CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID T713PA3
Task Order 313150010
SDG No. IOJ0896
No. of Analyses 5

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 the following:
Holding Times	--Continuing calibration %D outliers
GC/MS Tune/Inst. Performance	--Surrogate recovery outliers
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: IOJ0896

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#:	IOJ0896
Project Manager:	P. Costa
Matrix:	Soil/Solid
Analysis:	Semivolatiles (PAHs)
QC Level:	Level IV
No. of Samples:	5
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	Del Mar Lab No.	Matrix	Method
SGSS-1S01 (SOIL)	WL016	IOJ0896-01	soil	8270C/SIM
SGSS-1S01 (ASH)	WL017	IOJ0896-02	solid	8270C/SIM
BKND-5 (SOIL)	WL018	IOJ0896-03	soil	8270C/SIM
BKND-5 (ASH)	WL019	IOJ0896-04	solid	8270C/SIM
BKND-1 (SOIL)	WL021	IOJ0896-06	soil	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 COC and transfer COC accounted for the samples and analysis presented in this SDG. 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 two continuing calibrations associated with the samples in this SDG dated 10/18/05 and 10/19/05 (16:35). All RRFs were ≥0.05. The %D for benzo(g,h,i)perylene exceeded 20% in the continuing calibration dated 10/18/05. Results for benzo (g,h,i)perylene were qualified as estimated, "J," for detects and "UJ," for nondetects in samples WL016, WL017, and WL019. 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 samples WL018 and WL021. The %Ds for the remaining target compounds were ≤20% in both 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 (051017L02-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 (051017L02-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 recoveries of two or more base-neutral surrogates exceeded QC limits in samples WL016, WL017, and WL019. The samples were reanalyzed with similar results; however, insufficient sample was available for reextraction. Detects were qualified as estimated, "J," in the aforementioned samples. 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 further qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed for this SDG. Evaluation of method accuracy and precision was based on blank spike/blank spike duplicate results. 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
17461 Derian Avenue, Suite 100
Irvine, CA 92614-5845

Date Received: 10/14/05
Work Order No: 05-10-0882
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: mg/kg

Project: IOJ0896

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
IOJ0896-01	05-10-0882-1	10/13/05	Solid	10/17/05	10/19/05	051017L02

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	0.064	0.02	0.0037	1.01	J	Benzo (a) Anthracene	0.0093	0.02	0.0026	1.01	J
2-Methylnaphthalene	0.033	0.02	0.0024	1.01		Chrysene	0.017	0.02	0.0048	1.01	J
Acenaphthylene	0.0098	0.02	0.0024	1.01		Benzo (k) Fluoranthene	ND	0.020	0.0045	1.01	U
Acenaphthene	0.012	0.02	0.0051	1.01		Benzo (b) Fluoranthene	ND	0.020	0.0014	1.01	
Fluorene	0.020	0.02	0.0031	1.01		Benzo (a) Pyrene	ND	0.020	0.0020	1.01	
Phenanthrene	0.038	0.02	0.0038	1.01		Benzo (g,h,i) Perylene	0.0090	0.02	0.0033	1.01	J
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	0.019	0.02	0.0020	1.01	J	Dibenz (a,h) Anthracene	ND	0.020	0.0027	1.01	U
Pyrene	0.023	0.02	0.0033	1.01	J	1-Methylnaphthalene	0.024	0.02	0.0043	1.01	J
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Nitrobenzene-d5	331	28-139			2	2-Fluorobiphenyl	1111	33-144			2
p-Terphenyl-d14	148	23-160									

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
IOJ0896-02	05-10-0882-2	10/13/05	Solid	10/17/05	10/18/05	051017L02

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	0.30	0.02	0.0038	1.02	J	Benzo (a) Anthracene	ND	0.020	0.0027	1.02	U
2-Methylnaphthalene	0.033	0.02	0.0024	1.02	J	Chrysene	0.011	0.02	0.0048	1.02	J
Acenaphthylene	ND	0.020	0.0025	1.02	U	Benzo (k) Fluoranthene	ND	0.020	0.0046	1.02	U
Acenaphthene	ND	0.020	0.0051	1.02		Benzo (b) Fluoranthene	ND	0.020	0.0014	1.02	
Fluorene	ND	0.020	0.0031	1.02		Benzo (a) Pyrene	ND	0.020	0.0020	1.02	
Phenanthrene	0.054	0.02	0.0039	1.02	J	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	0.012	0.02	0.0020	1.02	J	Dibenz (a,h) Anthracene	ND	0.020	0.0028	1.02	U
Pyrene	0.011	0.02	0.0033	1.02	J	1-Methylnaphthalene	0.022	0.02	0.0044	1.02	J
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Nitrobenzene-d5	146	28-139			2	2-Fluorobiphenyl	150	33-144			2
p-Terphenyl-d14	170	23-160			2						

Level IV

KS 12/4/05

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Del Mar Analytical	Date Received: 10/14/05
17461 Derian Avenue, Suite 100	Work Order No: 05-10-0882
Irvine, CA 92614-5845	Preparation: EPA 3545
	Method: EPA 8270C SIM PAHs
	Units: mg/kg
Project: IOJ0896	Page 2 of 4

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
[redacted]	[redacted]	[redacted]	Solid	[redacted]	10/18/05	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	0.14	0.02	0.0040	1.09		Benzo (a) Anthracene	ND	0.022	0.0029	1.09	U
2-Methylnaphthalene	0.051	0.022	0.0026	1.09		Chrysene	0.0087	0.022	0.0052	1.09	J
Acenaphthylene	ND	0.022	0.0026	1.09	U	Benzo (k) Fluoranthene	ND	0.022	0.0049	1.09	U
Acenaphthene	0.012	0.022	0.0055	1.09	J	Benzo (b) Fluoranthene	ND	0.022	0.0015	1.09	
Fluorene	0.015	0.022	0.0033	1.09	J	Benzo (a) Pyrene	ND	0.022	0.0022	1.09	
Phenanthrene	0.034	0.022	0.0041	1.09		Benzo (g,h,i) Perylene	ND	0.022	0.0036	1.09	U
Anthracene	ND	0.022	0.0068	1.09	U	Indeno (1,2,3-c,d) Pyrene	ND	0.022	0.0038	1.09	U
Fluoranthene	0.0098	0.022	0.0021	1.09	J	Dibenz (a,h) Anthracene	ND	0.022	0.0029	1.09	U
Pyrene	0.014	0.022	0.0036	1.09	J	1-Methylnaphthalene	0.042	0.022	0.0047	1.09	
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Nitrobenzene-d5	106	28-139				2-Fluorobiphenyl	92	33-144			
p-Terphenyl-d14	123	23-160									

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
[redacted]	[redacted]	[redacted]	Solid	[redacted]	10/18/05	051017L02

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	0.32	0.02	0.0041	1.1		Benzo (a) Anthracene	ND	0.022	0.0029	1.1	U
2-Methylnaphthalene	0.057	0.022	0.0026	1.1		Chrysene	0.0091	0.022	0.0052	1.1	J
Acenaphthylene	ND	0.022	0.0026	1.1	U	Benzo (k) Fluoranthene	ND	0.022	0.0050	1.1	U
Acenaphthene	ND	0.022	0.0055	1.1		Benzo (b) Fluoranthene	ND	0.022	0.0015	1.1	
Fluorene	ND	0.022	0.0034	1.1		Benzo (a) Pyrene	ND	0.022	0.0022	1.1	
Phenanthrene	0.060	0.022	0.0042	1.1	J	Benzo (g,h,i) Perylene	ND	0.022	0.0036	1.1	U
Anthracene	ND	0.022	0.0068	1.1	U	Indeno (1,2,3-c,d) Pyrene	ND	0.022	0.0038	1.1	U
Fluoranthene	0.013	0.022	0.0021	1.1	J	Dibenz (a,h) Anthracene	ND	0.022	0.0030	1.1	U
Pyrene	0.014	0.022	0.0036	1.1	J	1-Methylnaphthalene	0.041	0.022	0.0047	1.1	J
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Nitrobenzene-d5	132	28-139			2	2-Fluorobiphenyl	169	33-144			2
p-Terphenyl-d14	183	23-160									

Level IV

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:	10/14/05
Work Order No:	05-10-0882
Preparation:	EPA 3545
Method:	EPA 8270C SIM PAHs
Units:	mg/kg
	Page 3 of 4

Project: IOJ0896

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
[illegible]	[illegible]	[illegible]	Solid	10/1[illegible]/05	10/19/05	051019L09

WLO21

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	ND	0.020	0.0038	1.02	U
2-Methylnaphthalene	ND	0.020	0.0024	1.02	
Acenaphthylene	ND	0.020	0.0025	1.02	
Acenaphthene	ND	0.020	0.0051	1.02	
Fluorene	ND	0.020	0.0031	1.02	
Phenanthrene	ND	0.020	0.0039	1.02	
Anthracene	ND	0.020	0.0063	1.02	
Fluoranthene	ND	0.020	0.0020	1.02	
Pyrene	0.0094	0.02	0.0033	1.02	J
Benzo (a) Anthracene	ND	0.020	0.0027	1.02	U
Chrysene	ND	0.020	0.0048	1.02	
Benzo (k) Fluoranthene	ND	0.020	0.0046	1.02	
Benzo (b) Fluoranthene	ND	0.020	0.0014	1.02	
Benzo (a) Pyrene	ND	0.020	0.0020	1.02	
Benzo (g,h,i) Perylene	ND	0.020	0.0033	1.02	UJ C
Indeno (1,2,3-c,d) Pyrene	ND	0.020	0.0035	1.02	U
Dibenz (a,h) Anthracene	ND	0.020	0.0028	1.02	UJ C
1-Methylnaphthalene	ND	0.020	0.0044	1.02	U

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	99	28-139	
p-Terphenyl-d14	147	23-160	
2-Fluorobiphenyl	97	33-144	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	099-06-016-[illegible]	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
Naphthalene	ND	0.020	0.0037	1	*
2-Methylnaphthalene	ND	0.020	0.0024	1	
Acenaphthylene	ND	0.020	0.0024	1	
Acenaphthene	ND	0.020	0.0050	1	
Fluorene	ND	0.020	0.0031	1	
Phenanthrene	ND	0.020	0.0038	1	
Anthracene	ND	0.020	0.0062	1	
Fluoranthene	ND	0.020	0.0019	1	
Pyrene	ND	0.020	0.0033	1	
Benzo (a) Anthracene	ND	0.020	0.0026	1	*
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
Nitrobenzene-d5	88	28-139	
p-Terphenyl-d14	133	23-160	
2-Fluorobiphenyl	89	33-144	

* not validated

es 12/8/05

Level IV

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

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