrene	0.026	0.02	0.0038	1.01		Benzo (g,h,i) Perylene	ND	0.020	0.0033	1.01	UJ C
Anthracene	ND	0.020	0.0063	1.01	U	Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0035	1.01	U
Fluoranthene	ND	0.020	0.0020	1.01		Dibenz (a,h) Anthracene	ND	0.020	0.0027	1.01	U
Pyrene	ND	0.020	0.0033	1.01		1-Methylnaphthalene	0.019	0.02	0.0043	1.01	J
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Nitrobenzene-d5	128	28-139				2-Fluorobiphenyl	126	33-144			
p-Terphenyl-d14	137	23-160									

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
IOJ0739-04	05-10-0747-4	10/07/05	Solid	10/13/05	10/18/05	051013L10

Comment(s): -Results are reported on a dry weight basis.
-Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Naphthalene	0.26	0.02	0.0037	0.99		Benzo (a) Anthracene	ND	0.020	0.0026	0.99	U
2-Methylnaphthalene	0.026	0.02	0.0024	0.99		Chrysene	0.0082	0.02	0.0047	0.99	J
Acenaphthylene	ND	0.020	0.0024	0.99	U	Benzo (k) Fluoranthene	ND	0.020	0.0045	0.99	U
Acenaphthene	ND	0.020	0.0050	0.99		Benzo (b) Fluoranthene	ND	0.020	0.0014	0.99	
Fluorene	ND	0.020	0.0030	0.99		Benzo (a) Pyrene	ND	0.020	0.0020	0.99	
Phenanthrene	0.033	0.02	0.0038	0.99		Benzo (g,h,i) Perylene	ND	0.020	0.0032	0.99	UJ C
Anthracene	ND	0.020	0.0061	0.99	U	Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0034	0.99	U
Fluoranthene	ND	0.020	0.0019	0.99		Dibenz (a,h) Anthracene	ND	0.020	0.0027	0.99	U
Pyrene	ND	0.020	0.0032	0.99		1-Methylnaphthalene	0.019	0.02	0.0042	0.99	J
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Nitrobenzene-d5	109	28-139				2-Fluorobiphenyl	110	33-144			
p-Terphenyl-d14	107	23-160									

Level III

10/18/05

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Del Mar Analytical
17461 Derian Avenue, Suite 100
Irvine, CA 92614-5845

Date Received: 10/20/05
Work Order No: 05-10-1149
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: mg/kg

Project: IOJ0739

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
IOJ0739-07	05-10-1149-1	10/7/05	Solid	10/20/05	10/20/05	051019L09

Comment(s): -Results are reported on a dry weight basis.
-Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual
Naphthalene	0.27	0.02	0.0037	1.01	
2-Methylnaphthalene	0.033	0.02	0.0024	1.01	
Acenaphthylene	ND	0.020	0.0024	1.01	U
Acenaphthene	ND	0.020	0.0051	1.01	
Fluorene	ND	0.020	0.0031	1.01	
Phenanthrene	0.050	0.02	0.0038	1.01	
Anthracene	ND	0.020	0.0063	1.01	U
Fluoranthene	0.010	0.02	0.0020	1.01	J
Pyrene	0.0096	0.02	0.0033	1.01	J
Surrogates:	REC (%)	Control Limits			Qual
Nitrobenzene-d5	113	28-139			
p-Terphenyl-d14	123	23-160			

Parameter	Result	RL	MDL	DF	Qual
Benzo (a) Anthracene	ND	0.020	0.0026	1.01	U
Chrysene	ND	0.020	0.0048	1.01	
Benzo (k) Fluoranthene	ND	0.020	0.0045	1.01	
Benzo (b) Fluoranthene	ND	0.020	0.0014	1.01	
Benzo (a) Pyrene	ND	0.020	0.0020	1.01	
Benzo (g,h,i) Perylene	ND	0.020	0.0033	1.01	
Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0035	1.01	
Dibenz (a,h) Anthracene	ND	0.020	0.0027	1.01	
1-Methylnaphthalene	0.025	0.02	0.0043	1.01	
Surrogates:	REC (%)	Control Limits			Qual
2-Fluorobiphenyl	110	33-144			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
IOJ0739-08	05-10-1149-2	10/10/05	Solid	10/20/05	10/20/05	051019L09

Comment(s): -Results are reported on a dry weight basis.
-Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual
Naphthalene	0.034	0.02	0.0037	1	
2-Methylnaphthalene	0.0098	0.02	0.0024	1	J
Acenaphthylene	ND	0.020	0.0024	1	U
Acenaphthene	ND	0.020	0.0050	1	
Fluorene	ND	0.020	0.0031	1	
Phenanthrene	0.021	0.02	0.0038	1	
Anthracene	ND	0.020	0.0062	1	U
Fluoranthene	0.0082	0.02	0.0019	1	J
Pyrene	ND	0.020	0.0033	1	U
Surrogates:	REC (%)	Control Limits			Qual
Nitrobenzene-d5	106	28-139			
p-Terphenyl-d14	131	23-160			

Parameter	Result	RL	MDL	DF	Qual
Benzo (a) Anthracene	ND	0.020	0.0026	1	U
Chrysene	ND	0.020	0.0047	1	
Benzo (k) Fluoranthene	ND	0.020	0.0045	1	
Benzo (b) Fluoranthene	ND	0.020	0.0014	1	
Benzo (a) Pyrene	ND	0.020	0.0020	1	
Benzo (g,h,i) Perylene	ND	0.020	0.0033	1	
Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0035	1	
Dibenz (a,h) Anthracene	ND	0.020	0.0027	1	
1-Methylnaphthalene	ND	0.020	0.0043	1	
Surrogates:	REC (%)	Control Limits			Qual
2-Fluorobiphenyl	99	33-144			

Level IV

KS 12/8/05

RL - Reporting Limit DF - Dilution Factor Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Del Mar Analytical
17461 Derian Avenue, Suite 100
Irvine, CA 92614-5845

Date Received: 10/20/05
Work Order No: 05-10-1149
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: mg/kg

Project: IOJ0739

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
IOJ0739-09	05-10-1149-3	10/10/05	Solid	10/20/05	10/20/05	051019L09

Comment(s): -Results are reported on a dry weight basis.
-Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Naphthalene	0.25	0.02	0.0037	1.01		Benzo (a) Anthracene	ND	0.020	0.0026	1.01	U
2-Methylnaphthalene	0.031	0.02	0.0024	1.01		Chrysene	ND	0.020	0.0048	1.01	
Acenaphthylene	ND	0.020	0.0024	1.01	U	Benzo (k) Fluoranthene	ND	0.020	0.0045	1.01	
Acenaphthene	ND	0.020	0.0051	1.01		Benzo (b) Fluoranthene	ND	0.020	0.0014	1.01	
Fluorene	ND	0.020	0.0031	1.01		Benzo (a) Pyrene	ND	0.020	0.0020	1.01	
Phenanthrene	0.057	0.02	0.0038	1.01		Benzo (g,h,i) Perylene	ND	0.020	0.0033	1.01	
Anthracene	ND	0.020	0.0063	1.01	U	Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0035	1.01	
Fluoranthene	0.012	0.02	0.0020	1.01	J	Dibenz (a,h) Anthracene	ND	0.020	0.0027	1.01	
Pyrene	0.0099	0.02	0.0033	1.01	J	1-Methylnaphthalene	0.023	0.02	0.0043	1.01	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	79	28-139		2-Fluorobiphenyl	93	33-144	
p-Terphenyl-d14	121	23-160					

Method Blank	099-06-010-61	N/A	Solid	10/19/05	10/19/05	051019L09

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Naphthalene	ND	0.020	0.0037	1	*	Benzo (a) Anthracene	ND	0.020	0.0026	1	*
2-Methylnaphthalene	ND	0.020	0.0024	1		Chrysene	ND	0.020	0.0047	1	
Acenaphthylene	ND	0.020	0.0024	1		Benzo (k) Fluoranthene	ND	0.020	0.0045	1	
Acenaphthene	ND	0.020	0.0050	1		Benzo (b) Fluoranthene	ND	0.020	0.0014	1	
Fluorene	ND	0.020	0.0031	1		Benzo (a) Pyrene	ND	0.020	0.0020	1	
Phenanthrene	ND	0.020	0.0038	1		Benzo (g,h,i) Perylene	ND	0.020	0.0033	1	
Anthracene	ND	0.020	0.0062	1		Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0035	1	
Fluoranthene	ND	0.020	0.0019	1		Dibenz (a,h) Anthracene	ND	0.020	0.0027	1	
Pyrene	ND	0.020	0.0033	1		1-Methylnaphthalene	ND	0.020	0.0043	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	88	28-139		2-Fluorobiphenyl	89	33-144	
p-Terphenyl-d14	133	23-160					

* qualifiers not validated

Level IV

US 12/8/05

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Del Mar Analytical
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Date Received: 10/19/05
Work Order No: 05-10-1065
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: mg/kg

Project: IOJ0739

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
IOJ0739-05 W L014	05-10-1065-1	10/10/05	Solid	10/19/05	10/20/05	051019L09

Comment(s): -Results are reported on a dry weight basis. Rev Qual | Qual Lab

-Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Naphthalene	0.39	0.02	0.0037	1.01		Benzo (a) Anthracene	ND	0.020	0.0026	1.01	U
2-Methylnaphthalene	0.11	0.02	0.0024	1.01		Chrysene	0.010	0.02	0.0048	1.01	J
Acenaphthylene	0.010	0.02	0.0024	1.01	J	Benzo (k) Fluoranthene	ND	0.020	0.0045	1.01	U
Acenaphthene	0.022	0.02	0.0051	1.01		Benzo (b) Fluoranthene	ND	0.020	0.0014	1.01	
Fluorene	0.016	0.02	0.0031	1.01	J	Benzo (a) Pyrene	ND	0.020	0.0020	1.01	
Phenanthrene	0.24	0.02	0.0038	1.01		Benzo (g,h,i) Perylene	ND	0.020	0.0033	1.01	
Anthracene	0.022	0.02	0.0063	1.01		Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0035	1.01	
Fluoranthene	0.072	0.02	0.0020	1.01		Dibenz (a,h) Anthracene	ND	0.020	0.0027	1.01	
Pyrene	0.039	0.02	0.0033	1.01		1-Methylnaphthalene	0.075	0.02	0.0043	1.01	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	128	28-139		2-Fluorobiphenyl	114	33-144	
p-Terphenyl-d14	103	23-160					

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
IOJ0739-06 W L015	05-10-1065-2	10/10/05	Solid	10/19/05	10/20/05	051019L09

Comment(s): -Results are reported on a dry weight basis. Rev Qual | Qual Lab

-Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Naphthalene	0.17	0.02	0.0037	1.01		Benzo (a) Anthracene	ND	0.020	0.0026	1.01	U
2-Methylnaphthalene	0.054	0.02	0.0024	1.01		Chrysene	ND	0.020	0.0048	1.01	
Acenaphthylene	ND	0.020	0.0024	1.01	U	Benzo (k) Fluoranthene	ND	0.020	0.0045	1.01	
Acenaphthene	ND	0.020	0.0051	1.01	U	Benzo (b) Fluoranthene	ND	0.020	0.0014	1.01	
Fluorene	0.0097	0.02	0.0031	1.01	J	Benzo (a) Pyrene	ND	0.020	0.0020	1.01	
Phenanthrene	0.056	0.02	0.0038	1.01		Benzo (g,h,i) Perylene	ND	0.020	0.0033	1.01	
Anthracene	ND	0.020	0.0063	1.01	U	Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0035	1.01	
Fluoranthene	0.017	0.02	0.0020	1.01	J	Dibenz (a,h) Anthracene	ND	0.020	0.0027	1.01	
Pyrene	0.015	0.02	0.0033	1.01	J	1-Methylnaphthalene	0.040	0.02	0.0043	1.01	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	118	28-139		2-Fluorobiphenyl	99	33-144	
p-Terphenyl-d14	210	23-160					

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Level IV 12/8/05