LABORATORY DATA CONSULTANTS, INC.
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Anchor Environmental, LLC
1423 3rd Avenue, Suite 300
Seattle, WA 98101-2226
ATTN: Ms. Sue Snyder

October 2, 2006

SUBJECT: Terminal 4 Early Action, Data Validation

Dear Ms. Snyder,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on September 15, 2006. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 15488:

SDG #	Fraction
JQ30, JQ33, JQ35, JQ36, JQ52	Phthalates, Polynuclear Aromatic Hydrocarbons, Lead & Zinc, Wet Chemistry

The data validation was performed under EPA Level III guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998

Please feel free to contact us if you have any questions.

Sincerely,

Stella S. Cuenco
Project Manager/Senior Chemist

Attachment 1

5427 Pages

LDC #15488 (Anchor Environmental-Seattle WA / Terminal 4 Early Action)

LDC	SDG#	DATE REC'D	(3) DATE DUE	SVOA (8270C)		PAHs (8270C -SIM)		Pb Zn (6010B)		DRO (NWTPH -Dx)		TOC (Plumb)		Total Solids (160.3)		Grain Size (D421)		Spec. Gravity (D854)		Atter -berg (D4318)		% Moist. (D2216)		Column Setting Test													
Matrix:	Water/Sediment			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	JQ30	09/15/06	10/06/06	-	-	-	-	-	-	-	-	-	-	-	-	0	2	0	2	0	2	0	2	0	2										
B	JQ33	09/15/06	10/06/06	0	23	0	20	0	17	0	17	0	17	0	17	0	17	-	-	-	-	-	-	-	-										
C	JQ35	09/15/06	10/06/06	0	18	0	16	0	16	0	16	0	16	0	16	0	16	-	-	-	-	-	-	-	-										
D	JQ36	09/15/06	10/06/06	0	12	0	16	0	12	0	12	0	12	0	12	0	12	-	-	-	-	-	-	-	-										
E	JQ52	09/15/06	10/06/06	0	5	0	5	0	4	0	4	0	4	0	4	-	-	-	-	-	-	-	-	-	-										
Total	B/SC			0	58	0	57	0	49	0	49	0	49	0	49	0	47	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	0	366

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS, MSD, or DUP's.

Terminal 4 Early Action
Data Validation Reports
LDC# 15488

Phthalates

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Phthalates

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ33

Sample Identification

T4-B414-01-A	T4-S3-01-GDL
T4-B414-01-ADL	T4-S3-01-H
T4-B414-01-B	T4-S3-01-HDL
T4-B414-01-C	T4-S3-01-GMS
T4-B414-02-A	T4-S3-01-GMSD
T4-B414-02-B	
T4-B414-02-C	
T4-B414-03-A	
T4-B414-03-B	
T4-B414-03-C	
T4-B414-04-A	
T4-B414-04-B	
T4-B414-04-C	
T4-S3-01-D	
T4-S3-01-DDL	
T4-S3-01-E	
T4-S3-01-EDL	
T4-S3-01-F	
T4-S3-01-FDL	
T4-S3-01-G	

Introduction

This data review covers 25 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Phthalates.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all target compounds were greater than or equal to 0.05 as required.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 25.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration RRF values were greater than or equal to 0.05 .

V. Blanks

Method blanks were reviewed for each matrix as applicable. No phthalate contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MB-072706	7/27/06	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	25 ug/Kg 21 ug/Kg	All samples in SDG JQ33

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
T4-B414-01-B	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	38 ug/Kg 56 ug/Kg	38U ug/Kg 56U ug/Kg
T4-B414-01-C	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	31 ug/Kg 130 ug/Kg	31U ug/Kg 130U ug/Kg
T4-B414-02-A	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	20 ug/Kg 68 ug/Kg	20U ug/Kg 68U ug/Kg
T4-B414-02-B	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	60 ug/Kg 33 ug/Kg	60U ug/Kg 33U ug/Kg
T4-B414-02-C	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	49 ug/Kg 97 ug/Kg	49U ug/Kg 97U ug/Kg
T4-B414-03-A	Bis(2-ethylhexyl)phthalate	79 ug/Kg	79U ug/Kg
T4-B414-03-B	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	27 ug/Kg 36 ug/Kg	27U ug/Kg 36U ug/Kg
T4-B414-03-C	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	20 ug/Kg 46 ug/Kg	20U ug/Kg 46U ug/Kg
T4-B414-04-A	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	39 ug/Kg 83 ug/Kg	39U ug/Kg 83U ug/Kg
T4-B414-04-B	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	36 ug/Kg 36 ug/Kg	36U ug/Kg 36U ug/Kg
T4-B414-04-C	Bis(2-ethylhexyl)phthalate	47 ug/Kg	47U ug/Kg
T4-S3-01-E (5X)	Bis(2-ethylhexyl)phthalate	180 ug/Kg	180U ug/Kg
T4-S3-01-G (5X)	Bis(2-ethylhexyl)phthalate	370 ug/Kg	370U ug/Kg
T4-S3-01-H (5X)	Bis(2-ethylhexyl)phthalate	360 ug/Kg	360U ug/Kg

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
T4-B414-03-CMS/MSD (T4-B414-03-C)	Di-n-octylphthalate	-	29.4 (42-142)	47.8 (≤30)	J (all detects) UJ (all non-detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits with the following exceptions:

Sample	Internal Standards	Area (Limits)	Compound	Flag	A or P
T4-B414-01-C	Chrysene-d12 Di-n-octylphthalate-d4	858392 (203432-813726) 1275292 (309365-1237460)	Butylbenzylphthalate Bis(2-ethylhexyl)phthalate Di-n-octylphthalate	J (all detects) J (all detects) J (all detects)	A
T4-B414-01-A	Chrysene-d12	1247695 (284954-1139814)	Butylbenzylphthalate	J (all detects)	A
T4-S3-01-D	Chrysene-d12	1489837 (284954-1139814)	Butylbenzylphthalate	J (all detects)	A
T4-S3-01-E	Chrysene-d12 Di-n-octylphthalate-d4	2035591 (284954-1139814) 1815121 (416508-1666030)	Butylbenzylphthalate Bis(2-ethylhexyl)phthalate Di-n-octylphthalate	J (all detects) J (all detects) J (all detects)	A
T4-S3-01-F	Chrysene-d12	1720845 (284954-1139814)	Butylbenzylphthalate	J (all detects)	A
T4-S3-01-G	Chrysene-d12	136179 (284954-1139814)	Butylbenzylphthalate	J (all detects)	A
T4-S3-01-H	Chrysene-d12	1919930 (284954-1139814)	Butylbenzylphthalate	J (all detects)	A

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags have been summarized at the end of the report if data has been qualified.

XVI. Field Duplicates

Samples T4-B414-02-A and T4-B414-02-A-DUP (from SDG JQ52) were identified as field duplicates. No phthalates were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-B414-02-A	T4-B414-02-A-DUP	
Di-n-butylphthalate	20	59U	200 (≤75)
Bis(2-ethylhexyl)phthalate	68	59U	200 (≤75)

XVII. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Phthalates - Data Qualification Summary - SDG JQ33

SDG	Sample	Compound	Flag	A or P	Reason
JQ33	T4-S3-01-G	Di-n-octylphthalate	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicates (%R)(RPD)
JQ33	T4-B414-01-C T4-S3-01-E	Butylbenzylphthalate Bis(2-ethylhexyl)phthalate Di-n-octylphthalate	J (all detects) J (all detects) J (all detects)	A	Internal standards (area)
JQ33	T4-B414-01-A T4-S3-01-D T4-S3-01-F T4-S3-01-G T4-S3-01-H	Butylbenzylphthalate	J (all detects)	A	Internal standards (area)

Terminal 4 Early Action
Phthalates - Laboratory Blank Data Qualification Summary - SDG JQ33

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
JQ33	T4-B414-01-B	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	38U ug/Kg 56U ug/Kg	A
JQ33	T4-B414-01-C	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	31U ug/Kg 130U ug/Kg	A
JQ33	T4-B414-02-A	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	20U ug/Kg 68U ug/Kg	A
JQ33	T4-B414-02-B	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	60U ug/Kg 33U ug/Kg	A
JQ33	T4-B414-02-C	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	49U ug/Kg 97U ug/Kg	A
JQ33	T4-B414-03-A	Bis(2-ethylhexyl)phthalate	79U ug/Kg	A
JQ33	T4-B414-03-B	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	27U ug/Kg 36U ug/Kg	A
JQ33	T4-B414-03-C	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	20U ug/Kg 46U ug/Kg	A
JQ33	T4-B414-04-A	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	39U ug/Kg 83U ug/Kg	A
JQ33	T4-B414-04-B	Di-n-butylphthalate Bis(2-ethylhexyl)phthalate	36U ug/Kg 36U ug/Kg	A

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
JQ33	T4-B414-04-C	Bis(2-ethylhexyl)phthalate	47U ug/Kg	A
JQ33	T4-S3-01-E (5X)	Bis(2-ethylhexyl)phthalate	180U ug/Kg	A
JQ33	T4-S3-01-G (5X)	Bis(2-ethylhexyl)phthalate	370U ug/Kg	A
JQ33	T4-S3-01-H (5X)	Bis(2-ethylhexyl)phthalate	360U ug/Kg	A

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-B414-01-A**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ33A
LIMS ID: 06-12923
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/03/06 08:51
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Percent Moisture: 44.8%
pH: 7.1

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	100	< 100 U
84-66-2	Diethylphthalate	100	< 100 U
84-74-2	Di-n-Butylphthalate	100	< 100 U
85-68-7	Butylbenzylphthalate	100	< 100 U
117-81-7	bis(2-Ethylhexyl)phthalate	100	< 100 U
117-84-0	Di-n-Octyl phthalate	100	< 100 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	38.6%

8/28/06

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FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-B414-01-A
DILUTION

Lab Sample ID: JQ33A
LIMS ID: 06-12923
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/08/06 22:24
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 20.0
Percent Moisture: 44.8%
pH: 7.1

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	400	< 400 U
84-66-2	Diethylphthalate	400	< 400 U
84-74-2	Di-n-Butylphthalate	400	< 400 U
85-68-7	Butylbenzylphthalate	400	< 400 U
117-81-7	bis(2-Ethylhexyl)phthalate	400	< 400 U
117-84-0	Di-n-Octyl phthalate	400	< 400 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	54.4%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-B414-01-B
SAMPLE

Lab Sample ID: JQ33B
LIMS ID: 06-12924
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/01/06 17:03
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 48.2%
pH: 7.2

CAS Number	Analyte	RL	Result	
131-11-3	Dimethylphthalate	20	< 20 U	
84-66-2	Diethylphthalate	20	< 20 U	
84-74-2	**Di-n-Butylphthalate**	**20**	**38 B**	**U**
85-68-7	Butylbenzylphthalate	20	< 20 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**56 B**	**U**
117-84-0	Di-n-Octyl phthalate	20	< 20 U	

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	50.4%

8/9/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-B414-01-C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ33C
LIMS ID: 06-12925
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/01/06 17:34
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 46.4%
pH: 7.1

CAS Number	Analyte	RL	Result	
131-11-3	Dimethylphthalate	20	< 20 U	
84-66-2	Diethylphthalate	20	< 20 U	
84-74-2	**Di-n-Butylphthalate**	**20**	**31 B**	UJ
85-68-7	Butylbenzylphthalate	20	< 20 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**130 B**	UJ
117-84-0	Di-n-Octyl phthalate	20	< 20 U	

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	52.4%

8/9/2006

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-B414-02-A**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ33D
LIMS ID: 06-12926
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/01/06 18:04
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 49.7%
pH: 7.2

CAS Number	Analyte	RL	Result	
131-11-3	Dimethylphthalate	20	< 20 U	
84-66-2	Diethylphthalate	20	< 20 U	
84-74-2	**Di-n-Butylphthalate**	**20**	**20 B**	U
85-68-7	Butylbenzylphthalate	20	< 20 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**68 B**	U
117-84-0	Di-n-Octyl phthalate	20	< 20 U	

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	54.0%

8/10/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-B414-02-B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ33E
LIMS ID: 06-12927
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/01/06 18:35
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 49.4%
pH: 7.2

CAS Number	Analyte	RL	Result	
131-11-3	Dimethylphthalate	20	< 20 U	
84-66-2	Diethylphthalate	20	< 20 U	
84-74-2	**Di-n-Butylphthalate**	**20**	**60 B**	U
85-68-7	Butylbenzylphthalate	20	< 20 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**33 B**	U
117-84-0	Di-n-Octyl phthalate	20	< 20 U	

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	52.8%

8/8/06

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-B414-02-C
SAMPLE

Lab Sample ID: JQ33F
LIMS ID: 06-12928
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/01/06 19:06
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 48.2%
pH: 7.0

CAS Number	Analyte	RL	Result	
131-11-3	Dimethylphthalate	20	< 20 U	
84-66-2	**Diethylphthalate**	**20**	**14 J**	
84-74-2	**Di-n-Butylphthalate**	**20**	**49 B**	u
85-68-7	Butylbenzylphthalate	20	< 20 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**97 B**	u
117-84-0	Di-n-Octyl phthalate	20	< 20 U	

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	48.0%

8/8/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-B414-03-A**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ33G
LIMS ID: 06-12929
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/01/06 19:36
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 49.8%
pH: 7.1

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**79 B** U
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	58.4%

8/8/06

0970

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-B414-03-B
SAMPLE

Lab Sample ID: JQ33H
LIMS ID: 06-12930
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/01/06 20:07
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 50.4%
pH: 7.0

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**27 B** U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**36 B** U
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	46.0%

8/9/06

0981

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-B414-03-C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ33I
LIMS ID: 06-12931
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/01/06 20:38
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 49.7%
pH: 7.2

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**20 B** U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**46 B** U
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	47.6%

9/28/06

0992

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-B414-04-A
SAMPLE

Lab Sample ID: JQ33J
LIMS ID: 06-12932
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/01/06 21:08
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 52.3%
pH: 7.2

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**39 B** U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**83 B** U
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	50.8%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-B414-04-B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ33K
LIMS ID: 06-12933
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/01/06 21:39
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 47.1%
pH: 7.1

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**36 B** U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**36 B** U
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	61.2%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-B414-04-C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ33L
LIMS ID: 06-12934
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/01/06 22:10
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 49.3%
pH: 7.1

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**47 B** U
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	54.0%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-01-D**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ33M
LIMS ID: 06-12935
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/03/06 09:52
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Percent Moisture: 49.1%
pH: 7.1

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	99	< 99 U
84-66-2	Diethylphthalate	99	< 99 U
84-74-2	Di-n-Butylphthalate	99	< 99 U
85-68-7	Butylbenzylphthalate	99	< 99 U
117-81-7	bis(2-Ethylhexyl)phthalate	99	< 99 U
117-84-0	Di-n-Octyl phthalate	99	< 99 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	27.6%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-01-D**
Page 1 of 1 **DILUTION**

Lab Sample ID: JQ33M
LIMS ID: 06-12935
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/08/06 22:55
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 20.0
Percent Moisture: 49.1%
pH: 7.1

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	390	< 390 U
84-66-2	Diethylphthalate	390	< 390 U
84-74-2	Di-n-Butylphthalate	390	< 390 U
85-68-7	Butylbenzylphthalate	390	< 390 U
117-81-7	bis(2-Ethylhexyl)phthalate	390	< 390 U
117-84-0	Di-n-Octyl phthalate	390	< 390 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	37.6%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-01-E**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ33N
LIMS ID: 06-12936
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/03/06 10:53
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Percent Moisture: 48.8%
pH: 6.9

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	99	< 99 U
84-66-2	Diethylphthalate	99	< 99 U
84-74-2	Di-n-Butylphthalate	99	< 99 U
85-68-7	Butylbenzylphthalate	99	< 99 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**99**	**180 B** UJ
117-84-0	Di-n-Octyl phthalate	99	< 99 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	30.0%

9/1/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-01-E**
Page 1 of 1 **DILUTION**

Lab Sample ID: JQ33N
LIMS ID: 06-12936
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/08/06 23:25
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 20.0
Percent Moisture: 48.8%
pH: 6.9

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	400	< 400 U
84-66-2	Diethylphthalate	400	< 400 U
84-74-2	Di-n-Butylphthalate	400	< 400 U
85-68-7	Butylbenzylphthalate	400	< 400 U
117-81-7	bis(2-Ethylhexyl)phthalate	400	< 400 U
117-84-0	Di-n-Octyl phthalate	400	< 400 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	40.8%

9/9/2006

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-01-F**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ330 QC Report No: JQ33-Anchor Environmental
LIMS ID: 06-12937 Project: T4 EARLY ACTION
Matrix: Sediment 050332-01
Data Release Authorized: Date Sampled: 07/18/06
Reported: 08/10/06 Date Received: 07/21/06

Date Extracted: 07/27/06 Sample Amount: 16.6 g-dry-wt
Date Analyzed: 08/03/06 11:23 Final Extract Volume: 1.0 mL
Instrument/Analyst: NT6/LJR Dilution Factor: 5.00
GPC Cleanup: Yes Percent Moisture: 49.8%
pH: 7.0

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	300	< 300 U
84-66-2	Diethylphthalate	300	< 300 U
84-74-2	Di-n-Butylphthalate	300	< 300 U
85-68-7	Butylbenzylphthalate	300	< 300 U
117-81-7	bis(2-Ethylhexyl)phthalate	300	< 300 U
117-84-0	Di-n-Octyl phthalate	300	< 300 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	33.6%

9/26/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-01-F**
Page 1 of 1 **DILUTION**

Lab Sample ID: JQ330
LIMS ID: 06-12937
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/08/06 23:56
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 16.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 20.0
Percent Moisture: 49.8%
pH: 7.0

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	1,200	< 1,200 U
84-66-2	Diethylphthalate	1,200	< 1,200 U
84-74-2	Di-n-Butylphthalate	1,200	< 1,200 U
85-68-7	Butylbenzylphthalate	1,200	< 1,200 U
117-81-7	bis(2-Ethylhexyl)phthalate	1,200	< 1,200 U
117-84-0	Di-n-Octyl phthalate	1,200	< 1,200 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	47.2%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-S3-01-G
SAMPLE

Lab Sample ID: JQ33P
LIMS ID: 06-12938
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/03/06 11:54
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 19.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Percent Moisture: 44.6%
pH: 7.0

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	250	< 250 U
84-66-2	Diethylphthalate	250	< 250 U
84-74-2	Di-n-Butylphthalate	250	< 250 U
85-68-7	Butylbenzylphthalate	250	< 250 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**250**	**370 B** U
117-84-0	Di-n-Octyl phthalate	250	< 250 U UJ

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	34.2%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-01-G**
Page 1 of 1 **DILUTION**

Lab Sample ID: JQ33P
LIMS ID: 06-12938
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/09/06 00:27
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 19.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 20.0
Percent Moisture: 44.6%
pH: 7.0

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	1,000	< 1,000 U
84-66-2	Diethylphthalate	1,000	< 1,000 U
84-74-2	Di-n-Butylphthalate	1,000	< 1,000 U
85-68-7	Butylbenzylphthalate	1,000	< 1,000 U
117-81-7	bis(2-Ethylhexyl)phthalate	1,000	< 1,000 U
117-84-0	Di-n-Octyl phthalate	1,000	< 1,000 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	48.0%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-01-H**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ33Q
LIMS ID: 06-12939
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/03/06 12:24
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 19.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Percent Moisture: 45.6%
pH: 7.1

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	260	< 260 U
84-66-2	Diethylphthalate	260	< 260 U
84-74-2	Di-n-Butylphthalate	260	< 260 U
85-68-7	Butylbenzylphthalate	260	< 260 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**260**	**360 B** U
117-84-0	Di-n-Octyl phthalate	260	< 260 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	27.6%

8/9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-01-H**
Page 1 of 1 **DILUTION**

Lab Sample ID: JQ33Q
LIMS ID: 06-12939
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/09/06 00:57
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 19.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 20.0
Percent Moisture: 45.6%
pH: 7.1

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	1,000	< 1,000 U
84-66-2	Diethylphthalate	1,000	< 1,000 U
84-74-2	Di-n-Butylphthalate	1,000	< 1,000 U
85-68-7	Butylbenzylphthalate	1,000	< 1,000 U
117-81-7	bis(2-Ethylhexyl)phthalate	1,000	< 1,000 U
117-84-0	Di-n-Octyl phthalate	1,000	< 1,000 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	41.6%

9/28/06

LDC #: 15488B2a **VALIDATION COMPLETENESS WORKSHEET** Date: 9/21/06
SDG #: JQ33 Level III Page: 1 of 1
Laboratory: Analytical Resources, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS ~~Semivolatiles~~ (EPA SW 846 Method 8270C) phthalates

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18 - 20/06
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	no specs
IV.	Continuing calibration ICV	A	
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	SW	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 5 + T4-~~B414~~ B414-02-A-DUP (JQ52)
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: all soils

1	T4-B414-01-A	11	T4-B414-04-A	21	T4-S3-01-GDL	31	MB-070706
2	T4-B414-01-ADL	12	T4-B414-04-B	22	T4-S3-01-H	32	
3	T4-B414-01-B	13	T4-B414-04-C	23	T4-S3-01-HDL	33	
4	T4-B414-01-C	14	T4-S3-01-D	24	T4-S3-01-GMS	34	
5	T4-B414-02-A	15	T4-S3-01-DDL	25	T4-S3-01-GMSD	35	
6	T4-B414-02-B	16	T4-S3-01-E	26		36	
7	T4-B414-02-C	17	T4-S3-01-EDL	27		37	
8	T4-B414-03-A	18	T4-S3-01-F	28		38	
9	T4-B414-03-B	19	T4-S3-01-FDL	29		39	
10	T4-B414-03-C	20	T4-S3-01-G	30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol**	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol**	III. Benzo(a)pyrene**
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol**	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene**	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol*	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene**	T. 4-Chloroaniline	II. 4-Nitrophenol*	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene**	JJ. Dibenzofuran	YY. Fluoranthene**	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol**	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene*	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine*	Y. 2,4,6-Trichlorophenol**	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT.
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)**	FFF. Di-n-octylphthalate**	UUU.
N. 2-Nitrophenol**	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 15488B29
SDG #: VQ33

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: a
2nd Reviewer: 2

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank analyzed for each matrix?
Y N N/A Was a method blank analyzed for each concentration preparation level?
Y N N/A Was a method blank associated with every sample?
Y N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 7/27/06 **Blank analysis date:** 8/1/06
Conc. units: ug/Kg Associated Samples: all

Compound	Blank ID	Sample Identification								
MB-070706		3	4	5	6	7	8	9	10	11
XX	25	38/U	31/U	20/U	60/U	49/U		27/U	20/U	39/U
ZZZ	21	56/U	130/U	68/U	33/U	97/U	79/U	36/U	46/U	83/U

Blank extraction date: 7/27/06 **Blank analysis date:** 8/1/06
Conc. units: ug/Kg Associated Samples: all

Compound	Blank ID	Sample Identification								
MB-070706		12	13	16(5)	20(5)	22(5)				
XX	25	36/U								
ZZZ	21	36/U	47/U	180/U	370/U	360/U				

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 15488A29
SDG #: J033

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: 9
2nd Reviewer: 8

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

(Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		24/25	FFF	( )	29.4 (42-142)	47.8 (≤ 30)	20	J/UJ/A
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)		Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
A.	Phenol	26-90%	≤ 35%	12-110%	≤ 42%	GG.	Acenaphthene	31-137%	≤ 19%	46-118%	≤ 31%
C.	2-Chlorophenol	25-102%	≤ 50%	27-123%	≤ 40%	II.	4-Nitrophenol	11-114%	≤ 50%	10-80%	≤ 50%
E.	1,4-Dichlorobenzene	28-104%	≤ 27%	36-97%	≤ 28%	KK.	2,4-Dinitrotoluene	28-89%	≤ 47%	24-96%	≤ 38%
J.	N-Nitroso-di-n-propylamine	41-126%	≤ 38%	41-116%	≤ 38%	TT.	Pentachlorophenol	17-109%	≤ 47%	9-103%	≤ 50%
R.	1,2,4-Trichlorobenzene	38-107%	≤ 23%	39-98%	≤ 28%	ZZ.	Pyrene	35-142%	≤ 36%	26-127%	≤ 31%
V.	4-Chloro-3-methylphenol	26-103%	≤ 33%	23-97%	≤ 42%						

LDC #: 15488A29
SDG #: JQ33

VALIDATION FINDINGS WORKSHEET
Internal Standards

Page: 1 of 1
Reviewer: 9
2nd Reviewer: 8

METHOD: GC/MS BNA (EPA SW 846 Method 8270)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were all internal standard area counts within -50 to +100 of the associated calibration standard?
(Y) N N/A Were the retention times of the internal standards within +/- 30 seconds of the retention times of the associated calibration standard?

#	Date	Sample ID	Internal Standard	Area (Limits)	RT (Limits)	Qualifications
		4	CRY	858392 (203432 - 813726)		dets/A (AAA)
			DOP	127529 (309365 - 1237460)		(EEE, FFF)
		1	CRY	1247695 (284954 - 1139814)		(AAA)
		14	CRY	1489837 ( )		
		16	CRY	2035591 ( )		
			DOP	1815121 (416508 - 1660030)		(EEE, FFF)
		18	CRY	1720845 ( )		(AAA)
		20	CRY	1361791 ( )		
		22	CRY	1919930 ( )		

* QC limits are advisory
IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10
IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

IST (DOP) = Di-n-octylphthalate-d4

LDC #: 15488B29
SDG #: 1033

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: 9
2nd reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds identified in the field duplicate pairs?

Compound	Concentration (µg/kg)		RPD (≤ 75)
	5	T4-B414-02-A-DUP	
XX	20	594	200
ZZ	68	↓	200

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Phthalates

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ35

Sample Identification

T4-S3-02-C
T4-S3-02-D
T4-S3-02-E
T4-S3-02-F
T4-S3-03-B
T4-S3-03-C
T4-S3-03-D
T4-S3-05-E
T4-S3-05-F
T4-S3-05-G
T4-S3-05-GDL
T4-S3-05-H
T4-S3-05-HDL
T4-S3-05-J
T4-S3-06-A
T4-S3-06-B
T4-S3-08-B
T4-S3-08-C
T4-S3-08-CMS
T4-S3-08-CMSD

Introduction

This data review covers 20 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Phthalates.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all target compounds were greater than or equal to 0.05 as required.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 25.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration RRF values were greater than or equal to 0.05 .

V. Blanks

Method blanks were reviewed for each matrix as applicable. No phthalate contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MB-073106	7/31/06	Bis(2-ethylhexyl)phthalate	10 ug/Kg	All samples in SDG JQ35

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
T4-S3-03-B (3X)	Bis(2-ethylhexyl)phthalate	140 ug/Kg	140U ug/Kg
T4-S3-02-F (3X)	Bis(2-ethylhexyl)phthalate	210 ug/Kg	210U ug/Kg
T4-S3-03-C (3X)	Bis(2-ethylhexyl)phthalate	160 ug/Kg	160U ug/Kg
T4-S3-05-F (3X)	Bis(2-ethylhexyl)phthalate	120 ug/Kg	120U ug/Kg
T4-S3-05-G (3X)	Bis(2-ethylhexyl)phthalate	160 ug/Kg	160U ug/Kg
T4-S3-05-H (3X)	Bis(2-ethylhexyl)phthalate	150 ug/Kg	150U ug/Kg
T4-S3-06-A	Bis(2-ethylhexyl)phthalate	46 ug/Kg	46U ug/Kg
T4-S3-08-B (3X)	Bis(2-ethylhexyl)phthalate	200 ug/Kg	200U ug/Kg

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags have been summarized at the end of the report if data has been qualified.

XVI. Field Duplicates

Samples T4-S3-02-F and T4-S3-02-F-DUP (from SDG JQ52), samples T4-S3-03-C and T4-S3-03-C-DUP (from SDG JQ52), samples T4-S3-03-C and T4-S3-03-C-DUPDL (from SDG JQ52), and samples T4-S3-08-C and T4-S3-08-C-DUP (from SDG JQ52) were identified as field duplicates. No phthalates were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
Bis(2-ethylhexyl)phthalate	140	210	40 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-03-C-DUP	T4-S3-03-C	
Bis(2-ethylhexyl)phthalate	140	160	13 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-03-C-DUPDL	T4-S3-03-C	
Bis(2-ethylhexyl)phthalate	140	160	13 (≤75)

XVII. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Phthalates - Data Qualification Summary - SDG JQ35

No Sample Data Qualified in this SDG

Terminal 4 Early Action
Phthalates - Laboratory Blank Data Qualification Summary - SDG JQ35

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
JQ35	T4-S3-03-B (3X)	Bis(2-ethylhexyl)phthalate	140U ug/Kg	A
JQ35	T4-S3-02-F (3X)	Bis(2-ethylhexyl)phthalate	210U ug/Kg	A
JQ35	T4-S3-03-C (3X)	Bis(2-ethylhexyl)phthalate	160U ug/Kg	A
JQ35	T4-S3-05-F (3X)	Bis(2-ethylhexyl)phthalate	120U ug/Kg	A
JQ35	T4-S3-05-G (3X)	Bis(2-ethylhexyl)phthalate	160U ug/Kg	A
JQ35	T4-S3-05-H (3X)	Bis(2-ethylhexyl)phthalate	150U ug/Kg	A
JQ35	T4-S3-06-A	Bis(2-ethylhexyl)phthalate	46U ug/Kg	A
JQ35	T4-S3-08-B (3X)	Bis(2-ethylhexyl)phthalate	200U ug/Kg	A

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-02-C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ35A
LIMS ID: 06-12956
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 14:35
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 46.8%
pH: 6.7

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	60	< 60 U
84-66-2	Diethylphthalate	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	31.9%

9/12/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-S3-02-D
SAMPLE

Lab Sample ID: JQ35B
LIMS ID: 06-12957
Matrix: Sediment
Data Release Authorized: MB
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 15:05
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 24.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 42.0%
pH: 6.3

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	120	< 120 U
84-66-2	Diethylphthalate	120	< 120 U
84-74-2	Di-n-Butylphthalate	120	< 120 U
85-68-7	Butylbenzylphthalate	120	< 120 U
117-81-7	bis(2-Ethylhexyl)phthalate	120	< 120 U
117-84-0	Di-n-Octyl phthalate	120	< 120 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	38.8%

9/18/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-02-E**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ35C
LIMS ID: 06-12958
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 15:36
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 27.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 39.1%
pH: 6.8

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	110	< 110 U
84-66-2	Diethylphthalate	110	< 110 U
84-74-2	Di-n-Butylphthalate	110	< 110 U
85-68-7	Butylbenzylphthalate	110	< 110 U
117-81-7	bis(2-Ethylhexyl)phthalate	110	< 110 U
117-84-0	Di-n-Octyl phthalate	110	< 110 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	30.5%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-02-F**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ35D
LIMS ID: 06-12959
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 16:06
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 20.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 44.9%
pH: 6.4

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	150	< 150 U
84-66-2	Diethylphthalate	150	< 150 U
84-74-2	Di-n-Butylphthalate	150	< 150 U
85-68-7	Butylbenzylphthalate	150	< 150 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**150**	**210 B** U
117-84-0	Di-n-Octyl phthalate	150	< 150 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	45.8%

9/18/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-03-B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ35E
LIMS ID: 06-12960
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 16:37
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 27.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 44.2%
pH: 6.8

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	110	< 110 U
84-66-2	Diethylphthalate	110	< 110 U
84-74-2	Di-n-Butylphthalate	110	< 110 U
85-68-7	Butylbenzylphthalate	110	< 110 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**110**	**140 B** U
117-84-0	Di-n-Octyl phthalate	110	< 110 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	44.2%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-S3-03-C
SAMPLE

Lab Sample ID: JQ35F
LIMS ID: 06-12961
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 17:07
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 40.6%
pH: 6.6

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**59**	**160 B** U
117-84-0	Di-n-Octyl phthalate	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	44.6%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-03-D**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ35G
LIMS ID: 06-12962
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 17:38
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 32.8%
pH: 6.8

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	55.7%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-05-E**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ35H
LIMS ID: 06-12963
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 18:08
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 47.7%
pH: 6.4

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	60	< 60 U
84-66-2	Diethylphthalate	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	38.9%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-05-F**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ35I
LIMS ID: 06-12964
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 18:39
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 28.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 43.7%
pH: 6.8

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	110	< 110 U
84-66-2	Diethylphthalate	110	< 110 U
84-74-2	Di-n-Butylphthalate	110	< 110 U
85-68-7	Butylbenzylphthalate	110	< 110 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**110**	**120 B** U
117-84-0	Di-n-Octyl phthalate	110	< 110 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	31.7%

8/11/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-S3-05-G
SAMPLE

Lab Sample ID: JQ35J
LIMS ID: 06-12965
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 19:09
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 24.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 42.9%
pH: 6.5

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	120	< 120 U
84-66-2	Diethylphthalate	120	< 120 U
84-74-2	Di-n-Butylphthalate	120	< 120 U
85-68-7	Butylbenzylphthalate	120	< 120 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**120**	**160 B** U
117-84-0	Di-n-Octyl phthalate	120	< 120 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	38.6%

8/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-05-G**
Page 1 of 1 **DILUTION**

Lab Sample ID: JQ35J
LIMS ID: 06-12965
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/09/06 13:57
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 24.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 20.0
Percent Moisture: 42.9%
pH: 6.5

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	820	< 820 U
84-66-2	Diethylphthalate	820	< 820 U
84-74-2	Di-n-Butylphthalate	820	< 820 U
85-68-7	Butylbenzylphthalate	820	< 820 U
117-81-7	bis(2-Ethylhexyl)phthalate	820	< 820 U
117-84-0	Di-n-Octyl phthalate	820	< 820 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	68.8%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-05-H**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ35K
LIMS ID: 06-12966
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 19:40
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 27.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 42.5%
pH: 6.8

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	110	< 110 U
84-66-2	Diethylphthalate	110	< 110 U
84-74-2	Di-n-Butylphthalate	110	< 110 U
85-68-7	Butylbenzylphthalate	110	< 110 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**110**	**150 B** U
117-84-0	Di-n-Octyl phthalate	110	< 110 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	31.0%

8/9/2006

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-05-H**
Page 1 of 1 **DILUTION**

Lab Sample ID: JQ35K
LIMS ID: 06-12966
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/09/06 14:27
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 27.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 20.0
Percent Moisture: 42.5%
pH: 6.8

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	730	< 730 U
84-66-2	Diethylphthalate	730	< 730 U
84-74-2	Di-n-Butylphthalate	730	< 730 U
85-68-7	Butylbenzylphthalate	730	< 730 U
117-81-7	bis(2-Ethylhexyl)phthalate	730	< 730 U
117-84-0	Di-n-Octyl phthalate	730	< 730 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	55.2%

8/16/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-05-J**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ35L
LIMS ID: 06-12967
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 20:11
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 51.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 20.2%
pH: 6.0

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	63.6%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS Sample ID: T4-S3-06-A
Page 1 of 1 SAMPLE

Lab Sample ID: JQ35M
LIMS ID: 06-12968
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 20:42
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 48.0%
pH: 7.5

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**46 B** U
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	53.2%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-S3-06-B
SAMPLE

Lab Sample ID: JQ35N
LIMS ID: 06-12969
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 21:12
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 51.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 23.2%
pH: 6.5

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	Di-n-Butylphthalate	20	< 20 U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	61.2%

9/7/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-S3-08-B
SAMPLE

Lab Sample ID: JQ350
LIMS ID: 06-12970
Matrix: Sediment
Data Release Authorized: MB
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/07/06 21:43
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 29.9%
pH: 6.9

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**59**	**200 B** U
117-84-0	Di-n-Octyl phthalate	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	39.8%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-08-C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ35P
LIMS ID: 06-12971
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/08/06 19:50
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 51.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 16.7%
pH: 6.0

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	58	< 58 U
84-66-2	Diethylphthalate	58	< 58 U
84-74-2	Di-n-Butylphthalate	58	< 58 U
85-68-7	Butylbenzylphthalate	58	< 58 U
117-81-7	bis(2-Ethylhexyl)phthalate	58	< 58 U
117-84-0	Di-n-Octyl phthalate	58	< 58 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	59.3%

FORM I

9/28/06

LDC #: 15488C2a **VALIDATION COMPLETENESS WORKSHEET** Date: 9/21/06
SDG #: JQ35 Level III Page: 1 of 1
Laboratory: Analytical Resources, Inc. Reviewer: A
2nd Reviewer: A

METHOD: GC/MS ~~Semivolatiles~~ (EPA SW 846 Method 8270C) phthalates

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18 - 20/06
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	no SPCC
IV.	Continuing calibration ICV	A	✓
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D=4+4DUP. 6+6DUP, 6+6DUPDL. 18+18DUP* (JQ52)
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
* ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
MSeds

1	T4-S3-02-C	11	T4-S3-05-GDL	21	MB-073106	31	
2	T4-S3-02-D	12	T4-S3-05-H	22		32	
3	T4-S3-02-E	13	T4-S3-05-HDL	23		33	
4	T4-S3-02-F	14	T4-S3-05-J	24		34	
5	T4-S3-03-B	15	T4-S3-06-A	25		35	
6	T4-S3-03-C	16	T4-S3-06-B	26		36	
7	T4-S3-03-D	17	T4-S3-08-B	27		37	
8	T4-S3-05-E	18	T4-S3-08-C	28		38	
9	T4-S3-05-F	19	T4-S3-08-CMS	29		39	
10	T4-S3-05-G	20	T4-S3-08-CMSD	30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol**	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol**	III. Benzo(a)pyrene**
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol**	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene**	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol*	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene**	T. 4-Chloroaniline	II. 4-Nitrophenol*	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene**	JJ. Dibenzofuran	YY. Fluoranthene**	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol**	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene*	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine*	Y. 2,4,6-Trichlorophenol**	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT.
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)**	FFF. Di-n-octylphthalate**	UUU.
N. 2-Nitrophenol**	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 15488C29
SDG #: J835

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: 9
2nd Reviewer: 8

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank analyzed for each matrix?
Y N N/A Was a method blank analyzed for each concentration preparation level?
Y N N/A Was a method blank associated with every sample?
Y N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 7/31/06 **Blank analysis date:** 8/7/06
Conc. units: ug/kg Associated Samples: All

Compound	Blank ID	Sample Identification								
MB	073106	5(3)	4(3x)	6(3)	9(3x)	10(3x)	12(3)	15	17(3)	
EEC	10	140/B U	210/B U	160/B U	120/B U	160/B U	150/B U	46/B U	200/B U	

Blank extraction date: _____ **Blank analysis date:** _____
Conc. units: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 15488E29
SDG #: 1835

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: 9
2nd reviewer: 9

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

(Y) N N/A Were field duplicate pairs identified in this SDG?
(Y) N N/A Were target compounds identified in the field duplicate pairs?

Compound	Concentration (ug/kg)		RPD (≤75)
	TA-SS-02-FDUP	4	
ZZZ	140	210	40

Compound	Concentration (ug/kg)		RPD (≤75)
	TA-SS-03-CDUP	6	
ZZZ	140	160	13

Compound	Concentration (ug/kg)		RPD (≤75)
	TA-SS-03-CDUPDL	6	
ZZZ	140	160	13

Compound	Concentration ( )		RPD

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Phthalates

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ36

Sample Identification

T4-S3-07-B
T4-S3-07-C
T4-S3-07-D
T4-S3-07-E
T4-S3-04-A
T4-S3-04-B
T4-S3-04-C
T4-S3-04-D
T4-WB-01
T4-WB-02
T4-WB-03
T4-WB-04
T4-S3-07-EMS
T4-S3-07-EMSD

Introduction

This data review covers 14 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Phthalates.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all target compounds were greater than or equal to 0.05 as required.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 25.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration RRF values were greater than or equal to 0.05 .

V. Blanks

Method blanks were reviewed for each matrix as applicable. No phthalate contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MB-080306	8/03/06	Di-n-butylphthalate	35 ug/Kg	All samples in SDG JQ36

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
T4-S3-07-B	Di-n-butylphthalate	35 ug/Kg	35U ug/Kg
T4-S3-07-C	Di-n-butylphthalate	32 ug/Kg	32U ug/Kg
T4-S3-07-D	Di-n-butylphthalate	22 ug/Kg	22U ug/Kg
T4-S3-07-E	Di-n-butylphthalate	36 ug/Kg	36U ug/Kg
T4-S3-04-B	Di-n-butylphthalate	30 ug/Kg	30U ug/Kg
T4-S3-04-C	Di-n-butylphthalate	38 ug/Kg	38U ug/Kg
T4-S3-04-D	Di-n-butylphthalate	26 ug/Kg	26U ug/Kg
T4-WB-01	Di-n-butylphthalate	22 ug/Kg	22U ug/Kg
T4-WB-02	Di-n-butylphthalate	29 ug/Kg	29U ug/Kg
T4-WB-03	Di-n-butylphthalate	24 ug/Kg	24U ug/Kg
T4-WB-04	Di-n-butylphthalate	30 ug/Kg	30U ug/Kg

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags have been summarized at the end of the report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Phthalates - Data Qualification Summary - SDG JQ36

No Sample Data Qualified in this SDG

Terminal 4 Early Action
Phthalates - Laboratory Blank Data Qualification Summary - SDG JQ36

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
JQ36	T4-S3-07-B	Di-n-butylphthalate	35U ug/Kg	A
JQ36	T4-S3-07-C	Di-n-butylphthalate	32U ug/Kg	A
JQ36	T4-S3-07-D	Di-n-butylphthalate	22U ug/Kg	A
JQ36	T4-S3-07-E	Di-n-butylphthalate	36U ug/Kg	A
JQ36	T4-S3-04-B	Di-n-butylphthalate	30U ug/Kg	A
JQ36	T4-S3-04-C	Di-n-butylphthalate	38U ug/Kg	A
JQ36	T4-S3-04-D	Di-n-butylphthalate	26U ug/Kg	A
JQ36	T4-WB-01	Di-n-butylphthalate	22U ug/Kg	A
JQ36	T4-WB-02	Di-n-butylphthalate	29U ug/Kg	A
JQ36	T4-WB-03	Di-n-butylphthalate	24U ug/Kg	A
JQ36	T4-WB-04	Di-n-butylphthalate	30U ug/Kg	A

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-07-B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ36A
LIMS ID: 06-12972
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/12/06 13:58
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 46.7%
pH: 6.9

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**35 B** U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**40**
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	68.4%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS Sample ID: T4-S3-07-C
Page 1 of 1 SAMPLE

Lab Sample ID: JQ36B
LIMS ID: 06-12973
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/12/06 14:31
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 45.2%
pH: 6.5

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**32 B** U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**24**
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	51.2%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-07-D**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ36C
LIMS ID: 06-12974
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/12/06 15:04
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 34.0%
pH: 6.8

CAS Number	Analyte	RL	Result	
131-11-3	Dimethylphthalate	20	< 20 U	
84-66-2	Diethylphthalate	20	< 20 U	
84-74-2	**Di-n-Butylphthalate**	**20**	**22 B**	u
85-68-7	Butylbenzylphthalate	20	< 20 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**60**	
117-84-0	Di-n-Octyl phthalate	20	< 20 U	

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	64.0%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-07-E**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ36D
LIMS ID: 06-12975
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/11/06 15:41
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 17.6%
pH: 6.7

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**36 B** U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	78.0%

9/18/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-04-A**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ36E
LIMS ID: 06-12976
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/11/06 17:20
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 26.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 34.9%
pH: 7.2

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	110	< 110 U
84-66-2	Diethylphthalate	110	< 110 U
84-74-2	Di-n-Butylphthalate	110	< 110 U
85-68-7	Butylbenzylphthalate	110	< 110 U
117-81-7	bis(2-Ethylhexyl)phthalate	110	< 110 U
117-84-0	Di-n-Octyl phthalate	110	< 110 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	85.8%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-04-B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ36F
LIMS ID: 06-12977
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/12/06 15:38
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 22.6%
pH: 6.4

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**30 B** U
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**16 J**
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	74.4%

8/28/06

0045

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-04-C**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ36G
LIMS ID: 06-12978
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/12/06 16:11
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 35.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 29.3%
pH: 6.8

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	28	< 28 U
84-66-2	Diethylphthalate	28	< 28 U
84-74-2	**Di-n-Butylphthalate**	**28**	**38 B** u
85-68-7	Butylbenzylphthalate	28	< 28 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**28**	**34**
117-84-0	Di-n-Octyl phthalate	28	< 28 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	68.0%

9/28/06

0046

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-04-D**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ36H
LIMS ID: 06-12979
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/11/06 18:59
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 51.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.3%
pH: 6.3

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**26 B** u
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	20	< 20 U
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	69.2%

9/28/06

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-WB-01**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ36I
LIMS ID: 06-12980
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/11/06 19:32
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 56.7%
pH: 7.1

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**22 B**
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**65**
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	40.8%

8/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-WB-02**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ36J
LIMS ID: 06-12981
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/11/06 20:06
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 40.8%
pH: 6.5

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**29 B**
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**60**
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	59.2%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-WB-03**
Page 1 of 1 SAMPLE

Lab Sample ID: JQ36K
LIMS ID: 06-12982
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/12/06 12:52
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 55.1%
pH: 6.9

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**24 B** u
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**90**
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	49.2%

8/9-28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-WB-04**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ36L
LIMS ID: 06-12983
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/12/06 13:25
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 53.4%
pH: 6.5

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	20	< 20 U
84-66-2	Diethylphthalate	20	< 20 U
84-74-2	**Di-n-Butylphthalate**	**20**	**30 B**
85-68-7	Butylbenzylphthalate	20	< 20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**20**	**79**
117-84-0	Di-n-Octyl phthalate	20	< 20 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	54.4%

9/28/06

0051

LDC #: 15488D2a **VALIDATION COMPLETENESS WORKSHEET** Date: 9/4/06
SDG #: JQ36 Level III Page: 1 of 1
Laboratory: Analytical Resources, Inc. Reviewer: a
2nd Reviewer: a

METHOD: GC/MS ~~Semivolatiles~~ (EPA SW 846 Method 8270C) phthalates

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/20/06
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	no SPCC
IV.	Continuing calibration rev	A	V
V.	Blanks	TW	
VI.	Surrogate spikes	~~SW~~/A	
VII.	Matrix spike/Matrix spike duplicates	A	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
All soils

1	T4-S3-07-B	11	T4-WB-03	21	MB-080306	31	
2	T4-S3-07-C	12	T4-WB-04	22		32	
3	T4-S3-07-D	13	T4-S3-07-EMS	23		33	
4	T4-S3-07-E	14	T4-S3-07-EMSD	24		34	
5	T4-S3-04-A	15		25		35	
6	T4-S3-04-B	16		26		36	
7	T4-S3-04-C	17		27		37	
8	T4-S3-04-D	18		28		38	
9	T4-WB-01	19		29		39	
10	T4-WB-02	20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol**	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol**	III. Benzo(a)pyrene**
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol**	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene**	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol*	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene**	T. 4-Chloroaniline	II. 4-Nitrophenol*	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene**	JJ. Dibenzofuran	YY. Fluoranthene**	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol**	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene*	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine*	Y. 2,4,6-Trichlorophenol**	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT.
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)**	FFF. Di-n-octylphthalate**	UUU.
N. 2-Nitrophenol**	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 15488D29
SDG #: 1236

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: 9
2nd Reviewer: 9

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank analyzed for each matrix?
Y N N/A Was a method blank analyzed for each concentration preparation level?
Y N N/A Was a method blank associated with every sample?
Y N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 8/3/06 **Blank analysis date:** 8/11/06
Conc. units: ug/kg Associated Samples: all

Compound	Blank ID	Sample Identification								
	MB-080306	1	2	3	4	6	7	8	9	10
XX	35	35/U	32/U	22/U	36/U	30/U	38/U	26/U	22/U	29/U

Blank extraction date: _____ **Blank analysis date:** _____
Conc. units: soil Associated Samples: all

Compound	Blank ID	Sample Identification								
	MB-080306	11	12							
XX	35	24/U	30/U							

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 19, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Phthalates

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ52

Sample Identification

T4-S3-02-F-DUP
T4-S3-03-C-DUP
T4-S3-03-C-DUPDL
T4-B414-02-A-DUP
T4-S3-08-C-DUP

Introduction

This data review covers 5 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8270C for Phthalates.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 15.0% for each individual compound and less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all target compounds were greater than or equal to 0.05 as required.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 25.0% for all compounds.

The percent differences (%D) of the second source calibration standard were less than or equal to 25.0% for all compounds.

All of the continuing calibration RRF values were greater than or equal to 0.05 .

V. Blanks

Method blanks were reviewed for each matrix as applicable. No phthalate contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MB-073106	7/31/06	Bis(2-ethylhexyl)phthalate	10 ug/Kg	All samples in SDG JQ52

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
T4-S3-02-F-DUP (3X)	Bis(2-ethylhexyl)phthalate	140 ug/Kg	140U ug/Kg
T4-S3-03-C-DUP (3X)	Bis(2-ethylhexyl)phthalate	140 ug/Kg	140U ug/Kg
T4-S3-03-C-DUPDL (5X)	Bis(2-ethylhexyl)phthalate	140 ug/Kg	140U ug/Kg

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits with the following exceptions:

Sample	Internal Standards	Area (Limits)	Compound	Flag	A or P
T4-S3-03-C-DUP	Chrysene-d12	1780984 (406919-1627676)	Butylbenzylphthalate	J (all detects)	A

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags have been summarized at the end of the report if data has been qualified.

XVI. Field Duplicates

Samples T4-S3-02-F-DUP and T4-S3-02-F (from SDG JQ35), samples T4-S3-03-C-DUP and T4-S3-03-C (from SDG JQ35), samples T4-S3-03-C-DUPDL and T4-S3-03-C (from SDG JQ35), samples T4-S3-08-C-DUP and T4-S3-08-C (from SDG JQ35), and samplesT4-B414-02-A-DUP and T4-B414-02-A-DUP (from SDG JQ33) were identified as field duplicates. No phthalates were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
Bis(2-ethylhexyl)phthalate	140	210	40 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-03-C-DUP	T4-S3-03-C	
Bis(2-ethylhexyl)phthalate	140	160	13 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-03-C-DUPDL	T4-S3-03-C	
Bis(2-ethylhexyl)phthalate	140	160	13 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-B414-02-A	T4-B414-02-A-DUP	
Di-n-butylphthalate	20	59U	200 (≤75)
Bis(2-ethylhexyl)phthalate	68	59U	200 (≤75)

XVII. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Phthalates - Data Qualification Summary - SDG JQ52

SDG	Sample	Compound	Flag	A or P	Reason
JQ52	T4-S3-03-C-DUP	Butylbenzylphthalate	J (all detects)	A	Internal standards (area)

Terminal 4 Early Action
Phthalates - Laboratory Blank Data Qualification Summary - SDG JQ52

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
JQ52	T4-S3-02-F-DUP (3X)	Bis(2-ethylhexyl)phthalate	140U ug/Kg	A
JQ52	T4-S3-03-C-DUP (3X)	Bis(2-ethylhexyl)phthalate	140U ug/Kg	A
JQ52	T4-S3-03-C-DUPDL (5X)	Bis(2-ethylhexyl)phthalate	140U ug/Kg	A

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-02-F-DUP**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ52A
LIMS ID: 06-13102
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/08/06 21:22
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 45.9%
pH: 6.6

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	60	< 60 U
84-66-2	Diethylphthalate	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**60**	**140 B** u
117-84-0	Di-n-Octyl phthalate	60	< 60 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	35.9%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-S3-03-C-DUP
SAMPLE

Lab Sample ID: JQ52B
LIMS ID: 06-13103
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/08/06 21:53
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 41.8%
pH: 6.4

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	60	< 60 U
84-66-2	Diethylphthalate	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**60**	**140 B** u
117-84-0	Di-n-Octyl phthalate	60	< 60 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	29.4%

FORM I

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-S3-03-C-DUP**
Page 1 of 1 **DILUTION**

Lab Sample ID: JQ52B
LIMS ID: 06-13103
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/09/06 13:26
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Percent Moisture: 41.8%
pH: 6.4

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	99	< 99 U
84-66-2	Diethylphthalate	99	< 99 U
84-74-2	Di-n-Butylphthalate	99	< 99 U
85-68-7	Butylbenzylphthalate	99	< 99 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**99**	**140 B** u
117-84-0	Di-n-Octyl phthalate	99	< 99 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	41.0%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS **Sample ID: T4-B414-02-A-DUP**
Page 1 of 1 **SAMPLE**

Lab Sample ID: JQ52C
LIMS ID: 06-13104
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/09/06 12:25
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 50.1%
pH: 6.4

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	41.6%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by SW8270D GC/MS
Page 1 of 1

Sample ID: T4-S3-08-C-DUP
SAMPLE

Lab Sample ID: JQ52D
LIMS ID: 06-13114
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/31/06
Date Analyzed: 08/09/06 12:55
Instrument/Analyst: NT6/LJR
GPC Cleanup: Yes

Sample Amount: 50.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 15.3%
pH: 5.8

CAS Number	Analyte	RL	Result
131-11-3	Dimethylphthalate	59	< 59 U
84-66-2	Diethylphthalate	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery	
d14-p-Terphenyl	63.7%

8/28/06

LDC #: 15488E2a **VALIDATION COMPLETENESS WORKSHEET** Date: 9/21/06
SDG #: JQ52 Level III Page: 1 of 1
Laboratory: Analytical Resources, Inc. Reviewer: a
2nd Reviewer: q

METHOD: GC/MS ~~Semivolatiles~~ (EPA SW 846 Method 8270C) phthalates

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18 - 19/06
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	no SPCC ↓
IV.	Continuing calibration ICV	A	
V.	Blanks	SW	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	A	T4-S3-08-C (JQ25)
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	SW	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	~~D~~ see WS
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
All soils

1	T4-S3-02-F-DUP	11	MB-073106	21		31	
2	T4-S3-03-C-DUP	12		22		32	
3	T4-S3-03-C-DUPDL	13		23		33	
4	T4-B414-02-A-DUP	14		24		34	
5	T4-S3-08-C-DUP	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol**	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol**	III. Benzo(a)pyrene**
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol**	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene**	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol*	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene**	T. 4-Chloroaniline	II. 4-Nitrophenol*	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene**	JJ. Dibenzofuran	YY. Fluoranthene**	NNN. Aniiine
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol**	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene*	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine*	Y. 2,4,6-Trichlorophenol**	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT.
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)**	FFF. Di-n-octylphthalate**	UUU.
N. 2-Nitrophenol**	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 15488E29
SDG #: VR52

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: 9
2nd Reviewer: 9

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank analyzed for each matrix?
Y N N/A Was a method blank analyzed for each concentration preparation level?
Y N N/A Was a method blank associated with every sample?
Y N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 7/31/06 **Blank analysis date:** 8/7/06
Conc. units: µg/Kg Associated Samples: All

Compound	Blank ID	Sample Identification								
MB-073106	1(3)	2(3)	3(5)	4						
EEE	10	140/U	140/U	140/U						

Blank extraction date: _____ **Blank analysis date:** _____
Conc. units: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 16488229
SDG #: JRS2

VALIDATION FINDINGS WORKSHEET
Internal Standards

Page: 1 of 1
Reviewer: 9
2nd Reviewer: 8

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all internal standard area counts within -50 to +100 of the associated calibration standard?

(Y) N N/A Were the retention times of the internal standards within +/- 30 seconds of the retention times of the associated calibration standard?

#	Date	Sample ID	Internal Standard	Area (Limits)	RT (Limits)	Qualifications
		2	CRY	IT80984 (40919-162T6T6)		Idets/A
						(AAA)

* QC limits are advisory

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10
IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

LDC #: 15488E29
SDG #: 1052

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: 9
2nd reviewer: 9

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds identified in the field duplicate pairs?

Compound	Concentration (µg/kg)		RPD (≤75)
	1	T4-53-02-F (1052)	
ZZE	140	210	40

Compound	Concentration (µg/kg)		RPD (≤75)
	2	T4-53-03-C (1052)	
ZZE	140	160	13

Compound	Concentration (µg/kg)		RPD (≤75)
	3	T4-53-03-C (1052)	
ZZE	140	160	13

Compound	Concentration (µg/kg)		RPD (≤75)
	5	T4-53-08-C (1052)	
ND	ND	ND	

LDC #: 15488E29
SDG #: JQ52

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: 9
2nd reviewer: 4

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

(Y) N N/A Were field duplicate pairs identified in this SDG?
(Y) N N/A Were target compounds identified in the field duplicate pairs?

Compound	Concentration (µg/kg)		RPD (≤ 75)
	4	T4-B414-02-A (JQ33)	
XX	594	20	200
ZZ	↓	68	↓

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Terminal 4 Early Action
Data Validation Reports
LDC# 15488

Polynuclear Aromatic Hydrocarbons

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ33

Sample Identification

T4-B414-01-A	T4-B414-02-AMS
T4-B414-01-ADL	T4-B414-02-AMSD
T4-B414-01-B	
T4-B414-01-C	
T4-B414-02-A	
T4-B414-02-B	
T4-B414-02-C	
T4-B414-03-A	
T4-B414-03-B	
T4-B414-03-C	
T4-B414-04-A	
T4-B414-04-B	
T4-B414-04-C	
T4-S3-01-D	
T4-S3-01-DDL	
T4-S3-01-E	
T4-S3-01-EDL	
T4-S3-01-F	
T4-S3-01-G	
T4-S3-01-H	

Introduction

This data review covers 22 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per a modification of EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Polynuclear Aromatic Hydrocarbons.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all target compounds were within validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% .

All of the continuing calibration RRF values were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polynuclear aromatic hydrocarbon contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Extraction Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MB-072706	7/27/06	Phenanthrene	5.5 ug/Kg	All samples in SDG JQ33

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for several samples. Since the samples were diluted out, no data were qualified.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within the QC limits. Since the samples were diluted out, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
T4-B414-01-A	Acenaphthene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene Perylene Benzo(e)pyrene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A

Sample	Compound	Finding	Criteria	Flag	A or P
T4-S3-01-D	Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene Benzo(e)pyrene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A
T4-S3-01-E	Acenaphthene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene Perylene Benzo(e)pyrene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples T4-B414-02-A and T4-B414-02-A-DUP (from SDG JQ52) were identified as field duplicates. No polynuclear aromatic hydrocarbons were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-B414-02-A	T4-B414-02-A-DUP	
Naphthalene	48U	180	200 (≤75)
2-Methylnaphthalene	48U	89	200 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-B414-02-A	T4-B414-02-A-DUP	
Isopropylbenzene	48U	50	200 (≤75)
Acenaphthene	120	540	127 (≤75)
Fluorene	48	220	128 (≤75)
Phenanthrene	420	1900	128 (≤75)
Anthracene	81	310	117 (≤75)
Fluoranthene	980	3900	120 (≤75)
Pyrene	920	3000	106 (≤75)
Benzo(a)anthracene	660	1800	93 (≤75)
Chrysene	840	2600	102 (≤75)
Benzo(b)fluoranthene	1100	2800	87 (≤75)
Benzo(k)fluoranthene	840	2200	89 (≤75)
Benzo(a)pyrene	1000	2400	82 (≤75)
Indeno(1,2,3-cd)pyrene	660	1500	78 (≤75)
Dibenz(a,h)anthracene	240	510	72 (≤75)
Benzo(g,h,i)perylene	770	1700	75 (≤75)
Perylene	300	870	97 (≤75)
Biphenyl	48U	150	200 (≤75)
1-Methylphenanthrene	48U	110	200 (≤75)
Benzo(e)pyrene	630	1600	87 (≤75)
2,3,5-Trimethylnaphthalene	48U	54	200 (≤75)

XVII. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG JQ33

SDG	Sample	Compound	Flag	A or P	Reason
JQ33	T4-B414-01-A	Acenaphthene Phenanthrene Anthracene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene Perylene Benzo(e)pyrene	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Compound quantitation and CRQLs
JQ33	T4-S3-01-D	Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene Benzo(e)pyrene	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Compound quantitation and CRQLs
JQ33	T4-S3-01-E	Acenaphthene Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene Perylene Benzo(e)pyrene	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Compound quantitation and CRQLs

Terminal 4 Early Action
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG JQ33

No Sample Data Qualified in this SDG

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Sample ID: T4-B414-01-A
SAMPLE

Lab Sample ID: JQ33A
LIMS ID: 06-12923
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 15:22
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 44.8%
pH: 7.1

CAS Number	Analyte	RL	Result		
91-20-3	Naphthalene	98	1,100		
91-57-6	2-Methylnaphthalene	98	3,200		
90-12-0	1-Methylnaphthalene	98	1,300		
208-96-8	Acenaphthylene	98	< 98	U	
83-32-9	Acenaphthene	98	13,000	E	J
86-73-7	Fluorene	98	9,800		
85-01-8	Phenanthrene	98	52,000	EB	J
120-12-7	Anthracene	98	13,000	E	
206-44-0	Fluoranthene	98	73,000	E	
129-00-0	Pyrene	98	52,000	E	
56-55-3	Benzo(a)anthracene	98	42,000	E	
218-01-9	Chrysene	98	54,000	E	
205-99-2	Benzo(b)fluoranthene	98	73,000	E	
207-08-9	Benzo(k)fluoranthene	98	35,000	E	
50-32-8	Benzo(a)pyrene	98	54,000	E	
193-39-5	Indeno(1,2,3-cd)pyrene	98	28,000	E	
53-70-3	Dibenz(a,h)anthracene	98	11,000	E	
191-24-2	Benzo(g,h,i)perylene	98	27,000	E	
198-55-0	Perylene	98	18,000	E	
92-52-4	Biphenyl	98	770		
581-42-0	2,6-Dimethylnaphthalene	98	830		
832-69-9	1-Methylphenanthrene	98	2,300		
192-97-2	Benzo(e)pyrene	98	37,000	E	J
2245-38-7	2,3,5-Trimethylnaphthalene	98	210		

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	87.3%
d14-Dibenzo(a,h)anthracen	66.7%

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Sample ID: T4-B414-01-A
DILUTION

Lab Sample ID: JQ33A
LIMS ID: 06-12923
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/07/06 12:05
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 400
Percent Moisture: 44.8%
pH: 7.1

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	2,000	< 2,000 U
91-57-6	**2-Methylnaphthalene**	**2,000**	**2,900**
90-12-0	1-Methylnaphthalene	2,000	< 2,000 U
208-96-8	Acenaphthylene	2,000	< 2,000 U
83-32-9	**Acenaphthene**	**2,000**	**12,000**
86-73-7	**Fluorene**	**2,000**	**8,600**
85-01-8	**Phenanthrene**	**2,000**	**60,000 B**
120-12-7	**Anthracene**	**2,000**	**11,000**
206-44-0	**Fluoranthene**	**2,000**	**97,000**
129-00-0	**Pyrene**	**2,000**	**67,000**
56-55-3	**Benzo(a)anthracene**	**2,000**	**46,000**
218-01-9	**Chrysene**	**2,000**	**60,000**
205-99-2	**Benzo(b)fluoranthene**	**2,000**	**63,000**
207-08-9	**Benzo(k)fluoranthene**	**2,000**	**52,000**
50-32-8	**Benzo(a)pyrene**	**2,000**	**54,000**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**2,000**	**35,000**
53-70-3	**Dibenz(a,h)anthracene**	**2,000**	**15,000**
191-24-2	**Benzo(g,h,i)perylene**	**2,000**	**38,000**
198-55-0	**Perylene**	**2,000**	**16,000**
92-52-4	Biphenyl	2,000	< 2,000 U
581-42-0	2,6-Dimethylnaphthalene	2,000	< 2,000 U
832-69-9	**1-Methylphenanthrene**	**2,000**	**2,400**
192-97-2	**Benzo(e)pyrene**	**2,000**	**37,000**
2245-38-7	2,3,5-Trimethylnaphthalene	2,000	< 2,000 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	D
d14-Dibenzo(a,h)anthracen	D

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Sample ID: T4-B414-01-B
SAMPLE

Lab Sample ID: JQ33B
LIMS ID: 06-12924
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 15:47
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 48.2%
pH: 7.2

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	50	74
91-57-6	**2-Methylnaphthalene**	50	89
90-12-0	**1-Methylnaphthalene**	50	50
208-96-8	Acenaphthylene	50	< 50 U
83-32-9	**Acenaphthene**	50	410
86-73-7	**Fluorene**	50	260
85-01-8	**Phenanthrene**	50	2,000 B
120-12-7	**Anthracene**	50	350
206-44-0	**Fluoranthene**	50	3,900
129-00-0	**Pyrene**	50	3,000
56-55-3	**Benzo(a)anthracene**	50	2,100
218-01-9	**Chrysene**	50	2,800
205-99-2	**Benzo(b)fluoranthene**	50	3,000
207-08-9	**Benzo(k)fluoranthene**	50	2,300
50-32-8	**Benzo(a)pyrene**	50	2,600
193-39-5	**Indeno(1,2,3-cd)pyrene**	50	1,700
53-70-3	**Dibenz(a,h)anthracene**	50	540
191-24-2	**Benzo(g,h,i)perylene**	50	1,900
198-55-0	**Perylene**	50	890
92-52-4	**Biphenyl**	50	150
581-42-0	2,6-Dimethylnaphthalene	50	< 50 U
832-69-9	**1-Methylphenanthrene**	50	110
192-97-2	**Benzo(e)pyrene**	50	1,800
2245-38-7	**2,3,5-Trimethylnaphthalene**	50	50

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	58.7%
d14-Dibenzo(a,h)anthracen	61.0%

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Sample ID: T4-B414-01-C
SAMPLE

Lab Sample ID: JQ33C
LIMS ID: 06-12925
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 16:12
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 46.4%
pH: 7.1

CAS Number	Analyte	RL	Result	
91-20-3	**Naphthalene**	**49**	**39**	**J**
91-57-6	**2-Methylnaphthalene**	**49**	**34**	**J**
90-12-0	1-Methylnaphthalene	49	< 49	U
208-96-8	Acenaphthylene	49	< 49	U
83-32-9	**Acenaphthene**	**49**	**130**	
86-73-7	**Fluorene**	**49**	**100**	
85-01-8	**Phenanthrene**	**49**	**720**	**B**
120-12-7	**Anthracene**	**49**	**130**	
206-44-0	**Fluoranthene**	**49**	**1,400**	
129-00-0	**Pyrene**	**49**	**1,200**	
56-55-3	**Benzo(a)anthracene**	**49**	**720**	
218-01-9	**Chrysene**	**49**	**1,000**	
205-99-2	**Benzo(b)fluoranthene**	**49**	**1,100**	
207-08-9	**Benzo(k)fluoranthene**	**49**	**850**	
50-32-8	**Benzo(a)pyrene**	**49**	**890**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**49**	**570**	
53-70-3	**Dibenz(a,h)anthracene**	**49**	**220**	
191-24-2	**Benzo(g,h,i)perylene**	**49**	**660**	
198-55-0	**Perylene**	**49**	**510**	
92-52-4	**Biphenyl**	**49**	**150**	
581-42-0	2,6-Dimethylnaphthalene	49	< 49	U
832-69-9	**1-Methylphenanthrene**	**49**	**64**	
192-97-2	**Benzo(e)pyrene**	**49**	**640**	
2245-38-7	2,3,5-Trimethylnaphthalene	49	< 49	U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	55.0%
d14-Dibenzo(a,h)anthracen	71.7%

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Sample ID: T4-B414-02-A
SAMPLE

Lab Sample ID: JQ33D
LIMS ID: 06-12926
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 16:37
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 49.7%
pH: 7.2

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	50	180
91-57-6	2-Methylnaphthalene	50	89
90-12-0	1-Methylnaphthalene	50	50
208-96-8	Acenaphthylene	50	< 50 U
83-32-9	Acenaphthene	50	540
86-73-7	Fluorene	50	220
85-01-8	Phenanthrene	50	1,900 B
120-12-7	Anthracene	50	310
206-44-0	Fluoranthene	50	3,900
129-00-0	Pyrene	50	3,000
56-55-3	Benzo(a)anthracene	50	1,800
218-01-9	Chrysene	50	2,600
205-99-2	Benzo(b)fluoranthene	50	2,800
207-08-9	Benzo(k)fluoranthene	50	2,200
50-32-8	Benzo(a)pyrene	50	2,400
193-39-5	Indeno(1,2,3-cd)pyrene	50	1,500
53-70-3	Dibenz(a,h)anthracene	50	510
191-24-2	Benzo(g,h,i)perylene	50	1,700
198-55-0	Perylene	50	870
92-52-4	Biphenyl	50	150
581-42-0	2,6-Dimethylnaphthalene	50	< 50 U
832-69-9	1-Methylphenanthrene	50	110
192-97-2	Benzo(e)pyrene	50	1,600
2245-38-7	2,3,5-Trimethylnaphthalene	50	54

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	60.3%
d14-Dibenzo(a,h)anthracen	82.0%

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Sample ID: T4-B414-02-B
SAMPLE

Lab Sample ID: JQ33E
LIMS ID: 06-12927
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/08/06 11:32
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 49.4%
pH: 7.2

CAS Number	Analyte	RL	Result	
91-20-3	Naphthalene	5.0	34	
91-57-6	2-Methylnaphthalene	5.0	15	
90-12-0	1-Methylnaphthalene	5.0	9.4	
208-96-8	Acenaphthylene	5.0	8.9	
83-32-9	Acenaphthene	5.0	40	
86-73-7	Fluorene	5.0	25	
85-01-8	Phenanthrene	5.0	150	B
120-12-7	Anthracene	5.0	27	
206-44-0	Fluoranthene	5.0	220	
129-00-0	Pyrene	5.0	200	
56-55-3	Benzo(a)anthracene	5.0	85	
218-01-9	Chrysene	5.0	120	
205-99-2	Benzo(b)fluoranthene	5.0	110	
207-08-9	Benzo(k)fluoranthene	5.0	96	
50-32-8	Benzo(a)pyrene	5.0	100	
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	62	
53-70-3	Dibenz(a,h)anthracene	5.0	23	
191-24-2	Benzo(g,h,i)perylene	5.0	76	
198-55-0	Perylene	5.0	220	
92-52-4	Biphenyl	5.0	6.4	
581-42-0	2,6-Dimethylnaphthalene	5.0	13	
832-69-9	1-Methylphenanthrene	5.0	17	
192-97-2	Benzo(e)pyrene	5.0	74	
2245-38-7	2,3,5-Trimethylnaphthalene	5.0	10	

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	66.0%
d14-Dibenzo(a,h)anthracen	65.3%

0299

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Sample ID: T4-B414-02-C
SAMPLE

Lab Sample ID: JQ33F
LIMS ID: 06-12928
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 17:26
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 48.2%
pH: 7.0

CAS Number	Analyte	RL	Result	
91-20-3	**Naphthalene**	**50**	**40**	**J**
91-57-6	2-Methylnaphthalene	50	< 50	U
90-12-0	1-Methylnaphthalene	50	< 50	U
208-96-8	Acenaphthylene	50	< 50	U
83-32-9	**Acenaphthene**	**50**	**99**	
86-73-7	**Fluorene**	**50**	**64**	
85-01-8	**Phenanthrene**	**50**	**440**	**B**
120-12-7	**Anthracene**	**50**	**79**	
206-44-0	**Fluoranthene**	**50**	**940**	
129-00-0	**Pyrene**	**50**	**760**	
56-55-3	**Benzo(a)anthracene**	**50**	**470**	
218-01-9	**Chrysene**	**50**	**630**	
205-99-2	**Benzo(b)fluoranthene**	**50**	**710**	
207-08-9	**Benzo(k)fluoranthene**	**50**	**590**	
50-32-8	**Benzo(a)pyrene**	**50**	**630**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**50**	**330**	
53-70-3	**Dibenz(a,h)anthracene**	**50**	**110**	
191-24-2	**Benzo(g,h,i)perylene**	**50**	**350**	
198-55-0	**Perylene**	**50**	**410**	
92-52-4	**Biphenyl**	**50**	**150**	
581-42-0	2,6-Dimethylnaphthalene	50	< 50	U
832-69-9	**1-Methylphenanthrene**	**50**	**54**	
192-97-2	**Benzo(e)pyrene**	**50**	**440**	
2245-38-7	2,3,5-Trimethylnaphthalene	50	< 50	U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	68.3%
d14-Dibenzo(a,h)anthracen	59.0%

0330

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Sample ID: T4-B414-03-A
SAMPLE

Lab Sample ID: JQ33G
LIMS ID: 06-12929
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 17:51
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 49.8%
pH: 7.1

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**50**	**65**
91-57-6	**2-Methylnaphthalene**	**50**	**60**
90-12-0	**1-Methylnaphthalene**	**50**	**30 J**
208-96-8	Acenaphthylene	50	< 50 U
83-32-9	**Acenaphthene**	**50**	**210**
86-73-7	**Fluorene**	**50**	**150**
85-01-8	**Phenanthrene**	**50**	**1,300 B**
120-12-7	**Anthracene**	**50**	**230**
206-44-0	**Fluoranthene**	**50**	**2,700**
129-00-0	**Pyrene**	**50**	**2,000**
56-55-3	**Benzo(a)anthracene**	**50**	**1,300**
218-01-9	**Chrysene**	**50**	**1,800**
205-99-2	**Benzo(b)fluoranthene**	**50**	**2,100**
207-08-9	**Benzo(k)fluoranthene**	**50**	**1,500**
50-32-8	**Benzo(a)pyrene**	**50**	**1,600**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**50**	**910**
53-70-3	**Dibenz(a,h)anthracene**	**50**	**380**
191-24-2	**Benzo(g,h,i)perylene**	**50**	**950**
198-55-0	**Perylene**	**50**	**620**
92-52-4	Biphenyl	50	< 50 U
581-42-0	2,6-Dimethylnaphthalene	50	< 50 U
832-69-9	**1-Methylphenanthrene**	**50**	**65**
192-97-2	**Benzo(e)pyrene**	**50**	**1,200**
2245-38-7	2,3,5-Trimethylnaphthalene	50	< 50 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	73.0%
d14-Dibenzo(a,h)anthracen	70.3%

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Sample ID: T4-B414-03-B
SAMPLE

Lab Sample ID: JQ33H
LIMS ID: 06-12930
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 18:16
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 50.4%
pH: 7.0

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**48**	**82**
91-57-6	**2-Methylnaphthalene**	**48**	**48**
90-12-0	1-Methylnaphthalene	48	< 48 U
208-96-8	Acenaphthylene	48	< 48 U
83-32-9	**Acenaphthene**	**48**	**210**
86-73-7	**Fluorene**	**48**	**130**
85-01-8	**Phenanthrene**	**48**	**1,200 B**
120-12-7	**Anthracene**	**48**	**190**
206-44-0	**Fluoranthene**	**48**	**2,300**
129-00-0	**Pyrene**	**48**	**1,800**
56-55-3	**Benzo(a)anthracene**	**48**	**1,100**
218-01-9	**Chrysene**	**48**	**1,600**
205-99-2	**Benzo(b)fluoranthene**	**48**	**1,600**
207-08-9	**Benzo(k)fluoranthene**	**48**	**1,300**
50-32-8	**Benzo(a)pyrene**	**48**	**1,400**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**48**	**780**
53-70-3	**Dibenz(a,h)anthracene**	**48**	**290**
191-24-2	**Benzo(g,h,i)perylene**	**48**	**810**
198-55-0	**Perylene**	**48**	**630**
92-52-4	Biphenyl	48	< 48 U
581-42-0	2,6-Dimethylnaphthalene	48	< 48 U
832-69-9	**1-Methylphenanthrene**	**48**	**67**
192-97-2	**Benzo(e)pyrene**	**48**	**1,000**
2245-38-7	2,3,5-Trimethylnaphthalene	48	< 48 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	73.7%
d14-Dibenzo(a,h)anthracen	67.3%

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Sample ID: T4-B414-03-C
SAMPLE

Lab Sample ID: JQ33I
LIMS ID: 06-12931
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 18:40
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 49.7%
pH: 7.2

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	5.0	17
91-57-6	2-Methylnaphthalene	5.0	8.9
90-12-0	1-Methylnaphthalene	5.0	6.4
208-96-8	Acenaphthylene	5.0	6.4
83-32-9	Acenaphthene	5.0	43
86-73-7	Fluorene	5.0	28
85-01-8	Phenanthrene	5.0	130 B
120-12-7	Anthracene	5.0	26
206-44-0	Fluoranthene	5.0	230
129-00-0	Pyrene	5.0	210
56-55-3	Benzo(a)anthracene	5.0	110
218-01-9	Chrysene	5.0	150
205-99-2	Benzo(b)fluoranthene	5.0	140
207-08-9	Benzo(k)fluoranthene	5.0	140
50-32-8	Benzo(a)pyrene	5.0	140
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	65
53-70-3	Dibenz(a,h)anthracene	5.0	23
191-24-2	Benzo(g,h,i)perylene	5.0	74
198-55-0	Perylene	5.0	200
92-52-4	Biphenyl	5.0	< 5.0 U
581-42-0	2,6-Dimethylnaphthalene	5.0	9.4
832-69-9	1-Methylphenanthrene	5.0	11
192-97-2	Benzo(e)pyrene	5.0	93
2245-38-7	2,3,5-Trimethylnaphthalene	5.0	5.4

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.3%
d14-Dibenzo(a,h)anthracen	51.3%

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Sample ID: T4-B414-04-A
SAMPLE

Lab Sample ID: JQ33J
LIMS ID: 06-12932
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 19:05
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 52.3%
pH: 7.2

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	5.0	28
91-57-6	2-Methylnaphthalene	5.0	14
90-12-0	1-Methylnaphthalene	5.0	8.0
208-96-8	Acenaphthylene	5.0	12
83-32-9	Acenaphthene	5.0	32
86-73-7	Fluorene	5.0	27
85-01-8	Phenanthrene	5.0	160 B
120-12-7	Anthracene	5.0	40
206-44-0	Fluoranthene	5.0	350
129-00-0	Pyrene	5.0	320
56-55-3	Benzo(a)anthracene	5.0	170
218-01-9	Chrysene	5.0	230
205-99-2	Benzo(b)fluoranthene	5.0	220
207-08-9	Benzo(k)fluoranthene	5.0	170
50-32-8	Benzo(a)pyrene	5.0	190
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	80
53-70-3	Dibenz(a,h)anthracene	5.0	28
191-24-2	Benzo(g,h,i)perylene	5.0	86
198-55-0	Perylene	5.0	220
92-52-4	Biphenyl	5.0	5.0
581-42-0	2,6-Dimethylnaphthalene	5.0	12
832-69-9	1-Methylphenanthrene	5.0	< 5.0 U
192-97-2	Benzo(e)pyrene	5.0	130
2245-38-7	2,3,5-Trimethylnaphthalene	5.0	7.0

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	74.7%
d14-Dibenzo(a,h)anthracen	51.7%

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Sample ID: T4-B414-04-B
SAMPLE

Lab Sample ID: JQ33K
LIMS ID: 06-12933
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 19:30
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 47.1%
pH: 7.1

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	5.0	15
91-57-6	2-Methylnaphthalene	5.0	8.9
90-12-0	1-Methylnaphthalene	5.0	4.5 J
208-96-8	Acenaphthylene	5.0	5.9
83-32-9	Acenaphthene	5.0	25
86-73-7	Fluorene	5.0	19
85-01-8	Phenanthrene	5.0	140 B
120-12-7	Anthracene	5.0	30
206-44-0	Fluoranthene	5.0	300
129-00-0	Pyrene	5.0	240
56-55-3	Benzo(a)anthracene	5.0	140
218-01-9	Chrysene	5.0	200
205-99-2	Benzo(b)fluoranthene	5.0	200
207-08-9	Benzo(k)fluoranthene	5.0	180
50-32-8	Benzo(a)pyrene	5.0	180
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	75
53-70-3	Dibenz(a,h)anthracene	5.0	29
191-24-2	Benzo(g,h,i)perylene	5.0	80
198-55-0	Perylene	5.0	200
92-52-4	Biphenyl	5.0	< 5.0 U
581-42-0	2,6-Dimethylnaphthalene	5.0	7.4
832-69-9	1-Methylphenanthrene	5.0	12
192-97-2	Benzo(e)pyrene	5.0	120
2245-38-7	2,3,5-Trimethylnaphthalene	5.0	5.4

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	66.3%
d14-Dibenzo(a,h)anthracen	47.3%

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Sample ID: T4-B414-04-C
SAMPLE

Lab Sample ID: JQ33L
LIMS ID: 06-12934
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 19:55
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 49.3%
pH: 7.1

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**50**	**69**
91-57-6	**2-Methylnaphthalene**	**50**	**30 J**
90-12-0	1-Methylnaphthalene	50	< 50 U
208-96-8	Acenaphthylene	50	< 50 U
83-32-9	**Acenaphthene**	**50**	**89**
86-73-7	**Fluorene**	**50**	**59**
85-01-8	**Phenanthrene**	**50**	**420 B**
120-12-7	**Anthracene**	**50**	**79**
206-44-0	**Fluoranthene**	**50**	**720**
129-00-0	**Pyrene**	**50**	**590**
56-55-3	**Benzo(a)anthracene**	**50**	**350**
218-01-9	**Chrysene**	**50**	**480**
205-99-2	**Benzo(b)fluoranthene**	**50**	**520**
207-08-9	**Benzo(k)fluoranthene**	**50**	**380**
50-32-8	**Benzo(a)pyrene**	**50**	**430**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**50**	**200**
53-70-3	**Dibenz(a,h)anthracene**	**50**	**89**
191-24-2	**Benzo(g,h,i)perylene**	**50**	**210**
198-55-0	**Perylene**	**50**	**330**
92-52-4	Biphenyl	50	< 50 U
581-42-0	2,6-Dimethylnaphthalene	50	< 50 U
832-69-9	1-Methylphenanthrene	50	< 50 U
192-97-2	**Benzo(e)pyrene**	**50**	**310**
2245-38-7	2,3,5-Trimethylnaphthalene	50	< 50 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	73.3%
d14-Dibenzo(a,h)anthracen	68.0%

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Sample ID: T4-S3-01-D
SAMPLE

Lab Sample ID: JQ33M
LIMS ID: 06-12935
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/07/06 16:38
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 49.1%
pH: 7.1

CAS Number	Analyte	RL	Result		
91-20-3	Naphthalene	49	440		
91-57-6	2-Methylnaphthalene	49	240		
90-12-0	1-Methylnaphthalene	49	130		
208-96-8	Acenaphthylene	49	74		
83-32-9	Acenaphthene	49	2,100		
86-73-7	Fluorene	49	1,100		
85-01-8	Phenanthrene	49	8,900	EB	J
120-12-7	Anthracene	49	2,000		
206-44-0	Fluoranthene	49	19,000	E	J
129-00-0	Pyrene	49	16,000	E	
56-55-3	Benzo(a)anthracene	49	12,000	E	
218-01-9	Chrysene	49	14,000	E	
205-99-2	Benzo(b)fluoranthene	49	14,000	E	
207-08-9	Benzo(k)fluoranthene	49	12,000	E	
50-32-8	Benzo(a)pyrene	49	16,000	E	
193-39-5	Indeno(1,2,3-cd)pyrene	49	8,200	E	
53-70-3	Dibenz(a,h)anthracene	49	2,800		
191-24-2	Benzo(g,h,i)perylene	49	8,600	E	J
198-55-0	Perylene	49	4,500		
92-52-4	Biphenyl	49	59		
581-42-0	2,6-Dimethylnaphthalene	49	110		
832-69-9	1-Methylphenanthrene	49	480		
192-97-2	Benzo(e)pyrene	49	9,400	E	J
2245-38-7	2,3,5-Trimethylnaphthalene	49	130		

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.3%
d14-Dibenzo(a,h)anthracen	81.0%

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Sample ID: T4-S3-01-D
DILUTION

Lab Sample ID: JQ33M
LIMS ID: 06-12935
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 20:19
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 50.0
Percent Moisture: 49.1%
pH: 7.1

CAS Number	Analyte	RL	Result	
91-20-3	Naphthalene	240	420	
91-57-6	2-Methylnaphthalene	240	220	J
90-12-0	1-Methylnaphthalene	240	120	J
208-96-8	Acenaphthylene	240	< 240	U
83-32-9	Acenaphthene	240	2,000	
86-73-7	Fluorene	240	1,100	
85-01-8	Phenanthrene	240	8,700	B
120-12-7	Anthracene	240	1,900	
206-44-0	Fluoranthene	240	19,000	
129-00-0	Pyrene	240	16,000	
56-55-3	Benzo(a)anthracene	240	11,000	
218-01-9	Chrysene	240	14,000	
205-99-2	Benzo(b)fluoranthene	240	15,000	
207-08-9	Benzo(k)fluoranthene	240	14,000	
50-32-8	Benzo(a)pyrene	240	16,000	
193-39-5	Indeno(1,2,3-cd)pyrene	240	6,900	
53-70-3	Dibenz(a,h)anthracene	240	2,500	
191-24-2	Benzo(g,h,i)perylene	240	7,300	
198-55-0	Perylene	250	4,300	
92-52-4	Biphenyl	250	< 250	U
581-42-0	2,6-Dimethylnaphthalene	240	< 240	U
832-69-9	1-Methylphenanthrene	240	560	
192-97-2	Benzo(e)pyrene	240	9,500	
2245-38-7	2,3,5-Trimethylnaphthalene	240	< 240	U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	D
d14-Dibenzo(a,h)anthracen	D

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: T4-S3-01-E
SAMPLE

Lab Sample ID: JQ33N
LIMS ID: 06-12936
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/07/06 17:03
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 48.8%
pH: 6.9

CAS Number	Analyte	RL	Result		
91-20-3	Naphthalene	48	720		
91-57-6	2-Methylnaphthalene	48	420		
90-12-0	1-Methylnaphthalene	48	190		
208-96-8	Acenaphthylene	48	73		
83-32-9	Acenaphthene	48	5,000	E	J
86-73-7	Fluorene	48	2,000		
85-01-8	Phenanthrene	48	16,000	EB	J
120-12-7	Anthracene	48	4,300		
206-44-0	Fluoranthene	48	32,000	E	J
129-00-0	Pyrene	48	26,000	E	
56-55-3	Benzo(a)anthracene	48	22,000	E	
218-01-9	Chrysene	48	24,000	E	
205-99-2	Benzo(b)fluoranthene	48	34,000	E	
207-08-9	Benzo(k)fluoranthene	48	20,000	E	
50-32-8	Benzo(a)pyrene	48	30,000	E	
193-39-5	Indeno(1,2,3-cd)pyrene	48	12,000	E	
53-70-3	Dibenz(a,h)anthracene	48	4,300		
191-24-2	Benzo(g,h,i)perylene	48	12,000	E	J
198-55-0	Perylene	49	8,900	E	J
92-52-4	Biphenyl	49	78		
581-42-0	2,6-Dimethylnaphthalene	48	150		
832-69-9	1-Methylphenanthrene	48	950		
192-97-2	Benzo(e)pyrene	48	18,000	E	J
2245-38-7	2,3,5-Trimethylnaphthalene	48	150		

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	65.3%
d14-Dibenzo(a,h)anthracen	76.7%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: T4-S3-01-E
DILUTION

Lab Sample ID: JQ33N
LIMS ID: 06-12936
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 20:44
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 100
Percent Moisture: 48.8%
pH: 6.9

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**480**	**730**
91-57-6	**2-Methylnaphthalene**	**480**	**390 J**
90-12-0	1-Methylnaphthalene	480	< 480 U
208-96-8	Acenaphthylene	480	< 480 U
83-32-9	**Acenaphthene**	**480**	**4,700**
86-73-7	**Fluorene**	**480**	**1,900**
85-01-8	**Phenanthrene**	**480**	**16,000 B**
120-12-7	**Anthracene**	**480**	**4,000**
206-44-0	**Fluoranthene**	**480**	**38,000**
129-00-0	**Pyrene**	**480**	**33,000**
56-55-3	**Benzo(a)anthracene**	**480**	**25,000**
218-01-9	**Chrysene**	**480**	**28,000**
205-99-2	**Benzo(b)fluoranthene**	**480**	**34,000**
207-08-9	**Benzo(k)fluoranthene**	**480**	**27,000**
50-32-8	**Benzo(a)pyrene**	**480**	**34,000**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**480**	**15,000**
53-70-3	**Dibenz(a,h)anthracene**	**480**	**5,200**
191-24-2	**Benzo(g,h,i)perylene**	**480**	**16,000**
198-55-0	**Perylene**	**490**	**9,400**
92-52-4	Biphenyl	490	< 490 U
581-42-0	2,6-Dimethylnaphthalene	480	< 480 U
832-69-9	**1-Methylphenanthrene**	**480**	**1,000**
192-97-2	**Benzo(e)pyrene**	**480**	**19,000**
2245-38-7	2,3,5-Trimethylnaphthalene	480	< 480 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	D
d14-Dibenzo(a,h)anthracen	D

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
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Sample ID: T4-S3-01-F
SAMPLE

Lab Sample ID: JQ330
LIMS ID: 06-12937
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 21:09
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 1.01 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 49.8%
pH: 7.0

CAS Number	Analyte	RL	Result	
91-20-3	**Naphthalene**	**990**	**990**	
91-57-6	**2-Methylnaphthalene**	**990**	**590**	**J**
90-12-0	1-Methylnaphthalene	990	< 990	U
208-96-8	Acenaphthylene	990	< 990	U
83-32-9	**Acenaphthene**	**990**	**6,200**	
86-73-7	**Fluorene**	**990**	**2,800**	
85-01-8	**Phenanthrene**	**990**	**24,000**	**B**
120-12-7	**Anthracene**	**990**	**5,700**	
206-44-0	**Fluoranthene**	**990**	**53,000**	
129-00-0	**Pyrene**	**990**	**47,000**	
56-55-3	**Benzo(a)anthracene**	**990**	**34,000**	
218-01-9	**Chrysene**	**990**	**39,000**	
205-99-2	**Benzo(b)fluoranthene**	**990**	**44,000**	
207-08-9	**Benzo(k)fluoranthene**	**990**	**38,000**	
50-32-8	**Benzo(a)pyrene**	**990**	**45,000**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**990**	**19,000**	
53-70-3	**Dibenz(a,h)anthracene**	**990**	**8,100**	
191-24-2	**Benzo(g,h,i)perylene**	**990**	**20,000**	
198-55-0	**Perylene**	**990**	**12,000**	
92-52-4	Biphenyl	990	< 990	U
581-42-0	2,6-Dimethylnaphthalene	990	< 990	U
832-69-9	**1-Methylphenanthrene**	**990**	**1,600**	
192-97-2	**Benzo(e)pyrene**	**990**	**26,000**	
2245-38-7	2,3,5-Trimethylnaphthalene	990	< 990	U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	60.7%
d14-Dibenzo(a,h)anthracen	54.7%

8/7/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
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Sample ID: T4-S3-01-G
SAMPLE

Lab Sample ID: JQ33P
LIMS ID: 06-12938
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/04/06 21:33
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 1.12 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 44.6%
pH: 7.0

CAS Number	Analyte	RL	Result	
91-20-3	**Naphthalene**	**450**	**620**	
91-57-6	**2-Methylnaphthalene**	**450**	**360**	**J**
90-12-0	1-Methylnaphthalene	450	< 450	U
208-96-8	Acenaphthylene	450	< 450	U
83-32-9	**Acenaphthene**	**450**	**4,200**	
86-73-7	**Fluorene**	**450**	**2,000**	
85-01-8	**Phenanthrene**	**450**	**15,000**	**B**
120-12-7	**Anthracene**	**450**	**3,500**	
206-44-0	**Fluoranthene**	**450**	**31,000**	
129-00-0	**Pyrene**	**450**	**27,000**	
56-55-3	**Benzo(a)anthracene**	**450**	**19,000**	
218-01-9	**Chrysene**	**450**	**22,000**	
205-99-2	**Benzo(b)fluoranthene**	**450**	**26,000**	
207-08-9	**Benzo(k)fluoranthene**	**450**	**22,000**	
50-32-8	**Benzo(a)pyrene**	**450**	**26,000**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**450**	**11,000**	
53-70-3	**Dibenz(a,h)anthracene**	**450**	**4,300**	
191-24-2	**Benzo(g,h,i)perylene**	**450**	**12,000**	
198-55-0	**Perylene**	**450**	**7,100**	
92-52-4	Biphenyl	450	< 450	U
581-42-0	2,6-Dimethylnaphthalene	450	< 450	U
832-69-9	**1-Methylphenanthrene**	**450**	**890**	
192-97-2	**Benzo(e)pyrene**	**450**	**15,000**	
2245-38-7	2,3,5-Trimethylnaphthalene	450	< 450	U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.7%
d14-Dibenzo(a,h)anthracen	42.3%

9/26/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-S3-01-H
SAMPLE

Lab Sample ID: JQ33Q
LIMS ID: 06-12939
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 07/27/06
Date Analyzed: 08/07/06 17:28
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 1.10 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 45.6%
pH: 7.1

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	910	1,700
91-57-6	**2-Methylnaphthalene**	910	1,000
90-12-0	**1-Methylnaphthalene**	910	460 J
208-96-8	Acenaphthylene	910	< 910 U
83-32-9	**Acenaphthene**	910	8,700
86-73-7	**Fluorene**	910	3,400
85-01-8	**Phenanthrene**	910	29,000 B
120-12-7	**Anthracene**	910	6,900
206-44-0	**Fluoranthene**	910	64,000
129-00-0	**Pyrene**	910	56,000
56-55-3	**Benzo(a)anthracene**	910	42,000
218-01-9	**Chrysene**	910	49,000
205-99-2	**Benzo(b)fluoranthene**	910	51,000
207-08-9	**Benzo(k)fluoranthene**	910	50,000
50-32-8	**Benzo(a)pyrene**	910	57,000
193-39-5	**Indeno(1,2,3-cd)pyrene**	910	28,000
53-70-3	**Dibenz(a,h)anthracene**	910	9,900
191-24-2	**Benzo(g,h,i)perylene**	910	29,000
198-55-0	**Perylene**	910	15,000
92-52-4	Biphenyl	910	< 910 U
581-42-0	2,6-Dimethylnaphthalene	910	< 910 U
832-69-9	**1-Methylphenanthrene**	910	2,000
192-97-2	**Benzo(e)pyrene**	910	32,000
2245-38-7	2,3,5-Trimethylnaphthalene	910	< 910 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.0%
d14-Dibenzo(a,h)anthracen	91.3%

0696

9/28/06

LDC #: 15488B2b **VALIDATION COMPLETENESS WORKSHEET** Date: 9/21/06
SDG #: JQ33 Level III Page: 1 of 1
Laboratory: Analytical Resources, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS ~~Semivolatiles~~ PAH's (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18 - 20/06
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	no SPCCs
IV.	Continuing calibration ~~CCV~~	A	d
V.	Blanks	SW	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	SW	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D=5+5-DUP (JA852)
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
All Soils

1	T4-B414-01-A	11	T4-B414-04-A	21	T4-B414-02-AMS	31	MB-072706
2	T4-B414-01-ADL	12	T4-B414-04-B	22	T4-B414-02-AMSD	32	
3	T4-B414-01-B	13	T4-B414-04-C	23		33	
4	T4-B414-01-C	14	T4-S3-01-D	24		34	
5	T4-B414-02-A	15	T4-S3-01-DDL	25		35	
6	T4-B414-02-B	16	T4-S3-01-E	26		36	
7	T4-B414-02-C	17	T4-S3-01-EDL	27		37	
8	T4-B414-03-A	18	T4-S3-01-F	28		38	
9	T4-B414-03-B	19	T4-S3-01-G	29		39	
10	T4-B414-03-C	20	T4-S3-01-H	30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol**	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol**	III. Benzo(a)pyrene**
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol**	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene**	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol*	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene**	T. 4-Chloroaniline	II. 4-Nitrophenol*	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene**	JJ. Dibenzofuran	YY. Fluoranthene**	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol**	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene*	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine*	Y. 2,4,6-Trichlorophenol**	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. perylene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)**	FFF. Di-n-octylphthalate**	UUU. Benzo(e)pyrene
N. 2-Nitrophenol**	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV. 1-Methylnaphthalene
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW. 2,6-Dimethylnaphthalene

XXX. 1-Methylphenanthrene
YYY. 2,3,5-Trimethylnaphthalene
ZZZ. Biphenyl

LDC #: 16488B6
SDG #: JQ33

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: Q
2nd Reviewer: R

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a method blank analyzed for each matrix?
(Y) N N/A Was a method blank analyzed for each concentration preparation level?
(Y) N N/A Was a method blank associated with every sample?
(Y) N N/A Was the blank contaminated? If yes, please see qualification below.

Blank extraction date: 7/27/06 **Blank analysis date:** 8/4/06
Conc. units: ug/Kg Associated Samples: All

Compound	Blank ID	Sample Identification								
MB 072706		All								
All	5.5	>5x								

Blank extraction date: _____ **Blank analysis date:** _____
Conc. units: _____ Associated Samples: _____

Compound	Blank ID	Sample Identification								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
Common contaminants such as the phthalates and TICs noted above that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #:

SDG #: 1833

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: 9
2nd Reviewer: 9

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N (N/A) If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A) If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		2, 15, 17	All	DO (—)	No Qual (OF >2X)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

* QC limits are advisory	QC Limits (Soil)	QC Limits (Water)
S1 (NBZ) = Nitrobenzene-d5	23-120	35-114
S2 (FBP) = 2-Fluorobiphenyl	30-115	43-116
S3 (TPH) = Terphenyl-d14	18-137	33-141
S4 (PHL) = Phenol-d5	24-113	10-94
S5 (2FP)= 2-Fluorophenol	25-121	21-100
S6 (TBP) = 2,4,6-Tribromophenol	19-122	10-123
S7 (2CP) = 2-Chlorophenol-d4	20-130*	33-110*
S8 (DCB) = 1,2-Dichlorobenzene-d4	20-130*	16-110*

LDC #: 15488A-2b
SDG #: JQ33

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: a
2nd Reviewer: e

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		21/22	To R out due to dilution			)	5	No Qual
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)		Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
A.	Phenol	26-90%	≤ 35%	12-110%	≤ 42%	GG.	Acenaphthene	31-137%	≤ 19%	46-118%	≤ 31%
C.	2-Chlorophenol	25-102%	≤ 50%	27-123%	≤ 40%	II.	4-Nitrophenol	11-114%	≤ 50%	10-80%	≤ 50%
E.	1,4-Dichlorobenzene	28-104%	≤ 27%	36-97%	≤ 28%	KK.	2,4-Dinitrotoluene	28-89%	≤ 47%	24-96%	≤ 38%
J.	N-Nitroso-di-n-propylamine	41-126%	≤ 38%	41-116%	≤ 38%	TT.	Pentachlorophenol	17-109%	≤ 47%	9-103%	≤ 50%
R.	1,2,4-Trichlorobenzene	38-107%	≤ 23%	39-98%	≤ 28%	ZZ.	Pyrene	35-142%	≤ 36%	26-127%	≤ 31%
V.	4-Chloro-3-methylphenol	26-103%	≤ 33%	23-97%	≤ 42%						

LDC #: 16488B25
SDG #: 1833

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: 9
2nd Reviewer: 8

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Sample ID	Finding (cpds > calib range)	Associated Samples	Qualifications
		1	~~EE~~. UU. VV. YY. ZZ	1	Vdets / A
			CCC. DDD. ~~FFF~~. HHH		
			III. JJJ. ~~KKK~~. LLL.		
			TTT. UUU		
		14	UU, YY. ZZ. CCC. DDD	14	
			~~FFF~~. HHH. III. JJJ		
			LLL, UUU		
		16	~~EE~~. UU. YY. ZZ. CCC	16	
			DDD. ~~FFF~~. HHH. III		
			JJJ, LLL, TTT. UUU		

Comments: See sample calculation verification worksheet for recalculations

LDC#: 15488B2b
SDG#: JQ33

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: 9
2nd Reviewer: 9

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	≤ 70
	T4-B414-02-A-DUP	5		
S	48U	180	200	
W	48U	89	200	
VVV	48U	50	200	
GG	120	540	127	
NN	48	220	128	
UU	420	1900	128	
VV	81	310	117	
YY	980	3900	120	
ZZ	920	3000	106	
CCC	660	1800	93	
DDD	840	2600	102	
GGG	1100	2800	87	
HHH	840	2200	89	
III	1000	2400	82	
JJJ	660	1500	78	
KKK	240	510	72	
LLL	770	1700	75	
TTT	300	870	97	
ZZZ	48U	150	200	
XXX	48U	110	200	
UUU	630	1600	87	
YYY	48U	54	200	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ35

Sample Identification

T4-S3-02-C
T4-S3-02-D
T4-S3-02-E
T4-S3-02-F
T4-S3-03-B
T4-S3-03-C
T4-S3-03-D
T4-S3-05-E
T4-S3-05-F
T4-S3-05-G
T4-S3-05-H
T4-S3-05-J
T4-S3-06-A
T4-S3-06-B
T4-S3-08-B
T4-S3-08-C
T4-S3-08-CMS
T4-S3-08-CMSD

Introduction

This data review covers 18 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per a modification of EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Polynuclear Aromatic Hydrocarbons.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all target compounds were within validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% .

All of the continuing calibration RRF values were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polynuclear aromatic hydrocarbon contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for sample T4-S3-05-G. Since the sample was diluted out, no data were qualified.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
T4-S3-08-CMS/MSD (T4-S3-08-C)	Benzo(k)fluoranthene	122 (26-110)	117 (26-110)	-	J (all detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples T4-S3-02-F and T4-S3-02-F-DUP (from SDG JQ52), samples T4-S3-02-F and T4-S3-02-F-DUPDL (from SDG JQ52), samples T4-S3-03-C and T4-S3-03-C-DUP (from SDG JQ52), and samples T4-S3-08-C and T4-S3-08-C-DUP (from SDG JQ52) were identified as field duplicates. No polynuclear aromatic hydrocarbons were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
Naphthalene	260	260U	200 (≤75)
2-Methylnaphthalene	160	260U	200 (≤75)
1-Methylnaphthalene	80	260U	200 (≤75)
Acenaphthylene	45	260U	200 (≤75)
Acenaphthene	1400	720	64 (≤75)
Fluorene	640	410	44 (≤75)
Phenanthrene	5200	3000	54 (≤75)
Anthracene	1200	620	64 (≤75)
Fluoranthene	11000	6600	50 (≤75)
Pyrene	10000	6200	47 (≤75)
Benzo(a)anthracene	7100	3700	63 (≤75)
Chrysene	8800	4700	61 (≤75)
Benzo(b)fluoranthene	9700	4900	66 (≤75)
Benzo(k)fluoranthene	7900	4200	61 (≤75)
Benzo(a)pyrene	9800	5100	63 (≤75)
Indeno(1,2,3-cd)pyrene	5400	3200	51 (≤75)
Dibenz(a,h)anthracene	1900	1200	45 (≤75)
Benzo(g,h,i)perylene	6100	3700	49 (≤75)
Perylene	3000	1600	61 (≤75)
2,6-Dimethylnaphthalene	95	260U	200 (≤75)
1-Methylphenanthrene	480	330	37 (≤75)
Benzo(e)pyrene	5800	3000	64 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
2,3,5-Trimethylnaphthalene	120	260U	200 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-02-F-DUPDL	T4-S3-02-F	
Naphthalene	250	260U	200 (≤75)
2-Methylnaphthalene	150	260U	200 (≤75)
Acenaphthene	1300	720	57 (≤75)
Fluorene	620	410	41 (≤75)
Phenanthrene	4700	3000	44 (≤75)
Anthracene	1100	620	56 (≤75)
Fluoranthene	10000	6600	41 (≤75)
Pyrene	8900	6200	36 (≤75)
Benzo(a)anthracene	6400	3700	53 (≤75)
Chrysene	7800	4700	50 (≤75)
Benzo(b)fluoranthene	8000	4900	48 (≤75)
Benzo(k)fluoranthene	6700	4200	46 (≤75)
Benzo(a)pyrene	8200	5100	47 (≤75)
Indeno(1,2,3-cd)pyrene	5000	3200	44 (≤75)
Dibenz(a,h)anthracene	1800	1200	40 (≤75)
Benzo(g,h,i)perylene	5800	3700	44 (≤75)
Perylene	2500	1600	44 (≤75)
1-Methylphenanthrene	380	330	14 (≤75)
Benzo(e)pyrene	4900	3000	48 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-03-C-DUP	T4-S3-03-C	
Naphthalene	98	69	35 (≤75)
2-Methylnaphthalene	49	50U	200 (≤75)
1-Methylnaphthalene	24	50U	200 (≤75)
Acenaphthylene	44	50U	200 (≤75)
Acenaphthene	210	170	21 (≤75)
Fluorene	130	120	8 (≤75)
Phenanthrene	760	610	22 (≤75)
Anthracene	150	110	31 (≤75)
Fluoranthene	1600	1300	21 (≤75)
Pyrene	1600	1300	21 (≤75)
Benzo(a)anthracene	710	570	22 (≤75)
Chrysene	960	830	15 (≤75)
Benzo(b)fluoranthene	880	730	19 (≤75)
Benzo(k)fluoranthene	740	690	7 (≤75)
Benzo(a)pyrene	910	790	14 (≤75)
Indeno(1,2,3-cd)pyrene	550	490	12 (≤75)
Dibenz(a,h)anthracene	170	150	13 (≤75)
Benzo(g,h,i)perylene	690	640	8 (≤75)
Perylene	440	400	10 (≤75)
Benzo(e)pyrene	560	510	9 (≤75)
2,3,5-Trimethylnaphthalene	64	54	17 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-08-C-DUP	T4-S3-08-C	
Naphthalene	49U	4.8	200 (≤75)
Acenaphthene	88	26	109 (≤75)
Fluorene	59	14	123 (≤75)
Phenanthrene	560	120	129 (≤75)
Anthracene	93	26	0 (≤75)
Fluoranthene	1100	280	0 (≤75)
Pyrene	900	250	113 (≤75)
Benzo(a)anthracene	540	170	104 (≤75)
Chrysene	780	210	115 (≤75)
Benzo(b)fluoranthene	830	240	110 (≤75)
Benzo(k)fluoranthene	620	180	110 (≤75)
Benzo(a)pyrene	660	230	97 (≤75)
Indeno(1,2,3-cd)pyrene	440	110	120 (≤75)
Dibenz(a,h)anthracene	150	40	116 (≤75)
Benzo(g,h,i)perylene	500	120	123 (≤75)
Perylene	280	71	119 (≤75)
1-Methylphenanthrene	49U	7.7	200 (≤75)
Benzo(e)pyrene	490	140	111 (≤75)

XVII. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG JQ35

SDG	Sample	Compound	Flag	A or P	Reason
JQ35	T4-S3-08-C	Benzo(k)fluoranthene	J (all detects)	A	Matrix spike/Matrix spike duplicates (%R)

Terminal 4 Early Action
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG JQ35

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-S3-02-C
SAMPLE

Lab Sample ID: JQ35A
LIMS ID: 06-12956
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/08/06 10:17
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 46.8%
pH: 6.7

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	99	160
91-57-6	2-Methylnaphthalene	99	< 99 U
90-12-0	1-Methylnaphthalene	99	< 99 U
208-96-8	Acenaphthylene	99	< 99 U
83-32-9	**Acenaphthene**	99	890
86-73-7	**Fluorene**	99	480
85-01-8	**Phenanthrene**	99	4,000
120-12-7	**Anthracene**	99	880
206-44-0	**Fluoranthene**	99	8,900
129-00-0	**Pyrene**	99	8,200
56-55-3	**Benzo(a)anthracene**	99	5,500
218-01-9	**Chrysene**	99	6,700
205-99-2	**Benzo(b)fluoranthene**	99	7,100
207-08-9	**Benzo(k)fluoranthene**	99	6,400
50-32-8	**Benzo(a)pyrene**	99	7,600
193-39-5	**Indeno(1,2,3-cd)pyrene**	99	4,600
53-70-3	**Dibenz(a,h)anthracene**	99	1,700
191-24-2	**Benzo(g,h,i)perylene**	99	5,600
198-55-0	**Perylene**	99	2,300
92-52-4	Biphenyl	99	< 99 U
581-42-0	2,6-Dimethylnaphthalene	99	< 99 U
832-69-9	**1-Methylphenanthrene**	99	260
192-97-2	**Benzo(e)pyrene**	99	4,500
2245-38-7	2,3,5-Trimethylnaphthalene	99	< 99 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	76.7%
d14-Dibenzo(a,h)anthracen	66.0%

8/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
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Sample ID: T4-S3-02-D
SAMPLE

Lab Sample ID: JQ35B
LIMS ID: 06-12957
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/07/06 12:55
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 2.32 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 42.0%
pH: 6.3

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**220**	**410**
91-57-6	**2-Methylnaphthalene**	**220**	**220**
90-12-0	1-Methylnaphthalene	220	< 220 U
208-96-8	Acenaphthylene	220	< 220 U
83-32-9	**Acenaphthene**	**220**	**2,400**
86-73-7	**Fluorene**	**220**	**1,100**
85-01-8	**Phenanthrene**	**220**	**9,000**
120-12-7	**Anthracene**	**220**	**1,900**
206-44-0	**Fluoranthene**	**220**	**20,000**
129-00-0	**Pyrene**	**220**	**18,000**
56-55-3	**Benzo(a)anthracene**	**220**	**13,000**
218-01-9	**Chrysene**	**220**	**15,000**
205-99-2	**Benzo(b)fluoranthene**	**220**	**16,000**
207-08-9	**Benzo(k)fluoranthene**	**220**	**13,000**
50-32-8	**Benzo(a)pyrene**	**220**	**17,000**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**220**	**10,000**
53-70-3	**Dibenz(a,h)anthracene**	**220**	**3,800**
191-24-2	**Benzo(g,h,i)perylene**	**220**	**12,000**
198-55-0	**Perylene**	**220**	**4,700**
92-52-4	Biphenyl	220	< 220 U
581-42-0	2,6-Dimethylnaphthalene	220	< 220 U
832-69-9	**1-Methylphenanthrene**	**220**	**580**
192-97-2	**Benzo(e)pyrene**	**220**	**9,800**
2245-38-7	2,3,5-Trimethylnaphthalene	220	< 220 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	68.3%
d14-Dibenzo(a,h)anthracen	85.3%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
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Sample ID: T4-S3-02-E
SAMPLE

Lab Sample ID: JQ35C
LIMS ID: 06-12958
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/07/06 13:19
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 2.44 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 39.1%
pH: 6.8

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**200**	**530**
91-57-6	**2-Methylnaphthalene**	**200**	**220**
90-12-0	1-Methylnaphthalene	200	< 200 U
208-96-8	Acenaphthylene	200	< 200 U
83-32-9	**Acenaphthene**	**200**	**2,400**
86-73-7	**Fluorene**	**200**	**1,000**
85-01-8	**Phenanthrene**	**200**	**8,300**
120-12-7	**Anthracene**	**200**	**1,900**
206-44-0	**Fluoranthene**	**200**	**19,000**
129-00-0	**Pyrene**	**200**	**16,000**
56-55-3	**Benzo(a)anthracene**	**200**	**12,000**
218-01-9	**Chrysene**	**200**	**14,000**
205-99-2	**Benzo(b)fluoranthene**	**200**	**15,000**
207-08-9	**Benzo(k)fluoranthene**	**200**	**12,000**
50-32-8	**Benzo(a)pyrene**	**200**	**15,000**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**200**	**9,300**
53-70-3	**Dibenz(a,h)anthracene**	**200**	**3,100**
191-24-2	**Benzo(g,h,i)perylene**	**200**	**11,000**
198-55-0	**Perylene**	**200**	**4,200**
92-52-4	Biphenyl	200	< 200 U
581-42-0	2,6-Dimethylnaphthalene	200	< 200 U
832-69-9	**1-Methylphenanthrene**	**200**	**510**
192-97-2	**Benzo(e)pyrene**	**200**	**9,000**
2245-38-7	2,3,5-Trimethylnaphthalene	200	< 200 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.7%
d14-Dibenzo(a,h)anthracen	95.3%

8/9/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: T4-S3-02-F
SAMPLE

Lab Sample ID: JQ35D
LIMS ID: 06-12959
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/07/06 13:44
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 1.95 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 44.9%
pH: 6.4

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	260	< 260 U
91-57-6	2-Methylnaphthalene	260	< 260 U
90-12-0	1-Methylnaphthalene	260	< 260 U
208-96-8	Acenaphthylene	260	< 260 U
83-32-9	**Acenaphthene**	**260**	**720**
86-73-7	**Fluorene**	**260**	**410**
85-01-8	**Phenanthrene**	**260**	**3,000**
120-12-7	**Anthracene**	**260**	**620**
206-44-0	**Fluoranthene**	**260**	**6,600**
129-00-0	**Pyrene**	**260**	**6,200**
56-55-3	**Benzo(a)anthracene**	**260**	**3,700**
218-01-9	**Chrysene**	**260**	**4,700**
205-99-2	**Benzo(b)fluoranthene**	**260**	**4,900**
207-08-9	**Benzo(k)fluoranthene**	**260**	**4,200**
50-32-8	**Benzo(a)pyrene**	**260**	**5,100**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**260**	**3,200**
53-70-3	**Dibenz(a,h)anthracene**	**260**	**1,200**
191-24-2	**Benzo(g,h,i)perylene**	**260**	**3,700**
198-55-0	**Perylene**	**260**	**1,600**
92-52-4	Biphenyl	260	< 260 U
581-42-0	2,6-Dimethylnaphthalene	260	< 260 U
832-69-9	**1-Methylphenanthrene**	**260**	**330**
192-97-2	**Benzo(e)pyrene**	**260**	**3,000**
2245-38-7	2,3,5-Trimethylnaphthalene	260	< 260 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	65.0%
d14-Dibenzo(a,h)anthracen	76.0%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-S3-03-B
SAMPLE

Lab Sample ID: JQ35E
LIMS ID: 06-12960
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/07/06 14:09
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 2.53 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 44.2%
pH: 6.8

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**200**	**240**
91-57-6	2-Methylnaphthalene	200	< 200 U
90-12-0	1-Methylnaphthalene	200	< 200 U
208-96-8	Acenaphthylene	200	< 200 U
83-32-9	**Acenaphthene**	**200**	**870**
86-73-7	**Fluorene**	**200**	**670**
85-01-8	**Phenanthrene**	**200**	**4,100**
120-12-7	**Anthracene**	**200**	**630**
206-44-0	**Fluoranthene**	**200**	**9,000**
129-00-0	**Pyrene**	**200**	**7,600**
56-55-3	**Benzo(a)anthracene**	**200**	**4,600**
218-01-9	**Chrysene**	**200**	**6,300**
205-99-2	**Benzo(b)fluoranthene**	**200**	**6,300**
207-08-9	**Benzo(k)fluoranthene**	**200**	**5,100**
50-32-8	**Benzo(a)pyrene**	**200**	**5,900**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**200**	**3,600**
53-70-3	**Dibenz(a,h)anthracene**	**200**	**1,300**
191-24-2	**Benzo(g,h,i)perylene**	**200**	**4,300**
198-55-0	**Perylene**	**200**	**1,900**
92-52-4	Biphenyl	200	< 200 U
581-42-0	2,6-Dimethylnaphthalene	200	< 200 U
832-69-9	**1-Methylphenanthrene**	**200**	**320**
192-97-2	**Benzo(e)pyrene**	**200**	**3,800**
2245-38-7	2,3,5-Trimethylnaphthalene	200	< 200 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	68.3%
d14-Dibenzo(a,h)anthracen	77.7%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
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Sample ID: T4-S3-03-C
SAMPLE

Lab Sample ID: JQ35F
LIMS ID: 06-12961
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/07/06 14:34
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 40.6%
pH: 6.6

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**50**	**69**
91-57-6	2-Methylnaphthalene	50	< 50 U
90-12-0	1-Methylnaphthalene	50	< 50 U
208-96-8	Acenaphthylene	50	< 50 U
83-32-9	**Acenaphthene**	**50**	**170**
86-73-7	**Fluorene**	**50**	**120**
85-01-8	**Phenanthrene**	**50**	**610**
120-12-7	**Anthracene**	**50**	**110**
206-44-0	**Fluoranthene**	**50**	**1,300**
129-00-0	**Pyrene**	**50**	**1,300**
56-55-3	**Benzo(a)anthracene**	**50**	**570**
218-01-9	**Chrysene**	**50**	**830**
205-99-2	**Benzo(b)fluoranthene**	**50**	**730**
207-08-9	**Benzo(k)fluoranthene**	**50**	**690**
50-32-8	**Benzo(a)pyrene**	**50**	**790**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**50**	**490**
53-70-3	**Dibenz(a,h)anthracene**	**50**	**150**
191-24-2	**Benzo(g,h,i)perylene**	**50**	**640**
198-55-0	**Perylene**	**50**	**400**
92-52-4	Biphenyl	50	< 50 U
581-42-0	2,6-Dimethylnaphthalene	50	< 50 U
832-69-9	1-Methylphenanthrene	50	< 50 U
192-97-2	**Benzo(e)pyrene**	**50**	**510**
2245-38-7	**2,3,5-Trimethylnaphthalene**	**50**	**54**

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	69.3%
d14-Dibenzo(a,h)anthracen	66.7%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
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Sample ID: T4-S3-03-D
SAMPLE

Lab Sample ID: JQ35G
LIMS ID: 06-12962
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/07/06 14:59
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 32.8%
pH: 6.8

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**50**	**50**
91-57-6	2-Methylnaphthalene	50	< 50 U
90-12-0	1-Methylnaphthalene	50	< 50 U
208-96-8	Acenaphthylene	50	< 50 U
83-32-9	**Acenaphthene**	**50**	**140**
86-73-7	**Fluorene**	**50**	**99**
85-01-8	**Phenanthrene**	**50**	**620**
120-12-7	**Anthracene**	**50**	**94**
206-44-0	**Fluoranthene**	**50**	**1,000**
129-00-0	**Pyrene**	**50**	**1,200**
56-55-3	**Benzo(a)anthracene**	**50**	**420**
218-01-9	**Chrysene**	**50**	**600**
205-99-2	**Benzo(b)fluoranthene**	**50**	**480**
207-08-9	**Benzo(k)fluoranthene**	**50**	**420**
50-32-8	**Benzo(a)pyrene**	**50**	**520**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**50**	**310**
53-70-3	**Dibenz(a,h)anthracene**	**50**	**99**
191-24-2	**Benzo(g,h,i)perylene**	**50**	**390**
198-55-0	**Perylene**	**50**	**280**
92-52-4	Biphenyl	50	< 50 U
581-42-0	**2,6-Dimethylnaphthalene**	**50**	**64**
832-69-9	1-Methylphenanthrene	50	< 50 U
192-97-2	**Benzo(e)pyrene**	**50**	**320**
2245-38-7	**2,3,5-Trimethylnaphthalene**	**50**	**110**

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	55.3%
d14-Dibenzo(a,h)anthracen	54.0%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-S3-05-E
SAMPLE

Lab Sample ID: JQ35H
LIMS ID: 06-12963
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/08/06 10:42
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 47.7%
pH: 6.4

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**98**	**150**
91-57-6	2-Methylnaphthalene	98	< 98 U
90-12-0	1-Methylnaphthalene	98	< 98 U
208-96-8	Acenaphthylene	98	< 98 U
83-32-9	**Acenaphthene**	**98**	**710**
86-73-7	**Fluorene**	**98**	**340**
85-01-8	**Phenanthrene**	**98**	**2,900**
120-12-7	**Anthracene**	**98**	**650**
206-44-0	**Fluoranthene**	**98**	**6,400**
129-00-0	**Pyrene**	**98**	**6,200**
56-55-3	**Benzo(a)anthracene**	**98**	**3,800**
218-01-9	**Chrysene**	**98**	**4,500**
205-99-2	**Benzo(b)fluoranthene**	**98**	**5,000**
207-08-9	**Benzo(k)fluoranthene**	**98**	**3,900**
50-32-8	**Benzo(a)pyrene**	**98**	**5,200**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**98**	**3,200**
53-70-3	**Dibenz(a,h)anthracene**	**98**	**1,100**
191-24-2	**Benzo(g,h,i)perylene**	**98**	**3,800**
198-55-0	**Perylene**	**98**	**1,500**
92-52-4	Biphenyl	98	< 98 U
581-42-0	2,6-Dimethylnaphthalene	98	< 98 U
832-69-9	**1-Methylphenanthrene**	**98**	**220**
192-97-2	**Benzo(e)pyrene**	**98**	**3,000**
2245-38-7	2,3,5-Trimethylnaphthalene	98	< 98 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	70.7%
d14-Dibenzo(a,h)anthracen	74.7%

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ANALYTICAL RESOURCES INCORPORATED

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Sample ID: T4-S3-05-F
SAMPLE

Lab Sample ID: JQ35I
LIMS ID: 06-12964
Matrix: Sediment
Data Release Authorized:
Reported: 08/11/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/09/06
Date Analyzed: 08/10/06 21:14
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 2.83 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 43.7%
pH: 6.8

CAS Number	Analyte	RL	Result	
91-20-3	**Naphthalene**	180	390	
91-57-6	**2-Methylnaphthalene**	180	210	
90-12-0	**1-Methylnaphthalene**	180	88	J
208-96-8	Acenaphthylene	180	< 180	U
83-32-9	**Acenaphthene**	180	1,900	
86-73-7	**Fluorene**	180	810	
85-01-8	**Phenanthrene**	180	7,500	
120-12-7	**Anthracene**	180	1,700	
206-44-0	**Fluoranthene**	180	18,000	
129-00-0	**Pyrene**	180	14,000	
56-55-3	**Benzo(a)anthracene**	180	11,000	
218-01-9	**Chrysene**	180	13,000	
205-99-2	**Benzo(b)fluoranthene**	180	14,000	
207-08-9	**Benzo(k)fluoranthene**	180	14,000	
50-32-8	**Benzo(a)pyrene**	180	15,000	
193-39-5	**Indeno(1,2,3-cd)pyrene**	180	6,600	
53-70-3	**Dibenz(a,h)anthracene**	180	2,600	
191-24-2	**Benzo(g,h,i)perylene**	180	6,600	
198-55-0	**Perylene**	180	4,600	
92-52-4	Biphenyl	180	< 180	U
581-42-0	2,6-Dimethylnaphthalene	180	< 180	U
832-69-9	**1-Methylphenanthrene**	180	420	
192-97-2	**Benzo(e)pyrene**	180	9,200	
2245-38-7	2,3,5-Trimethylnaphthalene	180	< 180	U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	77.7%
d14-Dibenzo(a,h)anthracen	86.7%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
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Sample ID: T4-S3-05-G
SAMPLE

Lab Sample ID: JQ35J
LIMS ID: 06-12965
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/08/06 11:07
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 2.31 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 42.9%
pH: 6.5

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	430	650
91-57-6	2-Methylnaphthalene	430	< 430 U
90-12-0	1-Methylnaphthalene	430	< 430 U
208-96-8	Acenaphthylene	430	< 430 U
83-32-9	**Acenaphthene**	430	3,900
86-73-7	**Fluorene**	430	1,700
85-01-8	**Phenanthrene**	430	14,000
120-12-7	**Anthracene**	430	3,300
206-44-0	**Fluoranthene**	430	33,000
129-00-0	**Pyrene**	430	30,000
56-55-3	**Benzo(a)anthracene**	430	21,000
218-01-9	**Chrysene**	430	25,000
205-99-2	**Benzo(b)fluoranthene**	430	24,000
207-08-9	**Benzo(k)fluoranthene**	430	26,000
50-32-8	**Benzo(a)pyrene**	430	28,000
193-39-5	**Indeno(1,2,3-cd)pyrene**	430	17,000
53-70-3	**Dibenz(a,h)anthracene**	430	6,500
191-24-2	**Benzo(g,h,i)perylene**	430	20,000
198-55-0	**Perylene**	430	8,100
92-52-4	Biphenyl	430	< 430 U
581-42-0	2,6-Dimethylnaphthalene	430	< 430 U
832-69-9	**1-Methylphenanthrene**	430	1,200
192-97-2	**Benzo(e)pyrene**	430	17,000
2245-38-7	2,3,5-Trimethylnaphthalene	430	< 430 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	102%
d14-Dibenzo(a,h)anthracen	99.3%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-S3-05-H
SAMPLE

Lab Sample ID: JQ35K
LIMS ID: 06-12966
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/07/06 18:42
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 2.59 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 42.5%
pH: 6.8

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**190**	**310**
91-57-6	2-Methylnaphthalene	190	< 190 U
90-12-0	1-Methylnaphthalene	190	< 190 U
208-96-8	Acenaphthylene	190	< 190 U
83-32-9	**Acenaphthene**	**190**	**1,700**
86-73-7	**Fluorene**	**190**	**730**
85-01-8	**Phenanthrene**	**190**	**6,500**
120-12-7	**Anthracene**	**190**	**1,500**
206-44-0	**Fluoranthene**	**190**	**15,000**
129-00-0	**Pyrene**	**190**	**14,000**
56-55-3	**Benzo(a)anthracene**	**190**	**9,500**
218-01-9	**Chrysene**	**190**	**11,000**
205-99-2	**Benzo(b)fluoranthene**	**190**	**11,000**
207-08-9	**Benzo(k)fluoranthene**	**190**	**12,000**
50-32-8	**Benzo(a)pyrene**	**190**	**13,000**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**190**	**6,400**
53-70-3	**Dibenz(a,h)anthracene**	**190**	**2,600**
191-24-2	**Benzo(g,h,i)perylene**	**190**	**6,700**
198-55-0	**Perylene**	**190**	**3,600**
92-52-4	Biphenyl	190	< 190 U
581-42-0	2,6-Dimethylnaphthalene	190	< 190 U
832-69-9	**1-Methylphenanthrene**	**190**	**420**
192-97-2	**Benzo(e)pyrene**	**190**	**7,500**
2245-38-7	2,3,5-Trimethylnaphthalene	190	< 190 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	65.3%
d14-Dibenzo(a,h)anthracen	72.7%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
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Sample ID: T4-S3-05-J
SAMPLE

Lab Sample ID: JQ35L
LIMS ID: 06-12967
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/08/06 12:21
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 2.00
Percent Moisture: 20.2%
pH: 6.0

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**9.6**	**14**
91-57-6	2-Methylnaphthalene	9.6	< 9.6 U
90-12-0	1-Methylnaphthalene	9.6	< 9.6 U
208-96-8	Acenaphthylene	9.6	< 9.6 U
83-32-9	**Acenaphthene**	**9.6**	**62**
86-73-7	**Fluorene**	**9.6**	**26**
85-01-8	**Phenanthrene**	**9.6**	**230**
120-12-7	Anthracene	9.6	57
206-44-0	**Fluoranthene**	**9.6**	**510**
129-00-0	**Pyrene**	**9.6**	**490**
56-55-3	**Benzo(a)anthracene**	**9.6**	**330**
218-01-9	**Chrysene**	**9.6**	**390**
205-99-2	**Benzo(b)fluoranthene**	**9.6**	**400**
207-08-9	**Benzo(k)fluoranthene**	**9.6**	**350**
50-32-8	**Benzo(a)pyrene**	**9.6**	**430**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**9.6**	**270**
53-70-3	**Dibenz(a,h)anthracene**	**9.6**	**100**
191-24-2	**Benzo(g,h,i)perylene**	**9.6**	**310**
198-55-0	**Perylene**	**9.6**	**120**
92-52-4	Biphenyl	9.6	< 9.6 U
581-42-0	2,6-Dimethylnaphthalene	9.6	< 9.6 U
832-69-9	**1-Methylphenanthrene**	**9.6**	**19**
192-97-2	**Benzo(e)pyrene**	**9.6**	**250**
2245-38-7	2,3,5-Trimethylnaphthalene	9.6	< 9.6 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	58.4%
d14-Dibenzo(a,h)anthracen	67.3%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-S3-06-A
SAMPLE

Lab Sample ID: JQ35M
LIMS ID: 06-12968
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/07/06 19:31
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 48.0%
pH: 7.5

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**49**	**83**
91-57-6	2-Methylnaphthalene	49	< 49 U
90-12-0	1-Methylnaphthalene	49	< 49 U
208-96-8	Acenaphthylene	49	< 49 U
83-32-9	**Acenaphthene**	**49**	**350**
86-73-7	**Fluorene**	**49**	**200**
85-01-8	**Phenanthrene**	**49**	**1,600**
120-12-7	**Anthracene**	**49**	**350**
206-44-0	**Fluoranthene**	**49**	**3,800**
129-00-0	**Pyrene**	**49**	**3,200**
56-55-3	**Benzo(a)anthracene**	**49**	**2,000**
218-01-9	**Chrysene**	**49**	**2,600**
205-99-2	**Benzo(b)fluoranthene**	**49**	**2,600**
207-08-9	**Benzo(k)fluoranthene**	**49**	**2,400**
50-32-8	**Benzo(a)pyrene**	**49**	**2,700**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**49**	**1,300**
53-70-3	**Dibenz(a,h)anthracene**	**49**	**520**
191-24-2	**Benzo(g,h,i)perylene**	**49**	**1,400**
198-55-0	**Perylene**	**49**	**880**
92-52-4	Biphenyl	49	< 49 U
581-42-0	2,6-Dimethylnaphthalene	49	< 49 U
832-69-9	1-Methylphenanthrene	49	< 49 U
192-97-2	**Benzo(e)pyrene**	**49**	**1,600**
2245-38-7	2,3,5-Trimethylnaphthalene	49	< 49 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	66.7%
d14-Dibenzo(a,h)anthracen	75.3%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: T4-S3-06-B
SAMPLE

Lab Sample ID: JQ35N
LIMS ID: 06-12969
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/07/06 19:56
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 23.2%
pH: 6.5

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	4.8	< 4.8 U
91-57-6	2-Methylnaphthalene	4.8	< 4.8 U
90-12-0	1-Methylnaphthalene	4.8	< 4.8 U
208-96-8	Acenaphthylene	4.8	< 4.8 U
83-32-9	Acenaphthene	4.8	< 4.8 U
86-73-7	Fluorene	4.8	< 4.8 U
85-01-8	**Phenanthrene**	**4.8**	**16**
120-12-7	Anthracene	4.8	< 4.8 U
206-44-0	**Fluoranthene**	**4.8**	**40**
129-00-0	**Pyrene**	**4.8**	**38**
56-55-3	**Benzo(a)anthracene**	**4.8**	**22**
218-01-9	**Chrysene**	**4.8**	**29**
205-99-2	**Benzo(b)fluoranthene**	**4.8**	**31**
207-08-9	**Benzo(k)fluoranthene**	**4.8**	**26**
50-32-8	**Benzo(a)pyrene**	**4.8**	**27**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**4.8**	**16**
53-70-3	**Dibenz(a,h)anthracene**	**4.8**	**5.8**
191-24-2	**Benzo(g,h,i)perylene**	**4.8**	**16**
198-55-0	**Perylene**	**4.8**	**11**
92-52-4	Biphenyl	4.8	< 4.8 U
581-42-0	2,6-Dimethylnaphthalene	4.8	< 4.8 U
832-69-9	1-Methylphenanthrene	4.8	< 4.8 U
192-97-2	**Benzo(e)pyrene**	**4.8**	**18**
2245-38-7	2,3,5-Trimethylnaphthalene	4.8	< 4.8 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	57.3%
d14-Dibenzo(a,h)anthracen	65.7%

0031 9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-S3-08-B
SAMPLE

Lab Sample ID: JQ350
LIMS ID: 06-12970
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/07/06 20:21
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 29.9%
pH: 6.9

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**49**	**93**
91-57-6	**2-Methylnaphthalene**	**49**	**49**
90-12-0	1-Methylnaphthalene	49	< 49 U
208-96-8	Acenaphthylene	49	< 49 U
83-32-9	**Acenaphthene**	**49**	**550**
86-73-7	**Fluorene**	**49**	**260**
85-01-8	**Phenanthrene**	**49**	**2,100**
120-12-7	**Anthracene**	**49**	**500**
206-44-0	**Fluoranthene**	**49**	**4,900**
129-00-0	**Pyrene**	**49**	**4,500**
56-55-3	**Benzo(a)anthracene**	**49**	**3,100**
218-01-9	**Chrysene**	**49**	**3,800**
205-99-2	**Benzo(b)fluoranthene**	**49**	**4,000**
207-08-9	**Benzo(k)fluoranthene**	**49**	**4,100**
50-32-8	**Benzo(a)pyrene**	**49**	**4,400**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**49**	**2,000**
53-70-3	**Dibenz(a,h)anthracene**	**49**	**700**
191-24-2	**Benzo(g,h,i)perylene**	**49**	**2,000**
198-55-0	**Perylene**	**49**	**1,300**
92-52-4	Biphenyl	49	< 49 U
581-42-0	2,6-Dimethylnaphthalene	49	< 49 U
832-69-9	**1-Methylphenanthrene**	**49**	**140**
192-97-2	**Benzo(e)pyrene**	**49**	**2,600**
2245-38-7	2,3,5-Trimethylnaphthalene	49	< 49 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	69.0%
d14-Dibenzo(a,h)anthracen	78.7%

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-S3-08-C
SAMPLE

Lab Sample ID: JQ35P
LIMS ID: 06-12971
Matrix: Sediment
Data Release Authorized: VTS
Reported: 08/09/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/07/06 20:46
Instrument/Analyst: NT1/YZ
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.4 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 16.7%
pH: 6.0

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**4.8**	**4.8**
91-57-6	2-Methylnaphthalene	4.8	< 4.8 U
90-12-0	1-Methylnaphthalene	4.8	< 4.8 U
208-96-8	Acenaphthylene	4.8	< 4.8 U
83-32-9	**Acenaphthene**	**4.8**	**26**
86-73-7	**Fluorene**	**4.8**	**14**
85-01-8	**Phenanthrene**	**4.8**	**120**
120-12-7	**Anthracene**	**4.8**	**26**
206-44-0	**Fluoranthene**	**4.8**	**280**
129-00-0	**Pyrene**	**4.8**	**250**
56-55-3	**Benzo(a)anthracene**	**4.8**	**170**
218-01-9	**Chrysene**	**4.8**	**210**
205-99-2	**Benzo(b)fluoranthene**	**4.8**	**240**
207-08-9	**Benzo(k)fluoranthene**	**4.8**	**180 J**
50-32-8	**Benzo(a)pyrene**	**4.8**	**230**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**4.8**	**110**
53-70-3	**Dibenz(a,h)anthracene**	**4.8**	**40**
191-24-2	**Benzo(g,h,i)perylene**	**4.8**	**120**
198-55-0	**Perylene**	**4.8**	**71**
92-52-4	Biphenyl	4.8	< 4.8 U
581-42-0	2,6-Dimethylnaphthalene	4.8	< 4.8 U
832-69-9	**1-Methylphenanthrene**	**4.8**	**7.7**
192-97-2	**Benzo(e)pyrene**	**4.8**	**140**
2245-38-7	2,3,5-Trimethylnaphthalene	4.8	< 4.8 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	50.0%
d14-Dibenzo(a,h)anthracen	67.0%

9/28/06

LDC #: 15488C2b **VALIDATION COMPLETENESS WORKSHEET** Date: 9/21/06

SDG #: JQ35 Level III Page: 1 of 1

Laboratory: Analytical Resources, Inc. Reviewer: 9

2nd Reviewer: 9

METHOD: GC/MS ~~Semivolatiles~~ PAHs (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18 - ~~29~~ 30/06
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	no sPCC.
IV.	Continuing calibration	A	↓
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D=4+4-DUP. 4+4-DUPDL. 6+6-DUP. 16+16-DUP (NQ5)
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

All Soils

1	T4-S3-02-C	11	T4-S3-05-H	21	MB-080106	31	
2	T4-S3-02-D	12	T4-S3-05-J	22	MB-080906	32	
3	T4-S3-02-E	13	T4-S3-06-A	23		33	
4	T4-S3-02-F	14	T4-S3-06-B	24		34	
5	T4-S3-03-B	15	T4-S3-08-B	25		35	
6	T4-S3-03-C	16	T4-S3-08-C	26		36	
7	T4-S3-03-D	17	T4-S3-08-CMS	27		37	
8	T4-S3-05-E	18	T4-S3-08-CMSD	28		38	
9	T4-S3-05-F	19		29		39	
10	T4-S3-05-G	20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol**	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol**	III. Benzo(a)pyrene**
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol**	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene**	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol*	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene**	T. 4-Chloroaniline	II. 4-Nitrophenol*	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene**	JJ. Dibenzofuran	YY. Fluoranthene**	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol**	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene*	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine*	Y. 2,4,6-Trichlorophenol**	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. perylene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)**	FFF. Di-n-octylphthalate**	UUU. Benzo(e)pyrene
N. 2-Nitrophenol**	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV. 1-Methylnaphthalene
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW. 2,6-Dimethylnaphthalene

XXX. 1-Methylphenanthrene

YYY. 2,3,5-Trimethylnaphthalene

222. Biphenyl

LDC #: 15488C2b
SDG #: J8235

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: Q
2nd Reviewer: A

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N (N/A) If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A) If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		10	MNP	102 (32-97)	No qual (20x)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
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				( )	
				( )	
				( )	
				( )	
				( )	

* QC limits are advisory	QC Limits (Soil)	QC Limits (Water)
S1 (NBZ) = Nitrobenzene-d5	23-120	35-114
S2 (FBP) = 2-Fluorobiphenyl	30-115	43-116
S3 (TPH) = Terphenyl-d14	18-137	33-141
S4 (PHL) = Phenol-d5	24-113	10-94
S5 (2FP) = 2-Fluorophenol	25-121	21-100
S6 (TBP) = 2,4,6-Tribromophenol	19-122	10-123
S7 (2CP) = 2-Chlorophenol-d4	20-130*	33-110*
S8 (DCB) = 1,2-Dichlorobenzene-d4	20-130*	16-110*

MNP = ~~d10~~ 2-Methylnaphthalene-d10

LDC #: 15488C2b
SDG #: VQ35

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: 9
2nd Reviewer: 8

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		17/18	HHH	122 (26-110)	~~###~~ (26-110)	( )	16	↓ dets/ND
				( )	117 ( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)		Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
A.	Phenol	26-90%	≤ 35%	12-110%	≤ 42%	GG.	Acenaphthene	31-137%	≤ 19%	46-118%	≤ 31%
C.	2-Chlorophenol	25-102%	≤ 50%	27-123%	≤ 40%	II.	4-Nitrophenol	11-114%	≤ 50%	10-80%	≤ 50%
E.	1,4-Dichlorobenzene	28-104%	≤ 27%	36-97%	≤ 28%	KK.	2,4-Dinitrotoluene	28-89%	≤ 47%	24-96%	≤ 38%
J.	N-Nitroso-di-n-propylamine	41-126%	≤ 38%	41-116%	≤ 38%	TT.	Pentachlorophenol	17-109%	≤ 47%	9-103%	≤ 50%
R.	1,2,4-Trichlorobenzene	38-107%	≤ 23%	39-98%	≤ 28%	ZZ.	Pyrene	35-142%	≤ 36%	26-127%	≤ 31%
V.	4-Chloro-3-methylphenol	26-103%	≤ 33%	23-97%	≤ 42%						

LDC#: 15488C2b
SDG#: JQ35

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: a
2nd Reviewer: [illegible]

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	≤ 75
	T4-S3-02-F-DUP	4		
S	260	260U	200	
W	160	260U	200	
VVV	80	260U	200	
DD	45	260U	200	
GG	1400	720	64	
NN	640	410	44	
UU	5200	3000	54	
VV	1200	620	64	
YY	11000	6600	50	
ZZ	10000	6200	47	
CCC	7100	3700	63	
DDD	8800	4700	61	
GGG	9700	4900	66	
HHH	7900	4200	61	
III	9800	5100	63	
JJJ	5400	3200	51	
KKK	1900	1200	45	
LLL	6100	3700	49	
TTT	3000	1600	61	
WWW	95	260U	200	
XXX	480	330	37	
UUU	5800	3000	64	
YYY	120	260U	200	

LDC#: 15488C2b
SDG#: JQ35

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: CL
2nd Reviewer: 9

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	≤ 75
	T4-S3-02-F-DUPDL	4		
S	250	260U	200	
W	150	260U	200	
GG	1300	720	57	
NN	620	410	41	
UU	4700	3000	44	
VV	1100	620	56	
YY	10000	6600	41	
ZZ	8900	6200	36	
CCC	6400	3700	53	
DDD	7800	4700	50	
GGG	8000	4900	48	
HHH	6700	4200	46	
III	8200	5100	47	
JJJ	5000	3200	44	
KKK	1800	1200	40	
LLL	5800	3700	44	
TTT	2500	1600	44	
XXX	380	330	14	
UUU	4900	3000	48	

Compound	Concentration (ug/Kg)		RPD	≤ 75
	T4-S3-03-C-DUP	6		
S	98	69	35	
W	49	50U	200	
VVV	24	50U	200	

LDC#: 15488C2b
SDG#: JQ35

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: CL
2nd Reviewer: 9

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	≤75
	T4-S3-03-C-DUP	6		
DD	44	50U	200	
GG	210	170	21	
NN	130	120	8	
UU	760	610	22	
VV	150	110	31	
YY	1600	1300	21	
ZZ	1600	1300	21	
CCC	710	570	22	
DDD	960	830	15	
GGG	880	730	19	
HHH	740	690	7	
III	910	790	14	
JJJ	550	490	12	
KKK	170	150	13	
LLL	690	640	8	
TTT	440	400	10	
UUU	560	510	9	
YYY	64	54	17	

Compound	Concentration (ug/Kg)		RPD	≤75
	T4-S3-08-C-DUP	16		
S	49U	4.8	200	
GG	88	26	109	
NN	59	14	123	
UU	560	120	129	

LDC#: 15488C2b
SDG#: JQ35

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: 9
2nd Reviewer: 9

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	≤75
	T4-S3-08-C-DUP	16		
VV	93	26	113	
YY	1100	280	119	
ZZ	900	250	113	
CCC	540	170	104	
DDD	780	210	115	
GGG	830	240	110	
HHH	620	180	110	
III	660	230	97	
JJJ	440	110	120	
KKK	150	40	116	
LLL	500	120	123	
TTT	280	71	119	
XXX	49U	7.7	200	
UUU	490	140	111	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ36

Sample Identification

T4-S3-07-B
T4-S3-07-C
T4-S3-07-D
T4-S3-07-E
T4-S3-04-A
T4-S3-04-ADL
T4-S3-04-B
T4-S3-04-BDL
T4-S3-04-C
T4-S3-04-CDL
T4-S3-04-D
T4-WB-01
T4-WB-01DL
T4-WB-02
T4-WB-03
T4-WB-04
T4-S3-07-EMS
T4-S3-07-EMSD

Introduction

This data review covers 18 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per a modification of EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Polynuclear Aromatic Hydrocarbons.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all target compounds were within validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% .

All of the continuing calibration RRF values were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polynuclear aromatic hydrocarbon contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
T4-S3-07-EMS/MSD (T4-S3-07-E)	Phenanthrene Chrysene	- -	- 134 (35-111)	32.2 (≤30) 30.2 (≤30)	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
T4-S3-07-EMS/MSD (T4-S3-07-E)	Benzo(k)fluoranthene	-	123 (26-110)	-	J (all detects)	A

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
T4-S3-04-A T4-S3-04-B	Fluoranthene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	A
T4-S3-04-C T4-WB-01	Fluoranthene Pyrene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects)	A

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG JQ36

SDG	Sample	Compound	Flag	A or P	Reason
JQ36	T4-WB-02	Phenanthrene	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicates (RPD)
JQ36	T4-WB-02	Chrysene	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicates (%R)(RPD)
JQ36	T4-WB-02	Benzo(k)fluoranthene	J (all detects)	A	Matrix spike/Matrix spike duplicates (%R)
JQ36	T4-S3-04-A T4-S3-04-B	Fluoranthene	J (all detects)	A	Compound quantitation and CRQLs
JQ36	T4-S3-04-C T4-WB-01	Fluoranthene Pyrene	J (all detects) J (all detects)	A	Compound quantitation and CRQLs

Terminal 4 Early Action
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG JQ36

No Sample Data Qualified in this SDG

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Sample ID: T4-S3-07-B
SAMPLE

Lab Sample ID: JQ36A
LIMS ID: 06-12972
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/14/06 11:56
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 46.7%
pH: 6.9

CAS Number	Analyte	RL	Result	
91-20-3	Naphthalene	50	120	
91-57-6	2-Methylnaphthalene	50	45	J
90-12-0	1-Methylnaphthalene	50	30	J
208-96-8	Acenaphthylene	50	79	
83-32-9	Acenaphthene	50	300	
86-73-7	Fluorene	50	200	
85-01-8	Phenanthrene	50	1,800	
120-12-7	Anthracene	50	410	
206-44-0	Fluoranthene	50	4,500	
129-00-0	Pyrene	50	4,300	
56-55-3	Benzo(a)anthracene	50	2,200	
218-01-9	Chrysene	50	2,800	
205-99-2	Benzo(b)fluoranthene	50	2,800	
207-08-9	Benzo(k)fluoranthene	50	2,600	
50-32-8	Benzo(a)pyrene	50	3,100	
193-39-5	Indeno(1,2,3-cd)pyrene	50	2,000	
53-70-3	Dibenz(a,h)anthracene	50	620	
191-24-2	Benzo(g,h,i)perylene	50	2,400	
198-55-0	Perylene	50	1,000	
92-52-4	Biphenyl	50	< 50	U
581-42-0	2,6-Dimethylnaphthalene	50	< 50	U
832-69-9	1-Methylphenanthrene	50	140	
192-97-2	Benzo(e)pyrene	50	1,900	
2245-38-7	2,3,5-Trimethylnaphthalene	50	64	

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	70.3%
d14-Dibenzo(a,h)anthracen	94.3%

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Sample ID: T4-S3-07-C
SAMPLE

Lab Sample ID: JQ36B
LIMS ID: 06-12973
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/09/06 10:03
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 45.2%
pH: 6.5

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**49**	**54**
91-57-6	2-Methylnaphthalene	49	< 49 U
90-12-0	1-Methylnaphthalene	49	< 49 U
208-96-8	Acenaphthylene	49	< 49 U
83-32-9	**Acenaphthene**	**49**	**200**
86-73-7	**Fluorene**	**49**	**110**
85-01-8	**Phenanthrene**	**49**	**860**
120-12-7	**Anthracene**	**49**	**190**
206-44-0	**Fluoranthene**	**49**	**1,800**
129-00-0	**Pyrene**	**49**	**1,700**
56-55-3	**Benzo(a)anthracene**	**49**	**1,200**
218-01-9	**Chrysene**	**49**	**1,400**
205-99-2	**Benzo(b)fluoranthene**	**49**	**1,400**
207-08-9	**Benzo(k)fluoranthene**	**49**	**1,300**
50-32-8	**Benzo(a)pyrene**	**49**	**1,500**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**49**	**990**
53-70-3	**Dibenz(a,h)anthracene**	**49**	**370**
191-24-2	**Benzo(g,h,i)perylene**	**49**	**1,200**
198-55-0	**Perylene**	**49**	**640**
92-52-4	Biphenyl	49	< 49 U
581-42-0	2,6-Dimethylnaphthalene	49	< 49 U
832-69-9	**1-Methylphenanthrene**	**49**	**59**
192-97-2	**Benzo(e)pyrene**	**49**	**940**
2245-38-7	2,3,5-Trimethylnaphthalene	49	< 49 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	54.7%
d14-Dibenzo(a,h)anthracen	68.3%

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Sample ID: T4-S3-07-D
SAMPLE

Lab Sample ID: JQ36C
LIMS ID: 06-12974
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/09/06 10:28
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 34.0%
pH: 6.8

CAS Number	Analyte	RL	Result	
91-20-3	Naphthalene	48	110	
91-57-6	2-Methylnaphthalene	48	63	
90-12-0	1-Methylnaphthalene	48	34	J
208-96-8	Acenaphthylene	48	29	J
83-32-9	Acenaphthene	48	520	
86-73-7	Fluorene	48	250	
85-01-8	Phenanthrene	48	2,000	
120-12-7	Anthracene	48	430	
206-44-0	Fluoranthene	48	4,500	
129-00-0	Pyrene	48	3,800	
56-55-3	Benzo(a)anthracene	48	2,600	
218-01-9	Chrysene	48	3,200	
205-99-2	Benzo(b)fluoranthene	48	3,400	
207-08-9	Benzo(k)fluoranthene	48	2,800	
50-32-8	Benzo(a)pyrene	48	3,400	
193-39-5	Indeno(1,2,3-cd)pyrene	48	2,100	
53-70-3	Dibenz(a,h)anthracene	48	700	
191-24-2	Benzo(g,h,i)perylene	48	2,400	
198-55-0	Perylene	49	1,100	
92-52-4	Biphenyl	49	< 49	U
581-42-0	2,6-Dimethylnaphthalene	48	< 48	U
832-69-9	1-Methylphenanthrene	48	140	
192-97-2	Benzo(e)pyrene	48	2,100	
2245-38-7	2,3,5-Trimethylnaphthalene	48	< 48	U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	70.7%
d14-Dibenzo(a,h)anthracen	91.0%

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Sample ID: T4-S3-07-E
SAMPLE

Lab Sample ID: JQ36D
LIMS ID: 06-12975
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/09/06 11:28
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 17.6%
pH: 6.7

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	4.8	7.3
91-57-6	2-Methylnaphthalene	4.8	2.9 J
90-12-0	1-Methylnaphthalene	4.8	< 4.8 U
208-96-8	Acenaphthylene	4.8	2.9 J
83-32-9	Acenaphthene	4.8	21
86-73-7	Fluorene	4.8	13
85-01-8	Phenanthrene	4.8	90
120-12-7	Anthracene	4.8	26
206-44-0	Fluoranthene	4.8	250
129-00-0	Pyrene	4.8	250
56-55-3	Benzo(a)anthracene	4.8	140
218-01-9	Chrysene	4.8	170
205-99-2	Benzo(b)fluoranthene	4.8	160
207-08-9	Benzo(k)fluoranthene	4.8	160
50-32-8	Benzo(a)pyrene	4.8	190
193-39-5	Indeno(1,2,3-cd)pyrene	4.8	120
53-70-3	Dibenz(a,h)anthracene	4.8	39
191-24-2	Benzo(g,h,i)perylene	4.8	140
198-55-0	Perylene	4.9	64
92-52-4	Biphenyl	4.9	< 4.9 U
581-42-0	2,6-Dimethylnaphthalene	4.8	< 4.8 U
832-69-9	1-Methylphenanthrene	4.8	8.7
192-97-2	Benzo(e)pyrene	4.8	120
2245-38-7	2,3,5-Trimethylnaphthalene	4.8	< 4.8 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	61.0%
d14-Dibenzo(a,h)anthracen	71.7%

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Sample ID: T4-S3-04-A
SAMPLE

Lab Sample ID: JQ36E
LIMS ID: 06-12976
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/09/06 12:42
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 1.32 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 34.9%
pH: 7.2

CAS Number	Analyte	RL	Result	
91-20-3	**Naphthalene**	**380**	**720**	
91-57-6	**2-Methylnaphthalene**	**380**	**460**	
90-12-0	**1-Methylnaphthalene**	**380**	**230**	**J**
208-96-8	Acenaphthylene	380	< 380	U
83-32-9	**Acenaphthene**	**380**	**4,600**	
86-73-7	**Fluorene**	**380**	**1,900**	
85-01-8	**Phenanthrene**	**380**	**18,000**	
120-12-7	**Anthracene**	**380**	**4,000**	
206-44-0	**Fluoranthene**	**380**	**41,000**	**E** J
129-00-0	**Pyrene**	**380**	**35,000**	
56-55-3	**Benzo(a)anthracene**	**380**	**25,000**	
218-01-9	**Chrysene**	**380**	**31,000**	
205-99-2	**Benzo(b)fluoranthene**	**380**	**31,000**	
207-08-9	**Benzo(k)fluoranthene**	**380**	**27,000**	
50-32-8	**Benzo(a)pyrene**	**380**	**33,000**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**380**	**20,000**	
53-70-3	**Dibenz(a,h)anthracene**	**380**	**6,700**	
191-24-2	**Benzo(g,h,i)perylene**	**380**	**23,000**	
198-55-0	**Perylene**	**380**	**8,900**	
92-52-4	Biphenyl	380	< 380	U
581-42-0	2,6-Dimethylnaphthalene	380	< 380	U
832-69-9	**1-Methylphenanthrene**	**380**	**1,100**	
192-97-2	**Benzo(e)pyrene**	**380**	**19,000**	
2245-38-7	2,3,5-Trimethylnaphthalene	380	< 380	U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	74.3%
d14-Dibenzo(a,h)anthracen	102%

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Sample ID: T4-S3-04-A
DILUTION

Lab Sample ID: JQ36E
LIMS ID: 06-12976
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/10/06 17:06
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 1.32 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 34.9%
pH: 7.2

CAS Number	Analyte	RL	Result	
91-20-3	**Naphthalene**	**760**	**830**	
91-57-6	**2-Methylnaphthalene**	**760**	**530**	**J**
90-12-0	1-Methylnaphthalene	760	< 760	U
208-96-8	Acenaphthylene	760	< 760	U
83-32-9	**Acenaphthene**	**760**	**4,800**	
86-73-7	**Fluorene**	**760**	**2,300**	
85-01-8	**Phenanthrene**	**760**	**19,000**	
120-12-7	**Anthracene**	**760**	**4,200**	
206-44-0	**Fluoranthene**	**760**	**42,000**	
129-00-0	**Pyrene**	**760**	**36,000**	
56-55-3	**Benzo(a)anthracene**	**760**	**26,000**	
218-01-9	**Chrysene**	**760**	**32,000**	
205-99-2	**Benzo(b)fluoranthene**	**760**	**30,000**	
207-08-9	**Benzo(k)fluoranthene**	**760**	**28,000**	
50-32-8	**Benzo(a)pyrene**	**760**	**33,000**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**760**	**18,000**	
53-70-3	**Dibenz(a,h)anthracene**	**760**	**6,400**	
191-24-2	**Benzo(g,h,i)perylene**	**760**	**19,000**	
198-55-0	**Perylene**	**760**	**9,100**	
92-52-4	Biphenyl	760	< 760	U
581-42-0	2,6-Dimethylnaphthalene	760	< 760	U
832-69-9	**1-Methylphenanthrene**	**760**	**1,400**	
192-97-2	**Benzo(e)pyrene**	**760**	**19,000**	
2245-38-7	2,3,5-Trimethylnaphthalene	760	< 760	U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	73.3%
d14-Dibenzo(a,h)anthracen	68.0%

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Sample ID: T4-S3-04-B
SAMPLE

Lab Sample ID: JQ36F
LIMS ID: 06-12977
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/10/06 17:31
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 22.6%
pH: 6.4

CAS Number	Analyte	RL	Result	
91-20-3	Naphthalene	5.0	13	
91-57-6	2-Methylnaphthalene	5.0	5.9	
90-12-0	1-Methylnaphthalene	5.0	3.0	J
208-96-8	Acenaphthylene	5.0	3.0	J
83-32-9	Acenaphthene	5.0	48	
86-73-7	Fluorene	5.0	21	
85-01-8	Phenanthrene	5.0	200	
120-12-7	Anthracene	5.0	44	
206-44-0	Fluoranthene	5.0	500	E J
129-00-0	Pyrene	5.0	450	
56-55-3	Benzo(a)anthracene	5.0	300	
218-01-9	Chrysene	5.0	380	
205-99-2	Benzo(b)fluoranthene	5.0	380	
207-08-9	Benzo(k)fluoranthene	5.0	340	
50-32-8	Benzo(a)pyrene	5.0	400	
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	210	
53-70-3	Dibenz(a,h)anthracene	5.0	75	
191-24-2	Benzo(g,h,i)perylene	5.0	230	
198-55-0	Perylene	5.0	120	
92-52-4	Biphenyl	5.0	< 5.0	U
581-42-0	2,6-Dimethylnaphthalene	5.0	< 5.0	U
832-69-9	1-Methylphenanthrene	5.4	< 5.4	Y
192-97-2	Benzo(e)pyrene	5.0	240	
2245-38-7	2,3,5-Trimethylnaphthalene	5.0	< 5.0	U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	63.7%
d14-Dibenzo(a,h)anthracen	67.3%

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Sample ID: T4-S3-04-B
DILUTION

Lab Sample ID: JQ36F
LIMS ID: 06-12977
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/09/06 13:07
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 22.6%
pH: 6.4

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	50	< 50 U
91-57-6	2-Methylnaphthalene	50	< 50 U
90-12-0	1-Methylnaphthalene	50	< 50 U
208-96-8	Acenaphthylene	50	< 50 U
83-32-9	**Acenaphthene**	**50**	**45 J**
86-73-7	Fluorene	50	< 50 U
85-01-8	**Phenanthrene**	**50**	**220**
120-12-7	**Anthracene**	**50**	**54**
206-44-0	**Fluoranthene**	**50**	**500**
129-00-0	**Pyrene**	**50**	**490**
56-55-3	**Benzo(a)anthracene**	**50**	**310**
218-01-9	**Chrysene**	**50**	**380**
205-99-2	**Benzo(b)fluoranthene**	**50**	**430**
207-08-9	**Benzo(k)fluoranthene**	**50**	**310**
50-32-8	**Benzo(a)pyrene**	**50**	**420**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**50**	**270**
53-70-3	**Dibenz(a,h)anthracene**	**50**	**89**
191-24-2	**Benzo(g,h,i)perylene**	**50**	**330**
198-55-0	**Perylene**	**50**	**130**
92-52-4	Biphenyl	50	< 50 U
581-42-0	2,6-Dimethylnaphthalene	50	< 50 U
832-69-9	1-Methylphenanthrene	50	< 50 U
192-97-2	**Benzo(e)pyrene**	**50**	**250**
2245-38-7	2,3,5-Trimethylnaphthalene	50	< 50 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	66.7%
d14-Dibenzo(a,h)anthracen	82.0%

9/26/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
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Sample ID: T4-S3-04-C
SAMPLE

Lab Sample ID: JQ36G
LIMS ID: 06-12978
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/10/06 17:56
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 1.78 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 29.3%
pH: 6.8

CAS Number	Analyte	RL	Result	
91-20-3	**Naphthalene**	**28**	**76**	
91-57-6	**2-Methylnaphthalene**	**28**	**42**	
90-12-0	**1-Methylnaphthalene**	**28**	**20**	**J**
208-96-8	Acenaphthylene	28	< 28	U
83-32-9	**Acenaphthene**	**28**	**370**	
86-73-7	**Fluorene**	**28**	**160**	
85-01-8	**Phenanthrene**	**28**	**1,400**	
120-12-7	**Anthracene**	**28**	**320**	
206-44-0	**Fluoranthene**	**28**	**3,200**	**E** J
129-00-0	**Pyrene**	**28**	**3,000**	**E** J
56-55-3	**Benzo(a)anthracene**	**28**	**2,200**	
218-01-9	**Chrysene**	**28**	**2,600**	
205-99-2	**Benzo(b)fluoranthene**	**28**	**2,500**	
207-08-9	**Benzo(k)fluoranthene**	**28**	**2,400**	
50-32-8	**Benzo(a)pyrene**	**28**	**2,800**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**28**	**1,500**	
53-70-3	**Dibenz(a,h)anthracene**	**28**	**560**	
191-24-2	**Benzo(g,h,i)perylene**	**28**	**1,600**	
198-55-0	**Perylene**	**28**	**840**	
92-52-4	Biphenyl	28	< 28	U
581-42-0	2,6-Dimethylnaphthalene	28	< 28	U
832-69-9	**1-Methylphenanthrene**	**28**	**100**	
192-97-2	**Benzo(e)pyrene**	**28**	**1,700**	
2245-38-7	2,3,5-Trimethylnaphthalene	28	< 28	U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	59.0%
d14-Dibenzo(a,h)anthracen	62.7%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
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Sample ID: T4-S3-04-C
DILUTION

Lab Sample ID: JQ36G
LIMS ID: 06-12978
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/09/06 13:32
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 1.78 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 29.3%
pH: 6.8

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	280	< 280 U
91-57-6	2-Methylnaphthalene	280	< 280 U
90-12-0	1-Methylnaphthalene	280	< 280 U
208-96-8	Acenaphthylene	280	< 280 U
83-32-9	Acenaphthene	280	360
86-73-7	Fluorene	280	200 J
85-01-8	Phenanthrene	280	1,400
120-12-7	Anthracene	280	310
206-44-0	Fluoranthene	280	3,400
129-00-0	Pyrene	280	3,000
56-55-3	Benzo(a)anthracene	280	2,100
218-01-9	Chrysene	280	2,700
205-99-2	Benzo(b)fluoranthene	280	2,500
207-08-9	Benzo(k)fluoranthene	280	2,400
50-32-8	Benzo(a)pyrene	280	2,700
193-39-5	Indeno(1,2,3-cd)pyrene	280	1,700
53-70-3	Dibenz(a,h)anthracene	280	670
191-24-2	Benzo(g,h,i)perylene	280	2,000
198-55-0	Perylene	280	870
92-52-4	Biphenyl	280	< 280 U
581-42-0	2,6-Dimethylnaphthalene	280	< 280 U
832-69-9	1-Methylphenanthrene	280	< 280 U
192-97-2	Benzo(e)pyrene	280	1,700
2245-38-7	2,3,5-Trimethylnaphthalene	280	< 280 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	60.0%
d14-Dibenzo(a,h)anthracen	67.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: T4-S3-04-D
SAMPLE

Lab Sample ID: JQ36H
LIMS ID: 06-12979
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/10/06 18:21
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 21.3%
pH: 6.3

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**4.9**	**6.4**
91-57-6	**2-Methylnaphthalene**	**4.9**	**3.9 J**
90-12-0	1-Methylnaphthalene	4.9	< 4.9 U
208-96-8	Acenaphthylene	4.9	< 4.9 U
83-32-9	**Acenaphthene**	**4.9**	**29**
86-73-7	**Fluorene**	**4.9**	**18**
85-01-8	**Phenanthrene**	**4.9**	**130**
120-12-7	**Anthracene**	**4.9**	**25**
206-44-0	**Fluoranthene**	**4.9**	**250**
129-00-0	**Pyrene**	**4.9**	**220**
56-55-3	**Benzo(a)anthracene**	**4.9**	**160**
218-01-9	**Chrysene**	**4.9**	**200**
205-99-2	**Benzo(b)fluoranthene**	**4.9**	**180**
207-08-9	**Benzo(k)fluoranthene**	**4.9**	**190**
50-32-8	**Benzo(a)pyrene**	**4.9**	**200**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**4.9**	**120**
53-70-3	**Dibenz(a,h)anthracene**	**4.9**	**48**
191-24-2	**Benzo(g,h,i)perylene**	**4.9**	**140**
198-55-0	**Perylene**	**4.9**	**61**
92-52-4	Biphenyl	4.9	< 4.9 U
581-42-0	2,6-Dimethylnaphthalene	4.9	< 4.9 U
832-69-9	**1-Methylphenanthrene**	**4.9**	**7.8**
192-97-2	**Benzo(e)pyrene**	**4.9**	**130**
2245-38-7	2,3,5-Trimethylnaphthalene	4.9	< 4.9 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	62.3%
d14-Dibenzo(a,h)anthracen	68.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-WB-01
SAMPLE

Lab Sample ID: JQ36I
LIMS ID: 06-12980
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/10/06 18:45
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 56.7%
pH: 7.1

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	4.9	20
91-57-6	2-Methylnaphthalene	4.9	11
90-12-0	1-Methylnaphthalene	4.9	5.9
208-96-8	Acenaphthylene	4.9	13
83-32-9	Acenaphthene	4.9	41
86-73-7	Fluorene	4.9	27
85-01-8	Phenanthrene	4.9	240
120-12-7	Anthracene	4.9	68
206-44-0	Fluoranthene	4.9	570 E
129-00-0	Pyrene	4.9	500 E
56-55-3	Benzo(a)anthracene	4.9	280
218-01-9	Chrysene	4.9	390
205-99-2	Benzo(b)fluoranthene	4.9	420
207-08-9	Benzo(k)fluoranthene	4.9	320
50-32-8	Benzo(a)pyrene	4.9	400
193-39-5	Indeno(1,2,3-cd)pyrene	4.9	200
53-70-3	Dibenz(a,h)anthracene	4.9	71
191-24-2	Benzo(g,h,i)perylene	4.9	210
198-55-0	Perylene	4.9	160
92-52-4	Biphenyl	4.9	< 4.9 U
581-42-0	2,6-Dimethylnaphthalene	4.9	6.4
832-69-9	1-Methylphenanthrene	4.9	16
192-97-2	Benzo(e)pyrene	4.9	250
2245-38-7	2,3,5-Trimethylnaphthalene	4.9	5.4

JJ

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	52.0%
d14-Dibenzo(a,h)anthracen	51.7%

0027 8/7/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
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Sample ID: T4-WB-01
DILUTION

Lab Sample ID: JQ36I
LIMS ID: 06-12980
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/09/06 14:21
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 56.7%
pH: 7.1

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	49	< 49 U
91-57-6	2-Methylnaphthalene	49	< 49 U
90-12-0	1-Methylnaphthalene	49	< 49 U
208-96-8	Acenaphthylene	49	< 49 U
83-32-9	**Acenaphthene**	**49**	**44 J**
86-73-7	Fluorene	49	< 49 U
85-01-8	**Phenanthrene**	**49**	**240**
120-12-7	**Anthracene**	**49**	**74**
206-44-0	**Fluoranthene**	**49**	**560**
129-00-0	**Pyrene**	**49**	**550**
56-55-3	**Benzo(a)anthracene**	**49**	**280**
218-01-9	**Chrysene**	**49**	**410**
205-99-2	**Benzo(b)fluoranthene**	**49**	**390**
207-08-9	**Benzo(k)fluoranthene**	**49**	**320**
50-32-8	**Benzo(a)pyrene**	**49**	**390**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**49**	**280**
53-70-3	**Dibenz(a,h)anthracene**	**49**	**78**
191-24-2	**Benzo(g,h,i)perylene**	**49**	**330**
198-55-0	**Perylene**	**49**	**170**
92-52-4	Biphenyl	49	< 49 U
581-42-0	2,6-Dimethylnaphthalene	49	< 49 U
832-69-9	1-Methylphenanthrene	49	< 49 U
192-97-2	**Benzo(e)pyrene**	**49**	**260**
2245-38-7	2,3,5-Trimethylnaphthalene	49	< 49 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	48.7%
d14-Dibenzo(a,h)anthracen	69.3%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
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Sample ID: T4-WB-02
SAMPLE

Lab Sample ID: JQ36J
LIMS ID: 06-12981
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/10/06 19:10
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 40.8%
pH: 6.5

CAS Number	Analyte	RL	Result	
91-20-3	Naphthalene	5.0	12	
91-57-6	2-Methylnaphthalene	5.0	5.4	
90-12-0	1-Methylnaphthalene	5.0	4.0	J
208-96-8	Acenaphthylene	5.0	13	
83-32-9	Acenaphthene	5.0	8.4	
86-73-7	Fluorene	5.0	8.9	
85-01-8	Phenanthrene	5.0	96	J
120-12-7	Anthracene	5.0	25	
206-44-0	Fluoranthene	5.0	280	
129-00-0	Pyrene	5.0	290	
56-55-3	Benzo(a)anthracene	5.0	120	
218-01-9	Chrysene	5.0	190	J
205-99-2	Benzo(b)fluoranthene	5.0	160	
207-08-9	Benzo(k)fluoranthene	5.0	150	J
50-32-8	Benzo(a)pyrene	5.0	190	
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	81	
53-70-3	Dibenz(a,h)anthracene	5.0	20	
191-24-2	Benzo(g,h,i)perylene	5.0	94	
198-55-0	Perylene	5.0	71	
92-52-4	Biphenyl	5.0	< 5.0	U
581-42-0	2,6-Dimethylnaphthalene	5.0	5.0	
832-69-9	1-Methylphenanthrene	5.0	10	
192-97-2	Benzo(e)pyrene	5.0	120	
2245-38-7	2,3,5-Trimethylnaphthalene	5.0	12	

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	59.0%
d14-Dibenzo(a,h)anthracen	48.0%

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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-WB-03
SAMPLE

Lab Sample ID: JQ36K
LIMS ID: 06-12982
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/10/06 19:35
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 55.1%
pH: 6.9

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	5.0	25
91-57-6	2-Methylnaphthalene	5.0	12
90-12-0	1-Methylnaphthalene	5.0	5.9
208-96-8	Acenaphthylene	5.0	15
83-32-9	Acenaphthene	5.0	32
86-73-7	Fluorene	5.0	25
85-01-8	Phenanthrene	5.0	190
120-12-7	Anthracene	5.0	79
206-44-0	Fluoranthene	5.0	460
129-00-0	Pyrene	5.0	440
56-55-3	Benzo(a)anthracene	5.0	230
218-01-9	Chrysene	5.0	330
205-99-2	Benzo(b)fluoranthene	5.0	300
207-08-9	Benzo(k)fluoranthene	5.0	260
50-32-8	Benzo(a)pyrene	5.0	310
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	120
53-70-3	Dibenz(a,h)anthracene	5.0	42
191-24-2	Benzo(g,h,i)perylene	5.0	140
198-55-0	Perylene	5.0	150
92-52-4	Biphenyl	5.0	< 5.0 U
581-42-0	2,6-Dimethylnaphthalene	5.0	6.9
832-69-9	1-Methylphenanthrene	5.0	16
192-97-2	Benzo(e)pyrene	5.0	200
2245-38-7	2,3,5-Trimethylnaphthalene	5.0	5.0

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	54.3%
d14-Dibenzo(a,h)anthracen	44.0%

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ANALYTICAL RESOURCES INCORPORATED

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Sample ID: T4-WB-04
SAMPLE

Lab Sample ID: JQ36L
LIMS ID: 06-12983
Matrix: Sediment
Data Release Authorized:
Reported: 08/14/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Date Extracted: 08/03/06
Date Analyzed: 08/10/06 20:00
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 53.4%
pH: 6.5

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	5.0	20
91-57-6	2-Methylnaphthalene	5.0	9.0
90-12-0	1-Methylnaphthalene	5.0	5.0
208-96-8	Acenaphthylene	5.0	14
83-32-9	Acenaphthene	5.0	22
86-73-7	Fluorene	5.0	18
85-01-8	Phenanthrene	5.0	120
120-12-7	Anthracene	5.0	48
206-44-0	Fluoranthene	5.0	290
129-00-0	Pyrene	5.0	280
56-55-3	Benzo(a)anthracene	5.0	130
218-01-9	Chrysene	5.0	190
205-99-2	Benzo(b)fluoranthene	5.0	150
207-08-9	Benzo(k)fluoranthene	5.0	160
50-32-8	Benzo(a)pyrene	5.0	160
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	70
53-70-3	Dibenz(a,h)anthracene	5.0	23
191-24-2	Benzo(g,h,i)perylene	5.0	79
198-55-0	Perylene	5.0	88
92-52-4	Biphenyl	5.0	< 5.0 U
581-42-0	2,6-Dimethylnaphthalene	5.0	6.5
832-69-9	1-Methylphenanthrene	5.0	12
192-97-2	Benzo(e)pyrene	5.0	110
2245-38-7	2,3,5-Trimethylnaphthalene	5.0	< 5.0 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	49.3%
d14-Dibenzo(a,h)anthracen	35.3%

FORM I

9/28/06

LDC #: 15488D2b **VALIDATION COMPLETENESS WORKSHEET** Date: 9/4/06
SDG #: JQ36 Level III Page: 1 of 1
Laboratory: Analytical Resources, Inc. Reviewer: 9
2nd Reviewer: 9

METHOD: GC/MS ~~Semivolatiles~~ PAHs (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/20/06
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	no %RSD ↓
IV.	Continuing calibration	A	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	SW	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
All Soils

1	T4-S3-07-B	11	T4-S3-04-D	21	MB-080306	31	
2	T4-S3-07-C	12	T4-WB-01	22		32	
3	T4-S3-07-D	13	T4-WB-01DL	23		33	
4	T4-S3-07-E	14	T4-WB-02	24		34	
5	T4-S3-04-A	15	T4-WB-03	25		35	
6	T4-S3-04-ADL	16	T4-WB-04	26		36	
7	T4-S3-04-B	17	T4-S3-07-EMS	27		37	
8	T4-S3-04-BDL	18	T4-S3-07-EMSD	28		38	
9	T4-S3-04-C	19		29		39	
10	T4-S3-04-CDL	20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol**	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol**	III. Benzo(a)pyrene**
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol**	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene**	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol*	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene**	T. 4-Chloroaniline	II. 4-Nitrophenol*	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene**	JJ. Dibenzofuran	YY. Fluoranthene**	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol**	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene*	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine*	Y. 2,4,6-Trichlorophenol**	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. perylene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)**	FFF. Di-n-octylphthalate**	UUU. Benzo(e)pyrene
N. 2-Nitrophenol**	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV.
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW.

LDC #: 154880-b
SDG #: 1036

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: 9
2nd Reviewer: 2

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

(Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		17/18	UU	( )	( )	32.2 (≤30)	4	J/UJ/A
			DDD	( )	134 (35-111)	30.2 (✓)		↓
			HHH	( )	123 (36-110)	( )		J dets/A
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)		Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
A.	Phenol	26-90%	≤ 35%	12-110%	≤ 42%	GG.	Acenaphthene	31-137%	≤ 19%	46-118%	≤ 31%
C.	2-Chlorophenol	25-102%	≤ 50%	27-123%	≤ 40%	II.	4-Nitrophenol	11-114%	≤ 50%	10-80%	≤ 50%
E.	1,4-Dichlorobenzene	28-104%	≤ 27%	36-97%	≤ 28%	KK.	2,4-Dinitrotoluene	28-89%	≤ 47%	24-96%	≤ 38%
J.	N-Nitroso-di-n-propylamine	41-126%	≤ 38%	41-116%	≤ 38%	TT.	Pentachlorophenol	17-109%	≤ 47%	9-103%	≤ 50%
R.	1,2,4-Trichlorobenzene	38-107%	≤ 23%	39-98%	≤ 28%	ZZ.	Pyrene	35-142%	≤ 36%	26-127%	≤ 31%
V.	4-Chloro-3-methylphenol	26-103%	≤ 33%	23-97%	≤ 42%						

LDC #: 15488D2D
SDG #: JQ36

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Sample ID	Finding (cpds > calib range)	Associated Samples	Qualifications
		5, 7	YY ~~ZZ~~	6, 7	Jdets/A
		9, 12	YY, ZZ	9, 12	

Comments: See sample calculation verification worksheet for recalculations

COMQUA.2S

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Terminal 4 Early Action
Collection Date:	July 18 through July 19, 2006
LDC Report Date:	September 29, 2006
Matrix:	Sediment
Parameters:	Polynuclear Aromatic Hydrocarbons
Validation Level:	EPA Level III
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	JQ52

Sample Identification

T4-S3-02-F-DUP
T4-S3-02-F-DUPDL
T4-S3-03-C-DUP
T4-B414-02-A-DUP
T4-S3-08-C-DUP

Introduction

This data review covers 5 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per a modification of EPA SW 846 Method 8270C using Selected Ion Monitoring (SIM) for Polynuclear Aromatic Hydrocarbons.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals. All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all target compounds were within validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% .

All of the continuing calibration RRF values were within validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No polynuclear aromatic hydrocarbon contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for sample T4-S3-02-F-DUPDL. Since the sample was diluted out, no data were qualified.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. Since there were no associated samples, no data were qualified.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
T4-S3-02-F-DUP	Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene Benzo(e)pyrene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment

Data flags are summarized at the end of this report if data has been qualified.

XVI. Field Duplicates

Samples T4-S3-02-F (from SDG JQ35) and T4-S3-02-F-DUP, samples T4-S3-02-F (from SDG JQ35) and T4-S3-02-F-DUPDL, samples T4-S3-03-C (from SDG JQ35) and T4-S3-03-C-DUP, samples T4-B414-02-A (from SDG JQ33) and T4-B414-02-A-DUP, and samples T4-S3-08-C (from SDG JQ35) and T4-S3-08-C-DUP were identified as field duplicates. No polynuclear aromatic hydrocarbons were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
Naphthalene	260	260U	200 (≤75)
2-Methylnaphthalene	160	260U	200 (≤75)
1-Methylnaphthalene	80	260U	200 (≤75)
Acenaphthylene	45	260U	200 (≤75)
Acenaphthene	1400	720	64 (≤75)
Fluorene	640	410	44 (≤75)
Phenanthrene	5200	3000	54 (≤75)
Anthracene	1200	620	64 (≤75)
Fluoranthene	11000	6600	50 (≤75)
Pyrene	10000	6200	47 (≤75)
Benzo(a)anthracene	7100	3700	63 (≤75)
Chrysene	8800	4700	61 (≤75)
Benzo(b)fluoranthene	9700	4900	66 (≤75)
Benzo(k)fluoranthene	7900	4200	61 (≤75)
Benzo(a)pyrene	9800	5100	63 (≤75)
Indeno(1,2,3-cd)pyrene	5400	3200	51 (≤75)
Dibenz(a,h)anthracene	1900	1200	45 (≤75)
Benzo(g,h,i)perylene	6100	3700	49 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
Perylene	3000	1600	61 (≤75)
2,6-Dimethylnaphthalene	95	260U	200 (≤75)
1-Methylphenanthrene	480	330	37 (≤75)
Benzo(e)pyrene	5800	3000	64 (≤75)
2,3,5-Trimethylnaphthalene	120	260U	200 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-02-F-DUPDL	T4-S3-02-F	
Naphthalene	250	260U	200 (≤75)
2-Methylnaphthalene	150	260U	200 (≤75)
Acenaphthene	1300	720	57 (≤75)
Fluorene	620	410	41 (≤75)
Phenanthrene	4700	3000	44 (≤75)
Anthracene	1100	620	56 (≤75)
Fluoranthene	10000	6600	41 (≤75)
Pyrene	8900	6200	36 (≤75)
Benzo(a)anthracene	6400	3700	53 (≤75)
Chrysene	7800	4700	50 (≤75)
Benzo(b)fluoranthene	8000	4900	48 (≤75)
Benzo(k)fluoranthene	6700	4200	46 (≤75)
Benzo(a)pyrene	8200	5100	47 (≤75)
Indeno(1,2,3-cd)pyrene	5000	3200	44 (≤75)
Dibenz(a,h)anthracene	1800	1200	40 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-02-F-DUPDL	T4-S3-02-F	
Benzo(g,h,i)perylene	5800	3700	44 (≤75)
Perylene	2500	1600	44 (≤75)
1-Methylphenanthrene	380	330	14 (≤75)
Benzo(e)pyrene	4900	3000	48 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-03-C-DUP	T4-S3-03-C	
Naphthalene	98	69	35 (≤75)
2-Methylnaphthalene	49	50U	200 (≤75)
1-Methylnaphthalene	24	50U	200 (≤75)
Acenaphthylene	44	50U	200 (≤75)
Acenaphthene	210	170	21 (≤75)
Fluorene	130	120	8 (≤75)
Phenanthrene	760	610	22 (≤75)
Anthracene	150	110	31 (≤75)
Fluoranthene	1600	1300	21 (≤75)
Pyrene	1600	1300	21 (≤75)
Benzo(a)anthracene	710	570	22 (≤75)
Chrysene	960	830	15 (≤75)
Benzo(b)fluoranthene	880	730	19 (≤75)
Benzo(k)fluoranthene	740	690	7 (≤75)
Benzo(a)pyrene	910	790	14 (≤75)
Indeno(1,2,3-cd)pyrene	550	490	12 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-03-C-DUP	T4-S3-03-C	
Dibenz(a,h)anthracene	170	150	13 (≤75)
Benzo(g,h,i)perylene	690	640	8 (≤75)
Perylene	440	400	10 (≤75)
Benzo(e)pyrene	560	510	9 (≤75)
2,3,5-Trimethylnaphthalene	64	54	17 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-B414-02-A	T4-B414-02-A-DUP	
Naphthalene	48U	180	200 (≤75)
2-Methylnaphthalene	48U	89	200 (≤75)
Isopropylbenzene	48U	50	200 (≤75)
Acenaphthene	120	540	127 (≤75)
Fluorene	48	220	128 (≤75)
Phenanthrene	420	1900	128 (≤75)
Anthracene	81	310	117 (≤75)
Fluoranthene	980	3900	120 (≤75)
Pyrene	920	3000	106 (≤75)
Benzo(a)anthracene	660	1800	93 (≤75)
Chrysene	840	2600	102 (≤75)
Benzo(b)fluoranthene	1100	2800	87 (≤75)
Benzo(k)fluoranthene	840	2200	89 (≤75)
Benzo(a)pyrene	1000	2400	82 (≤75)
Indeno(1,2,3-cd)pyrene	660	1500	78 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-B414-02-A	T4-B414-02-A-DUP	
Dibenz(a,h)anthracene	240	510	72 (≤75)
Benzo(g,h,i)perylene	770	1700	75 (≤75)
Perylene	300	870	97 (≤75)
Biphenyl	48U	150	200 (≤75)
1-Methylphenanthrene	48U	110	200 (≤75)
Benzo(e)pyrene	630	1600	87 (≤75)
2,3,5-Trimethylnaphthalene	48U	54	200 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-08-C-DUP	T4-S3-08-C	
Naphthalene	49U	4.8	200 (≤75)
Acenaphthene	88	26	109 (≤75)
Fluorene	59	14	123 (≤75)
Phenanthrene	560	120	129 (≤75)
Anthracene	93	26	0 (≤75)
Fluoranthene	1100	280	0 (≤75)
Pyrene	900	250	113 (≤75)
Benzo(a)anthracene	540	170	104 (≤75)
Chrysene	780	210	115 (≤75)
Benzo(b)fluoranthene	830	240	110 (≤75)
Benzo(k)fluoranthene	620	180	110 (≤75)
Benzo(a)pyrene	660	230	97 (≤75)
Indeno(1,2,3-cd)pyrene	440	110	120 (≤75)

Compound	Concentration (ug/Kg)		RPD (Limits)
	T4-S3-08-C-DUP	T4-S3-08-C	
Dibenz(a,h)anthracene	150	40	116 (≤75)
Benzo(g,h,i)perylene	500	120	123 (≤75)
Perylene	280	71	119 (≤75)
1-Methylphenanthrene	49U	7.7	200 (≤75)
Benzo(e)pyrene	490	140	111 (≤75)

XVII. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG JQ52

SDG	Sample	Compound	Flag	A or P	Reason
JQ52	T4-S3-02-F-DUP	Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene Benzo(e)pyrene	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Compound quantitation and CRQLs

Terminal 4 Early Action
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG JQ52

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-S3-02-F-DUP
SAMPLE

Lab Sample ID: JQ52A
LIMS ID: 06-13102
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/08/06 12:46
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 45.9%
pH: 6.6

CAS Number	Analyte	RL	Result		
91-20-3	Naphthalene	50	260		
91-57-6	2-Methylnaphthalene	50	160		
90-12-0	1-Methylnaphthalene	50	80		
208-96-8	Acenaphthylene	50	45	J	
83-32-9	Acenaphthene	50	1,400		
86-73-7	Fluorene	50	640		
85-01-8	Phenanthrene	50	5,200	E	J
120-12-7	Anthracene	50	1,200		
206-44-0	Fluoranthene	50	11,000	E	J
129-00-0	Pyrene	50	10,000	E	
56-55-3	Benzo(a)anthracene	50	7,100	E	
218-01-9	Chrysene	50	8,800	E	
205-99-2	Benzo(b)fluoranthene	50	9,700	E	
207-08-9	Benzo(k)fluoranthene	50	7,900	E	
50-32-8	Benzo(a)pyrene	50	9,800	E	
193-39-5	Indeno(1,2,3-cd)pyrene	50	5,400	E	
53-70-3	Dibenz(a,h)anthracene	50	1,900		
191-24-2	Benzo(g,h,i)perylene	50	6,100	E	J
198-55-0	Perylene	50	3,000		
92-52-4	Biphenyl	50	< 50	U	
581-42-0	2,6-Dimethylnaphthalene	50	95		
832-69-9	1-Methylphenanthrene	50	480		
192-97-2	Benzo(e)pyrene	50	5,800	E	J
2245-38-7	2,3,5-Trimethylnaphthalene	50	120		

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	68.7%
d14-Dibenzo(a,h)anthracen	61.0%

9/7x/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: T4-S3-02-F-DUP
DILUTION

Lab Sample ID: JQ52A
LIMS ID: 06-13102
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/09/06 16:00
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 50.0
Percent Moisture: 45.9%
pH: 6.6

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**250**	**250 J**
91-57-6	**2-Methylnaphthalene**	**250**	**150 J**
90-12-0	1-Methylnaphthalene	250	< 250 U
208-96-8	Acenaphthylene	250	< 250 U
83-32-9	**Acenaphthene**	**250**	**1,300**
86-73-7	**Fluorene**	**250**	**620**
85-01-8	**Phenanthrene**	**250**	**4,700**
120-12-7	**Anthracene**	**250**	**1,100**
206-44-0	**Fluoranthene**	**250**	**10,000**
129-00-0	**Pyrene**	**250**	**8,900**
56-55-3	**Benzo(a)anthracene**	**250**	**6,400**
218-01-9	**Chrysene**	**250**	**7,800**
205-99-2	**Benzo(b)fluoranthene**	**250**	**8,000**
207-08-9	**Benzo(k)fluoranthene**	**250**	**6,700**
50-32-8	**Benzo(a)pyrene**	**250**	**8,200**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**250**	**5,000**
53-70-3	**Dibenz(a,h)anthracene**	**250**	**1,800**
191-24-2	**Benzo(g,h,i)perylene**	**250**	**5,800**
198-55-0	**Perylene**	**250**	**2,500**
92-52-4	Biphenyl	250	< 250 U
581-42-0	2,6-Dimethylnaphthalene	250	< 250 U
832-69-9	**1-Methylphenanthrene**	**250**	**380**
192-97-2	**Benzo(e)pyrene**	**250**	**4,900**
2245-38-7	2,3,5-Trimethylnaphthalene	250	< 250 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	D
d14-Dibenzo(a,h)anthracen	D

8/8/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: T4-S3-03-C-DUP
SAMPLE

Lab Sample ID: JQ52B
LIMS ID: 06-13103
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/08/06 13:11
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 41.8%
pH: 6.4

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	49	98
91-57-6	2-Methylnaphthalene	49	49
90-12-0	1-Methylnaphthalene	49	24 J
208-96-8	Acenaphthylene	49	44 J
83-32-9	Acenaphthene	49	210
86-73-7	Fluorene	49	130
85-01-8	Phenanthrene	49	760
120-12-7	Anthracene	49	150
206-44-0	Fluoranthene	49	1,600
129-00-0	Pyrene	49	1,600
56-55-3	Benzo(a)anthracene	49	710
218-01-9	Chrysene	49	960
205-99-2	Benzo(b)fluoranthene	49	880
207-08-9	Benzo(k)fluoranthene	49	740
50-32-8	Benzo(a)pyrene	49	910
193-39-5	Indeno(1,2,3-cd)pyrene	49	550
53-70-3	Dibenz(a,h)anthracene	49	170
191-24-2	Benzo(g,h,i)perylene	49	690
198-55-0	Perylene	49	440
92-52-4	Biphenyl	49	< 49 U
581-42-0	2,6-Dimethylnaphthalene	49	< 49 U
832-69-9	1-Methylphenanthrene	110	< 110 Y
192-97-2	Benzo(e)pyrene	49	560
2245-38-7	2,3,5-Trimethylnaphthalene	49	64

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.7%
d14-Dibenzo(a,h)anthracen	66.0%

8/7/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: T4-B414-02-A-DUP
SAMPLE

Lab Sample ID: JQ52C
LIMS ID: 06-13104
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/08/06 19:47
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 50.1%
pH: 6.4

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	48	< 48 U
91-57-6	2-Methylnaphthalene	48	< 48 U
90-12-0	1-Methylnaphthalene	48	< 48 U
208-96-8	Acenaphthylene	48	< 48 U
83-32-9	**Acenaphthene**	48	**120**
86-73-7	**Fluorene**	48	**48**
85-01-8	**Phenanthrene**	48	**420**
120-12-7	**Anthracene**	48	**81**
206-44-0	**Fluoranthene**	48	**980**
129-00-0	**Pyrene**	48	**920**
56-55-3	**Benzo(a)anthracene**	48	**660**
218-01-9	**Chrysene**	48	**840**
205-99-2	**Benzo(b)fluoranthene**	48	**1,100**
207-08-9	**Benzo(k)fluoranthene**	48	**840**
50-32-8	**Benzo(a)pyrene**	48	**1,000**
193-39-5	**Indeno(1,2,3-cd)pyrene**	48	**660**
53-70-3	**Dibenz(a,h)anthracene**	48	**240**
191-24-2	**Benzo(g,h,i)perylene**	48	**770**
198-55-0	**Perylene**	48	**300**
92-52-4	Biphenyl	48	< 48 U
581-42-0	2,6-Dimethylnaphthalene	48	< 48 U
832-69-9	1-Methylphenanthrene	48	< 48 U
192-97-2	**Benzo(e)pyrene**	48	**630**
2245-38-7	2,3,5-Trimethylnaphthalene	48	< 48 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	73.3%
d14-Dibenzo(a,h)anthracen	79.0%

9/7/10

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: T4-S3-08-C-DUP
SAMPLE

Lab Sample ID: JQ52D
LIMS ID: 06-13114
Matrix: Sediment
Data Release Authorized:
Reported: 08/10/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Date Extracted: 08/01/06
Date Analyzed: 08/08/06 20:12
Instrument/Analyst: NT1/VTS
GPC Cleanup: No
Silica Gel Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 15.3%
pH: 5.8

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	49	< 49 U
91-57-6	2-Methylnaphthalene	49	< 49 U
90-12-0	1-Methylnaphthalene	49	< 49 U
208-96-8	Acenaphthylene	49	< 49 U
83-32-9	**Acenaphthene**	**49**	**88**
86-73-7	**Fluorene**	**49**	**59**
85-01-8	**Phenanthrene**	**49**	**560**
120-12-7	**Anthracene**	**49**	**93**
206-44-0	**Fluoranthene**	**49**	**1,100**
129-00-0	**Pyrene**	**49**	**900**
56-55-3	**Benzo(a)anthracene**	**49**	**540**
218-01-9	**Chrysene**	**49**	**780**
205-99-2	**Benzo(b)fluoranthene**	**49**	**830**
207-08-9	**Benzo(k)fluoranthene**	**49**	**620**
50-32-8	**Benzo(a)pyrene**	**49**	**660**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**49**	**440**
53-70-3	**Dibenz(a,h)anthracene**	**49**	**150**
191-24-2	**Benzo(g,h,i)perylene**	**49**	**500**
198-55-0	**Perylene**	**49**	**280**
92-52-4	Biphenyl	49	< 49 U
581-42-0	2,6-Dimethylnaphthalene	49	< 49 U
832-69-9	1-Methylphenanthrene	49	< 49 U
192-97-2	**Benzo(e)pyrene**	**49**	**490**
2245-38-7	2,3,5-Trimethylnaphthalene	49	< 49 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	69.0%
d14-Dibenzo(a,h)anthracen	67.7%

8/28/06

LDC #: 15488E2b

SDG #: JQ52

Laboratory: Analytical Resources, Inc.

PAHs

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 9/22/06

Page: 1 of 1

Reviewer: V

2nd Reviewer: [illegible]

METHOD: GC/MS ~~Semivolatiles~~ (EPA SW 846 Method 8270C-SIM)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18 - 19/06
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	no SPCC ↓
IV.	Continuing calibration	A	
V.	Blanks	A	
VI.	Surrogate spikes	SW	
VII.	Matrix spike/Matrix spike duplicates	SW	
VIII.	Laboratory control samples	A	LCS
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	SW	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	see WS
XVII.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:

MI Seds

1	T4-S3-02-F-DUP	11	MB-080106	21		31	
2	T4-S3-02-F-DUPDL	12		22		32	
3	T4-S3-03-C-DUP	13		23		33	
4	T4-B414-02-A-DUP	14		24		34	
5	T4-S3-08-C-DUP	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

A. Phenol**	P. Bis(2-chloroethoxy)methane	EE. 2,6-Dinitrotoluene	TT. Pentachlorophenol**	III. Benzo(a)pyrene**
B. Bis (2-chloroethyl) ether	Q. 2,4-Dichlorophenol**	FF. 3-Nitroaniline	UU. Phenanthrene	JJJ. Indeno(1,2,3-cd)pyrene
C. 2-Chlorophenol	R. 1,2,4-Trichlorobenzene	GG. Acenaphthene**	VV. Anthracene	KKK. Dibenz(a,h)anthracene
D. 1,3-Dichlorobenzene	S. Naphthalene	HH. 2,4-Dinitrophenol*	WW. Carbazole	LLL. Benzo(g,h,i)perylene
E. 1,4-Dichlorobenzene**	T. 4-Chloroaniline	II. 4-Nitrophenol*	XX. Di-n-butylphthalate	MMM. Bis(2-Chloroisopropyl)ether
F. 1,2-Dichlorobenzene	U. Hexachlorobutadiene**	JJ. Dibenzofuran	YY. Fluoranthene**	NNN. Aniline
G. 2-Methylphenol	V. 4-Chloro-3-methylphenol**	KK. 2,4-Dinitrotoluene	ZZ. Pyrene	OOO. N-Nitrosodimethylamine
H. 2,2'-Oxybis(1-chloropropane)	W. 2-Methylnaphthalene	LL. Diethylphthalate	AAA. Butylbenzylphthalate	PPP. Benzoic Acid
I. 4-Methylphenol	X. Hexachlorocyclopentadiene*	MM. 4-Chlorophenyl-phenyl ether	BBB. 3,3'-Dichlorobenzidine	QQQ. Benzyl alcohol
J. N-Nitroso-di-n-propylamine*	Y. 2,4,6-Trichlorophenol**	NN. Fluorene	CCC. Benzo(a)anthracene	RRR. Pyridine
K. Hexachloroethane	Z. 2,4,5-Trichlorophenol	OO. 4-Nitroaniline	DDD. Chrysene	SSS. Benzidine
L. Nitrobenzene	AA. 2-Chloronaphthalene	PP. 4,6-Dinitro-2-methylphenol	EEE. Bis(2-ethylhexyl)phthalate	TTT. perylene
M. Isophorone	BB. 2-Nitroaniline	QQ. N-Nitrosodiphenylamine (1)**	FFF. Di-n-octylphthalate**	UUU. Benzo(e)pyrene
N. 2-Nitrophenol**	CC. Dimethylphthalate	RR. 4-Bromophenyl-phenylether	GGG. Benzo(b)fluoranthene	VVV. 1-Methylnaphthalene
O. 2,4-Dimethylphenol	DD. Acenaphthylene	SS. Hexachlorobenzene	HHH. Benzo(k)fluoranthene	WWW. 2,6-Dimethylnaphthalene

XXX. 1-Methylphenanthrene

YYY. 2,3,5-Trimethylnaphthalene

ZZZ. Biphenyl

SDG #: J252

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were percent recoveries (%R) for surrogates within QC limits?

Y (N) N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?

Y (N) N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		2	All	DO (—)	No Qual (50x)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

* QC limits are advisory

	QC Limits (Soil)	QC Limits (Water)
S1 (NBZ) = Nitrobenzene-d5	23-120	35-114
S2 (FBP) = 2-Fluorobiphenyl	30-115	43-116
S3 (TPH) = Terphenyl-d14	18-137	33-141
S4 (PHL) = Phenol-d5	24-113	10-94
S5 (2FP) = 2-Fluorophenol	25-121	21-100
S6 (TBP) = 2,4,6-Tribromophenol	19-122	10-123
S7 (2CP) = 2-Chlorophenol-d4	20-130*	33-110*
S8 (DCB) = 1,2-Dichlorobenzene-d4	20-130*	16-110*

LDC #: 15488c2b
SDG #: 1852

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: 9
2nd Reviewer: R

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

(Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		T4-53-08-C	HHH	122 (26-110)	117 (26-110)	( )	~~All~~ None	No Qual
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

	Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)		Compound	QC Limits (Soil)	RPD (Soil)	QC Limits (Water)	RPD (Water)
A.	Phenol	26-90%	≤ 35%	12-110%	≤ 42%	GG.	Acenaphthene	31-137%	≤ 19%	46-118%	≤ 31%
C.	2-Chlorophenol	25-102%	≤ 50%	27-123%	≤ 40%	II.	4-Nitrophenol	11-114%	≤ 50%	10-80%	≤ 50%
E.	1,4-Dichlorobenzene	28-104%	≤ 27%	36-97%	≤ 28%	KK.	2,4-Dinitrotoluene	28-89%	≤ 47%	24-96%	≤ 38%
J.	N-Nitroso-di-n-propylamine	41-126%	≤ 38%	41-116%	≤ 38%	TT.	Pentachlorophenol	17-109%	≤ 47%	9-103%	≤ 50%
R.	1,2,4-Trichlorobenzene	38-107%	≤ 23%	39-98%	≤ 28%	ZZ.	Pyrene	35-142%	≤ 36%	26-127%	≤ 31%
V.	4-Chloro-3-methylphenol	26-103%	≤ 33%	23-97%	≤ 42%						

LDC #: 15488Eb
SDG #: VQ52

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: Q
2nd Reviewer: R

METHOD: GC/MS BNA (EPA SW 846 Method 8270)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N (N/A) Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N (N/A) Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Sample ID	epds > calib range Finding	Associated Samples	Qualifications
		1	UU. YY. ZZ. CCC. DDD	1	Idets / B
			~~FFF~~. HHH. III. JJJ		
			KKK, LLL		

Comments: See sample calculation verification worksheet for recalculations

LDC#: 15488E2b
SDG#: JQ52

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: 9
2nd Reviewer: f

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	(ETS
	1	T4-S3-02-F (JQ35)		
S	260	260U	200	
W	160	260U	200	
VVV	80	260U	200	
DD	45	260U	200	
GG	1400	720	64	
NN	640	410	44	
UU	5200	3000	54	
VV	1200	620	64	
YY	11000	6600	50	
ZZ	10000	6200	47	
CCC	7100	3700	63	
DDD	8800	4700	61	
GGG	9700	4900	66	
HHH	7900	4200	61	
III	9800	5100	63	
JJJ	5400	3200	51	
KKK	1900	1200	45	
LLL	6100	3700	49	
TTT	3000	1600	61	
WWW	95	260U	200	
XXX	480	330	37	
UUU	5800	3000	64	
YYY	120	260U	200	

LDC#: 15488E2b
SDG#: JQ52

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: 9
2nd Reviewer: 9

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	LCS
	2	T4-S3-02-F (JQ35)		
S	250	260U	200	
W	150	260U	200	
GG	1300	720	57	
NN	620	410	41	
UU	4700	3000	44	
VV	1100	620	56	
YY	10000	6600	41	
ZZ	8900	6200	36	
CCC	6400	3700	53	
DDD	7800	4700	50	
GGG	8000	4900	48	
HHH	6700	4200	46	
III	8200	5100	47	
JJJ	5000	3200	44	
KKK	1800	1200	40	
LLL	5800	3700	44	
TTT	2500	1600	44	
XXX	380	330	14	
UUU	4900	3000	48	

Compound	Concentration (ug/Kg)		RPD	LCS
	3	T4-S3-03-C (JQ35)		
S	98	69	35	
W	49	50U	200	
VVV	24	50U	200	

LDC#: 15488E2b
SDG#: JQ52

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	(≤75
	3	T4-S3-03-C (JQ35)		
DD	44	50U	200	
GG	210	170	21	
NN	130	120	8	
UU	760	610	22	
VV	150	110	31	
YY	1600	1300	21	
ZZ	1600	1300	21	
CCC	710	570	22	
DDD	960	830	15	
GGG	880	730	19	
HHH	740	690	7	
III	910	790	14	
JJJ	550	490	12	
KKK	170	150	13	
LLL	690	640	8	
TTT	440	400	10	
UUU	560	510	9	
YYY	64	54	17	

Compound	Concentration (ug/Kg)		RPD	(≤75
	4	T4-B414-02-A (JQ33)		
S	48U	180	200	
W	48U	89	200	
VVV	48U	50	200	
GG	120	540	127	

LDC#: 15488E2b
SDG#: JQ52

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: 9
2nd Reviewer: 9

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	(≤75
	4	T4-B414-02-A (JQ33)		
NN	48	220	128	
UU	420	1900	128	
VV	81	310	117	
YY	980	3900	120	
ZZ	920	3000	106	
CCC	660	1800	93	
DDD	840	2600	102	
GGG	1100	2800	87	
HHH	840	2200	89	
III	1000	2400	82	
JJJ	660	1500	78	
KKK	240	510	72	
LLL	770	1700	75	
TTT	300	870	97	
ZZZ	48U	150	200	
XXX	48U	110	200	
UUU	630	1600	87	
YYY	48U	54	200	

Compound	Concentration (ug/Kg)		RPD	(≤75
	5	T4-S3-08-C (JQ35)		
S	49U	4.8	200	
GG	88	26	109	
NN	59	14	123	
UU	560	120	129	

LDC#: 15488E2b
SDG#: JQ52

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: 9
2nd Reviewer: h

METHOD: GC/MS SVOA (EPA SW 846 Method 8270C-SIM)

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD	≤ TS
	5	T4-S3-08-C (JQ35)		
VV	93	26	113	
YY	1100	280	119	
ZZ	900	250	113	
CCC	540	170	104	
DDD	780	210	115	
GGG	830	240	110	
HHH	620	180	110	
III	660	230	97	
JJJ	440	110	120	
KKK	150	40	116	
LLL	500	120	123	
TTT	280	71	119	
XXX	49U	7.7	200	
UUU	490	140	111	

Terminal 4 Early Action
Data Validation Reports
LDC# 15488

Lead & Zinc

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Lead & Zinc

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ33

Sample Identification

T4-B414-01-A
T4-B414-01-B
T4-B414-01-C
T4-B414-02-A
T4-B414-02-B
T4-B414-02-C
T4-B414-03-A
T4-B414-03-B
T4-B414-03-C
T4-B414-04-A
T4-B414-04-B
T4-B414-04-C
T4-S3-01-D
T4-S3-01-E
T4-S3-01-F
T4-S3-01-G
T4-S3-01-H
T4-B414-01-AMS
T4-B414-01-ADUP

Introduction

This data review covers 19 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Lead and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2002) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Zinc	1.2 mg/Kg	All samples in SDG JQ33

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks.

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

Raw data were not reviewed for this SDG.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

Samples T4-B414-02-A-DUP (from SDG JQ52) and T4-B414-02-A were identified as field duplicates. No lead or zinc was detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)
	T4-B414-02-A-DUP	T4-B414-02-A	
Lead	149	18	157 (≤75)
Zinc	180	104	54 (≤75)

XIV. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Lead & Zinc - Data Qualification Summary - SDG JQ33

No Sample Data Qualified in this SDG

Terminal 4 Early Action
Lead & Zinc - Laboratory Blank Data Qualification Summary - SDG JQ33

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-B414-01-A
SAMPLE

Lab Sample ID: JQ33A
LIMS ID: 06-12923
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 54.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	4	26	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	126	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-B414-01-B
SAMPLE

Lab Sample ID: JQ33B
LIMS ID: 06-12924
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 52.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	4	26	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	128	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-B414-01-C
SAMPLE

Lab Sample ID: JQ33C
LIMS ID: 06-12925
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 52.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	4	35	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	148	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-B414-02-A
SAMPLE

Lab Sample ID: JQ33D
LIMS ID: 06-12926
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 50.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	4	18	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	104	

U-Analyte undetected at given RL
RL-Reporting Limit

8/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-B414-02-B
SAMPLE

Lab Sample ID: JQ33E
LIMS ID: 06-12927
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 52.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	4	14	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	94	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-B414-02-C
SAMPLE

Lab Sample ID: JQ33F
LIMS ID: 06-12928
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 52.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	4	25	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	134	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-B414-03-A
SAMPLE

Lab Sample ID: JQ33G
LIMS ID: 06-12929
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 53.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	3	16	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	98	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-B414-03-B
SAMPLE

Lab Sample ID: JQ33H
LIMS ID: 06-12930
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 52.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	4	19	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	107	

U-Analyte undetected at given RL
RL-Reporting Limit

8/2/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-B414-03-C
SAMPLE

Lab Sample ID: JQ33I
LIMS ID: 06-12931
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 51.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	4	14	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	92	

U-Analyte undetected at given RL
RL-Reporting Limit

8/9/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-B414-04-A
SAMPLE

Lab Sample ID: JQ33J
LIMS ID: 06-12932
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 49.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	4	17	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	104	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-B414-04-B
SAMPLE

Lab Sample ID: JQ33K
LIMS ID: 06-12933
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 55.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	**7439-92-1**	**Lead**	3	**15**	
3050B	07/27/06	6010B	07/31/06	**7440-66-6**	**Zinc**	1	**94**	

U-Analyte undetected at given RL
RL-Reporting Limit

9/12/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-B414-04-C
SAMPLE

Lab Sample ID: JQ33L
LIMS ID: 06-12934
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 54.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	**7439-92-1**	**Lead**	3	17	
3050B	07/27/06	6010B	07/31/06	**7440-66-6**	**Zinc**	1	105	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-01-D
SAMPLE

Lab Sample ID: JQ33M
LIMS ID: 06-12935
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Percent Total Solids: 52.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	**7439-92-1**	**Lead**	4	258	
3050B	07/27/06	6010B	07/31/06	**7440-66-6**	**Zinc**	1	381	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-01-E
SAMPLE

Lab Sample ID: JQ33N
LIMS ID: 06-12936
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Percent Total Solids: 55.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	3	432	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	546	

U-Analyte undetected at given RL
RL-Reporting Limit

8/9/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-01-F
SAMPLE

Lab Sample ID: JQ33O
LIMS ID: 06-12937
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Percent Total Solids: 59.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	3	559	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	827	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-01-G
SAMPLE

Lab Sample ID: JQ33P
LIMS ID: 06-12938
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Percent Total Solids: 55.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	3	455	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	656	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-01-H
SAMPLE

Lab Sample ID: JQ33Q
LIMS ID: 06-12939
Matrix: Sediment
Data Release Authorized:
Reported: 08/01/06

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Percent Total Solids: 57.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/27/06	6010B	07/31/06	7439-92-1	Lead	3	527	
3050B	07/27/06	6010B	07/31/06	7440-66-6	Zinc	1	609	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

LDC #: 15488B4
SDG #: JQ33
Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 9/21/06
Page: 1 of 1
Reviewer: MM
2nd Reviewer:

METHOD: Lead & Zinc (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18 - 20/06
II.	Calibration	A	
III.	Blanks	SW	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	A	3 MS/Dup
VI.	Duplicate Sample Analysis	A	
VII.	Laboratory Control Samples (LCS)	A	LCS
VIII.	Internal Standard (ICP-MS)	N	Not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	Not performed
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	SW	D
XIV.	Field Blanks	~~SW~~ N	(4, T4-B414-02-A-Dup (SDG JQ52))

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Sediment

1	T4-B414-01-A	11	T4-B414-04-B	21		31	
2	T4-B414-01-B	12	T4-B414-04-C	22		32	
3	T4-B414-01-C	13	T4-S3-01-D	23		33	
4	T4-B414-02-A	14	T4-S3-01-E	24		34	
5	T4-B414-02-B	15	T4-S3-01-F	25		35	
6	T4-B414-02-C	16	T4-S3-01-G	26		36	
7	T4-B414-03-A	17	T4-S3-01-H	27		37	
8	T4-B414-03-B	18	T4-B414-01-AMS	28		38	
9	T4-B414-03-C	19	T4-B414-01-ADUP	29		39	
10	T4-B414-04-A	20	PB	30		40	

Notes:

LDC #: 15488B4
SDG #: JQ33

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: MH
2nd reviewer:

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-17	Sediment	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
m 18, 19	〃	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
ICP Trace		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___

Comments: Mercury by CVAA if performed

LDC #: 15488B4
SDG #: JR33

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: MH
2nd Reviewer: R

METHOD: Trace Metals (EPA SW 846 Method 6010/7000) Soil preparation factor applied: 100X
Sample Concentration units, unless otherwise noted: mg/kg Associated Samples: ALL (7 SX)

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Blank Action Limit											
Al															Al
Sb															Sb
As															As
Ba															Ba
Be															Be
Cd															Cd
Ca															Ca
Cr															Cr
Co															Co
Cu															Cu
Fe															Fe
Pb															Pb
Mg															Mg
Mn															Mn
Hg															Hg
Ni															Ni
K															K
Se															Se
Ag															Ag
Na															Na
Tl															Tl
V															V
Zn	1.2				6.0										Zn
B															B
Mo															Mo
Sr															Sr

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC#: 15488B4
SDG#: J833

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: MM
2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B)

(Y) N NA Were field duplicate pairs identified in this SDG?
(Y) N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (mg/kg)		(≤75) RPD	
	T4-B414-02-A-DUP	4		
Lead	149	18	157	
Zinc	180	104	54	

V:\FIELD DUPLICATES\FD_inorganic\15488B4.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Lead & Zinc

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ35

Sample Identification

T4-S3-02-C
T4-S3-02-D
T4-S3-02-E
T4-S3-02-F
T4-S3-03-B
T4-S3-03-C
T4-S3-03-D
T4-S3-05-E
T4-S3-05-F
T4-S3-05-G
T4-S3-05-H
T4-S3-05-J
T4-S3-06-A
T4-S3-06-B
T4-S3-08-B
T4-S3-08-C
T4-S3-02-CMS
T4-S3-02-CDUP
T4-S3-02-CREMS
T4-S3-02-CREDUP

Introduction

This data review covers 20 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Lead and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2002) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met with the following exceptions:

Date	Lab. Reference/ID	Analyte	%R (Limits)	Associated Samples	Flag	A or P
8/7/06	CCV7	Zinc	111.4 (90-110)	T4-S3-02-C T4-S3-02-CREMS T4-S3-02-CREDUP PBS2	J (all detects)	P

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Zinc	0.7 mg/Kg	T4-S3-02-D T4-S3-02-E T4-S3-02-F T4-S3-03-B T4-S3-03-C T4-S3-03-D T4-S3-05-E T4-S3-05-F T4-S3-05-G T4-S3-05-H T4-S3-05-J T4-S3-06-A T4-S3-06-B T4-S3-08-B T4-S3-08-C
PB (prep blank)	Zinc	2.4 mg/Kg	T4-S3-02-C

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks.

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	%R (Limits)	Flag	A or P
T4-S3-02-CREMS (T4-S3-02-C)	Zinc	133 (75-125)	J (all detects)	A
T4-S3-02-CMS (T4-S3-02-D T4-S3-02-E T4-S3-02-F T4-S3-03-B T4-S3-03-C T4-S3-03-D T4-S3-05-E T4-S3-05-F T4-S3-05-G T4-S3-05-H T4-S3-05-J T4-S3-06-A T4-S3-06-B T4-S3-08-B T4-S3-08-C)	Zinc	240 (75-125)	J (all detects)	A

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

Raw data were not reviewed for this SDG.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

Samples T4-S3-02-F and T4-S3-02-F-DUP (from SDG JQ52), samplesT4-S3-03-C and T4-S3-03-C-DUP (from SDG JQ52), and samples T4-S3-08-C and T4-S3-08-C-DUP (from SDG JQ52) were identified as field duplicates. No lead or zinc was detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
Lead	713	721	1 (≤75)
Zinc	708	705	0 (≤75)

Analyte	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-03-C-DUP	T4-S3-03-C	
Lead	432	417	4 (≤75)
Zinc	524	546	4 (≤75)

Analyte	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-08-C-DUP	T4-S3-08-C	
Lead	12	89	152 (≤75)
Zinc	69.6	142	68 (≤75)

XIV. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Lead & Zinc - Data Qualification Summary - SDG JQ35

SDG	Sample	Analyte	Flag	A or P	Reason
JQ35	T4-S3-02-C	Zinc	J (all detects)	P	Calibration (%R)
JQ35	T4-S3-02-C T4-S3-02-D T4-S3-02-E T4-S3-02-F T4-S3-03-B T4-S3-03-C T4-S3-03-D T4-S3-05-E T4-S3-05-F T4-S3-05-G T4-S3-05-H T4-S3-05-J T4-S3-06-A T4-S3-06-B T4-S3-08-B T4-S3-08-C	Zinc	J (all detects)	A	Matrix spike analysis (%R)

Terminal 4 Early Action
Lead & Zinc - Laboratory Blank Data Qualification Summary - SDG JQ35

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-02-C
SAMPLE

Lab Sample ID: JQ35A
LIMS ID: 06-12956
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Percent Total Solids: 53.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/07/06	6010B	08/07/06	**7439-92-1**	**Lead**	4	212	
3050B	08/07/06	6010B	08/07/06	**7440-66-6**	**Zinc**	1	328	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-02-D
SAMPLE

Lab Sample ID: JQ35B
LIMS ID: 06-12957
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Percent Total Solids: 55.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	**7439-92-1**	**Lead**	3	**496**	
3050B	07/28/06	6010B	08/01/06	**7440-66-6**	**Zinc**	1	**633**	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-02-E
SAMPLE

Lab Sample ID: JQ35C
LIMS ID: 06-12958
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Percent Total Solids: 58.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	7439-92-1	Lead	3	452	
3050B	07/28/06	6010B	08/01/06	7440-66-6	Zinc	1	573	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-02-F
SAMPLE

Lab Sample ID: JQ35D
LIMS ID: 06-12959
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Percent Total Solids: 55.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	**7439-92-1**	**Lead**	8	**721**	
3050B	07/28/06	6010B	08/01/06	**7440-66-6**	**Zinc**	3	**705**	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-03-B
SAMPLE

Lab Sample ID: JQ35E
LIMS ID: 06-12960
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 56.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	**7439-92-1**	**Lead**	3	**266**	
3050B	07/28/06	6010B	08/01/06	**7440-66-6**	**Zinc**	1	**418**	J

U-Analyte undetected at given RL
RL-Reporting Limit

7/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-03-C
SAMPLE

Lab Sample ID: JQ35F
LIMS ID: 06-12961
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 59.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	**7439-92-1**	**Lead**	3	**417**	
3050B	07/28/06	6010B	08/01/06	**7440-66-6**	**Zinc**	1	**546**	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/26/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-03-D
SAMPLE

Lab Sample ID: JQ35G
LIMS ID: 06-12962
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 66.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	**7439-92-1**	**Lead**	3	**580**	
3050B	07/28/06	6010B	08/01/06	**7440-66-6**	**Zinc**	0.8	**583**	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-05-E
SAMPLE

Lab Sample ID: JQ35H
LIMS ID: 06-12963
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 51.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	7439-92-1	Lead	4	142	
3050B	07/28/06	6010B	08/01/06	7440-66-6	Zinc	1	303	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-05-F
SAMPLE

Lab Sample ID: JQ35I
LIMS ID: 06-12964
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 55.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	7439-92-1	Lead	3	267	
3050B	07/28/06	6010B	08/01/06	7440-66-6	Zinc	1	479	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-05-G
SAMPLE

Lab Sample ID: JQ35J
LIMS ID: 06-12965
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 57.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	7439-92-1	Lead	3	264	
3050B	07/28/06	6010B	08/01/06	7440-66-6	Zinc	1	454	J

U-Analyte undetected at given RL
RL-Reporting Limit

8/7/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-05-H
SAMPLE

Lab Sample ID: JQ35K
LIMS ID: 06-12966
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 56.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	**7439-92-1**	**Lead**	3	**311**	
3050B	07/28/06	6010B	08/01/06	**7440-66-6**	**Zinc**	1	**465**	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-05-J
SAMPLE

Lab Sample ID: JQ35L
LIMS ID: 06-12967
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 78.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	**7439-92-1**	**Lead**	3	**6**	
3050B	07/28/06	6010B	08/01/06	**7440-66-6**	**Zinc**	0.8	**53.6**	J

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-06-A
SAMPLE

Lab Sample ID: JQ35M
LIMS ID: 06-12968
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 50.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	**7439-92-1**	**Lead**	4	**104**	
3050B	07/28/06	6010B	08/01/06	**7440-66-6**	**Zinc**	1	**188**	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-06-B
SAMPLE

Lab Sample ID: JQ35N
LIMS ID: 06-12969
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 72.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	**7439-92-1**	**Lead**	3	**10**	
3050B	07/28/06	6010B	08/01/06	**7440-66-6**	**Zinc**	0.8	**53.5**	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-08-B
SAMPLE

Lab Sample ID: JQ35O
LIMS ID: 06-12970
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 68.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	**7439-92-1**	**Lead**	3	**188**	
3050B	07/28/06	6010B	08/01/06	**7440-66-6**	**Zinc**	0.8	**297**	J

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-08-C
SAMPLE

Lab Sample ID: JQ35P
LIMS ID: 06-12971
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 82.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/28/06	6010B	08/01/06	**7439-92-1**	**Lead**	2	89	
3050B	07/28/06	6010B	08/01/06	**7440-66-6**	**Zinc**	0.7	142	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

LDC #: 15488C4

SDG #: JQ35

Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 9/21/06

Page: 1 of 1

Reviewer: MM

2nd Reviewer:

METHOD: Lead & Zinc (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18-20/06
II.	Calibration	SW	
III.	Blanks	SW	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	SW	
VI.	Duplicate Sample Analysis	A	
VII.	Laboratory Control Samples (LCS)	A	LCS
VIII.	Internal Standard (ICP-MS)	N	Not Utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	Not performed
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	SDG JQ35
XIII.	Field Duplicates	SW	(4, T4-S3-02-F-DUP), (6, T4-S3-03-C-DUP), (16, T4-S3-08-C-DUP)
XIV.	Field Blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: sediment

1	T4-S3-02-C	11	T4-S3-05-H	21	PBS1	31	
2	T4-S3-02-D	12	T4-S3-05-J	22	PBS2	32	
3	T4-S3-02-E	13	T4-S3-06-A	23		33	
4	T4-S3-02-F	14	T4-S3-06-B	24		34	
5	T4-S3-03-B	15	T4-S3-08-B	25		35	
6	T4-S3-03-C	16	T4-S3-08-C	26		36	
7	T4-S3-03-D	17	T4-S3-02-CMS	27		37	
8	T4-S3-05-E	18	T4-S3-02-CDUP	28		38	
9	T4-S3-05-F	19	T4-S3-02-CREMS	29		39	
10	T4-S3-05-G	20	T4-S3-02-CREDUP	30		40	

Notes:

LDC #: 154884
SDG #: JQ31

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: MH
2nd reviewer:

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
L46	Sediment	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
m17,18	"	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
L19,20	"	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
ICP Trace		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___

Comments: Mercury by CVAA if performed

LDC #: 15488c4
SDG #: JQ3T

VALIDATION FINDINGS WORKSHEET
Calibration

Reviewer: MH
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all instruments calibrated daily, each set-up time, and were the proper number of standards used?

Y N N/A Were all initial and continuing calibration verification percent recoveries (%R) within the control limits of 90-110% for all analytes except mercury (80-120%) and cyanide (85-115%)?

LEVEL IV ONLY:

Y N N/A Was a midrange cyanide standard distilled?

Y N N/A Are all correlation coefficients $\geq$0.995?

Y N N/A Were recalculated results acceptable? See Level IV Initial and Continuing Calibration Recalculation Worksheet for recalculations.

#	Date	Calibration ID	Analyte	%R	Associated Samples	Qualification of Data
1	8/7/06	CCV7	Zn	111.4	1, 19, 20, PBS2	J+ /P

Comments:

LDC #: 15488C4
SDG #: J035

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Reviewer: MH
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/7000) Soil preparation factor applied: 100X
Sample Concentration units, unless otherwise noted: mg/kg Associated Samples: 2-16 (7SX)

					Sample Identification										
Analyte	Maximum PB* (mg/Kg)	Maximum PB* (ug/L)	Maximum ICB/CCB* (ug/L)	Blank Action Limit											
Al															Al
Sb															Sb
As															As
Ba															Ba
Be															Be
Cd															Cd
Ca															Ca
Cr															Cr
Cc															Co
Cu															Cu
Fe															Fe
Pb															Pb
Mg															Mg
Mn															Mn
Hg															Hg
Nl															Nl
K															K
Se															Se
Ag															Ag
Na															Na
Tl															Tl
V															V
Zn	0.7			3.5											Zn
B															B
Mo															Mo
Sr															Sr

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 15488C4
SDG #: J235

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Page: 1 of 2
Reviewer: MH
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/7000) Soil preparation factor applied: _____
Sample Concentration units, unless otherwise noted: mg/kg Associated Samples: 1 (75%)

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Blank Action Limit											
Al															Al
Sb															Sb
As															As
Ba															Ba
Be															Be
Cd															Cd
Ca															Ca
Cr															Cr
Co															Co
Cu															Cu
Fe															Fe
Pb															Pb
Mg															Mg
Mn															Mn
Hg															Hg
Ni															Ni
K															K
Se															Se
Ag															Ag
Na															Na
Tl															Tl
V															V
Zn	2.4			12.0											Zn
B															B
Mo															Mo
Sr															Sr

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

BLNKSMP.4S2

LDC #: 15488C4
SDG #: JQ35

VALIDATION FINDINGS WORKSHEET
Matrix Spike Analysis

Reviewer: MM
2nd Reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y (N) N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Was a post digestion spike analyzed for ICP elements that did not meet the required criteria for matrix spike recovery?

LEVEL IV ONLY:

Y N (N/A) Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Matrix Spike ID	Matrix	Analyte	%R	Associated Samples	Qualifications
1	19	Solid	Zn	133	1	J (+) / A
2	17	↓	Zn	240	2-16	↓

Comments:

LDC#: 15488C4
SDG#: JQ35

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: MM
2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B)

(Y) N NA Were field duplicate pairs identified in this SDG?
(Y) N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (mg/kg)		(≤75) RPD	
	T4-S3-02-F-DUP	T4-S3-02-F		
Lead	713	721	1	
Zinc	708	705	0	

Compound	Concentration (mg/kg)		(≤75) RPD	
	T4-S3-03-C-DUP	T4-S3-03-C		
Lead	432	417	4	
Zinc	524	546	4	

Compound	Concentration (mg/kg)		(≤75) RPD	
	T4-S3-08-C-DUP	T4-S3-08-C		
Lead	12	89	152	
Zinc	69.6	142	68	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Lead & Zinc

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ36

Sample Identification

T4-S3-07-B
T4-S3-07-C
T4-S3-07-D
T4-S3-07-E
T4-S3-04-A
T4-S3-04-B
T4-S3-04-C
T4-S3-04-D
T4-WB-01
T4-WB-02
T4-WB-03
T4-WB-04
T4-S3-07-BMS
T4-S3-07-BDUP

Introduction

This data review covers 14 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Lead and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2002) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

Raw data were not reviewed for this SDG.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

No field duplicates were identified in this SDG.

XIV. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Lead & Zinc - Data Qualification Summary - SDG JQ36

No Sample Data Qualified in this SDG

Terminal 4 Early Action
Lead & Zinc - Laboratory Blank Data Qualification Summary - SDG JQ36

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-07-B
SAMPLE

Lab Sample ID: JQ36A
LIMS ID: 06-12972
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 52.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	4	57	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	1	212	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-07-C
SAMPLE

Lab Sample ID: JQ36B
LIMS ID: 06-12973
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 54.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	3	53	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	1	156	

U-Analyte undetected at given RL
RL-Reporting Limit

8/7/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-07-D
SAMPLE

Lab Sample ID: JQ36C
LIMS ID: 06-12974
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 64.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	3	81	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	0.8	217	

U-Analyte undetected at given RL
RL-Reporting Limit

8/8/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-07-E
SAMPLE

Lab Sample ID: JQ36D
LIMS ID: 06-12975
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 79.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	2	14	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	0.7	57.5	

U-Analyte undetected at given RL
RL-Reporting Limit

8/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-04-A
SAMPLE

Lab Sample ID: JQ36E
LIMS ID: 06-12976
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 57.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	3	435	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	1	460	

U-Analyte undetected at given RL
RL-Reporting Limit

8/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-04-B
SAMPLE

Lab Sample ID: JQ36F
LIMS ID: 06-12977
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 71.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	3	206	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	0.8	252	

U-Analyte undetected at given RL
RL-Reporting Limit

8/8/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-04-C
SAMPLE

Lab Sample ID: JQ36G
LIMS ID: 06-12978
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 75.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	3	276	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	0.8	343	

U-Analyte undetected at given RL
RL-Reporting Limit

8/7/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-S3-04-D
SAMPLE

Lab Sample ID: JQ36H
LIMS ID: 06-12979
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 83.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	2	**111**	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	0.7	**141**	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-WB-01
SAMPLE

Lab Sample ID: JQ36I
LIMS ID: 06-12980
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 40.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	5	**30**	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	1	**129**	

U-Analyte undetected at given RL
RL-Reporting Limit

8/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-WB-02
SAMPLE

Lab Sample ID: JQ36J
LIMS ID: 06-12981
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 51.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	4	35	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	1	141	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-WB-03
SAMPLE

Lab Sample ID: JQ36K
LIMS ID: 06-12982
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 42.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	5	24	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	1	127	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: T4-WB-04
SAMPLE

Lab Sample ID: JQ36L
LIMS ID: 06-12983
Matrix: Sediment
Data Release Authorized:
Reported: 08/04/06

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Percent Total Solids: 44.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/31/06	6010B	08/02/06	**7439-92-1**	**Lead**	4	20	
3050B	07/31/06	6010B	08/02/06	**7440-66-6**	**Zinc**	1	112	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

LDC #: 15488D4
SDG #: JQ36
Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 9/22/06
Page: 1 of 1
Reviewer: MM
2nd Reviewer: [signature]

METHOD: Lead & Zinc (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/20/06
II.	Calibration	A	
III.	Blanks	A	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	A	3 MS/Dup
VI.	Duplicate Sample Analysis	A	
VII.	Laboratory Control Samples (LCS)	A	Les
VIII.	Internal Standard (ICP-MS)	N	Not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	Not performed
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Sediment.

1	T4-S3-07-B	11	T4-WB-03	21		31	
2	T4-S3-07-C	12	T4-WB-04	22		32	
3	T4-S3-07-D	13	T4-S3-07-BMS	23		33	
4	T4-S3-07-E	14	T4-S3-07-BDUP	24		34	
5	T4-S3-04-A	15	PB	25		35	
6	T4-S3-04-B	16		26		36	
7	T4-S3-04-C	17		27		37	
8	T4-S3-04-D	18		28		38	
9	T4-WB-01	19		29		39	
10	T4-WB-02	20		30		40	

Notes: _____

LDC #: 154804
SDG #: JB36

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: MP
2nd reviewer:

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-12	Sediment	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
13,14	↓	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
ICP Trace		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___

Comments: Mercury by CVAA if performed

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Terminal 4 Early Action
Collection Date:	July 18 through July 19, 2006
LDC Report Date:	September 29, 2006
Matrix:	Sediment
Parameters:	Lead & Zinc
Validation Level:	EPA Level III
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	JQ52

Sample Identification

T4-S3-02-F-DUP
T4-S3-03-C-DUP
T4-B414-02-A-DUP
T4-S3-08-C-DUP
T4-S3-02-F-DUPMS
T4-S3-02-F-DUPDUP

Introduction

This data review covers 6 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Lead and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2002) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met with the following exceptions:

Date	Lab. Reference/ID	Analyte	%R (Limits)	Associated Samples	Flag	A or P
8/7/06	CCV7	Zinc	111.4 (90-110)	T4-S3-02-F-DUP T4-S3-02-F-DUPMS T4-S3-02-F-DUPDUP	J (all detects)	P

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Zinc	2.0 mg/Kg	All samples in SDG JQ52

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks.

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VIII. Internal Standards (ICP-MS)

ICP-MS was not utilized in this SDG.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution was not performed for this SDG.

XI. Sample Result Verification

Raw data were not reviewed for this SDG.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

Samples T4-S3-02-F (from SDG JQ35) and T4-S3-02-F-DUP, samplesT4-S3-03-C (from SDG JQ35) and T4-S3-03-C-DUP, samples T4-S3-08-C (from SDG JQ35) and T4-S3-08-C-DUP, and samples T4-B414-02-A-DUP and T4-B414-02-A (from SDG JQ33) were identified as field duplicates. No lead or zinc was detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
Lead	713	721	1 (≤75)
Zinc	708	705	0 (≤75)

Analyte	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-03-C-DUP	T4-S3-03-C	
Lead	432	417	4 (≤75)
Zinc	524	546	4 (≤75)

Analyte	Concentration (mg/Kg)		RPD (Limits)
	T4-B414-02-A-DUP	T4-B414-02-A	
Lead	149	18	157 (≤75)
Zinc	180	104	54 (≤75)

Analyte	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-08-C-DUP	T4-S3-08-C	
Lead	12	89	152 (≤75)
Zinc	69.6	142	68 (≤75)

XIV. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Lead & Zinc - Data Qualification Summary - SDG JQ52

SDG	Sample	Analyte	Flag	A or P	Reason
JQ52	T4-S3-02-F-DUP	Zinc	J (all detects)	P	Calibration (%R)

Terminal 4 Early Action
Lead & Zinc - Laboratory Blank Data Qualification Summary - SDG JQ52

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-02-F-DUP
SAMPLE

Lab Sample ID: JQ52A
LIMS ID: 06-13102
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Percent Total Solids: 54.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/07/06	6010B	08/07/06	7439-92-1	Lead	4	713	
3050B	08/07/06	6010B	08/07/06	7440-66-6	Zinc	1	708	J

U-Analyte undetected at given RL
RL-Reporting Limit

9/7/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-03-C-DUP
SAMPLE

Lab Sample ID: JQ52B
LIMS ID: 06-13103
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 60.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/07/06	6010B	08/07/06	7439-92-1	Lead	3	432	
3050B	08/07/06	6010B	08/07/06	7440-66-6	Zinc	0.9	524	

U-Analyte undetected at given RL
RL-Reporting Limit

8/7/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-B414-02-A-DUP
SAMPLE

Lab Sample ID: JQ52C
LIMS ID: 06-13104
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 50.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/07/06	6010B	08/07/06	7439-92-1	Lead	4	149	
3050B	08/07/06	6010B	08/07/06	7440-66-6	Zinc	1	180	

U-Analyte undetected at given RL
RL-Reporting Limit

9/28/06

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: T4-S3-08-C-DUP
SAMPLE

Lab Sample ID: JQ52D
LIMS ID: 06-13114
Matrix: Sediment
Data Release Authorized:
Reported: 08/08/06

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Percent Total Solids: 81.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/07/06	6010B	08/07/06	7439-92-1	Lead	2	12	
3050B	08/07/06	6010B	08/07/06	7440-66-6	Zinc	0.7	69.6	

U-Analyte undetected at given RL
RL-Reporting Limit

9/26/06

LDC #: 15488E4
SDG #: JQ52
Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 9/27/06
Page: 1 of 1
Reviewer: MG
2nd Reviewer: [signature]

METHOD: Lead & Zinc (EPA SW 846 Method 6010B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/18, 19/06
II.	Calibration	SW A	
III.	Blanks	SW	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	A	} MS/DUP
VI.	Duplicate Sample Analysis	A	
VII.	Laboratory Control Samples (LCS)	A	LCS
VIII.	Internal Standard (ICP-MS)	N	} not utilized
IX.	Furnace Atomic Absorption QC	N	
X.	ICP Serial Dilution	N	not performed
XI.	Sample Result Verification	N	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	SW	(1, T4-S3-02-F), (2, T4-S3-03-C), (4,T4-S3-08-C), (3, T4-B414-02-A)
XIV.	Field Blanks	N	SDG SQ35 SDG SQ33

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: Soil

1	T4-S3-02-F-DUP	11		21		31	
2	T4-S3-03-C-DUP	12		22		32	
3	T4-B414-02-A-DUP	13		23		33	
4	T4-S3-08-C-DUP	14		24		34	
5	T4-S3-02-F-DUPMS	15		25		35	
6	T4-S3-02-F-DUPDUP	16		26		36	
7	PB	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 154884

SDG #: JB52

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: MH

2nd reviewer:

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-4	Sediment	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
FC5.6	b	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
ICP Trace		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, (Pb), Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, (Zn), Mo, B, Si, CN, ___ ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___ ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Si, CN, ___

Comments: Mercury by CVAA if performed

LDC #: 15488 Z4
SDG #: JQ52

VALIDATION FINDINGS WORKSHEET
Calibration

Page: 1 of 1
Reviewer: WH
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all instruments calibrated daily, each set-up time, and were the proper number of standards used?

Y N N/A Were all initial and continuing calibration verification percent recoveries (%R) within the control limits of 90-110% for all analytes except mercury (80-120%) and cyanide (85-115%)?

LEVEL IV ONLY:

Y N N/A Was a midrange cyanide standard distilled?

Y N N/A Are all correlation coefficients ≥0.995?

Y N N/A Were recalculated results acceptable? See Level IV Initial and Continuing Calibration Recalculation Worksheet for recalculations.

#	Date	Calibration ID	Analyte	%R	Associated Samples	Qualification of Data
1	8/17/06	CCV7	Zn	111.4	1, 5, 6	J+/P

Comments:

CAL.4SW

LDC #: 1548824
SDG #: JAE2
METHOD: Trace Metals (EPA SW 846 Method 6010/7000)
Sample Concentration units, unless otherwise noted: ug/kg

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Soil preparation factor applied: 100X
Associated Samples: All (75X)

Page: 1 of 1
Reviewer: MH
2nd Reviewer: [illegible]

					Sample Identification										
Analyte	Maximum PB[a] (mg/Kg)	Maximum PB[a] (ug/L)	Maximum ICB/CCB[a] (ug/L)	Blank Action Limit											
Al															Al
Sb															Sb
As															As
Ba															Ba
Be															Be
Cd															Cd
Ca															Ca
Cr															Cr
Co															Co
Cu															Cu
Fe															Fe
Pb															Pb
Mg															Mg
Mn															Mn
Hg															Hg
Ni															Ni
K															K
Se															Se
Ag															Ag
Na															Na
Tl															Tl
V															V
Zn	2.0			10.0											Zn
B															B
Mo															Mo
Sr															Sr

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

BLNKSMP.4S2

LDC#: 15488E4
SDG#: J852

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: MM
2nd Reviewer: Q

METHOD: Metals (EPA Method 6010B)

(Y)N NA Were field duplicate pairs identified in this SDG?
(Y)N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (mg/kg) 1	T4-S3-02-F	(595) RPD	
Lead	713	721	1	
Zinc	708	705	0	

Compound	Concentration (mg/kg) 2	T4-S3-03-C	(595) RPD	
Lead	432	417	4	
Zinc	524	546	4	

Compound	Concentration (mg/kg) 3	T4-B414-02-A	(595) RPD	
Lead	149	18	157	
Zinc	180	104	54	

Compound	Concentration (mg/kg) 4	T4-S3-08-C	(595) RPD	
Lead	12	89	152	
Zinc	69.6	142	68	

Terminal 4 Early Action
Data Validation Reports
LDC# 15488

Wet Chemistry

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Terminal 4 Early Action
Collection Date:	July 20, 2006
LDC Report Date:	September 29, 2006
Matrix:	Sediment and Water Composite
Parameters:	Wet Chemistry
Validation Level:	EPA Level III
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	JQ30

Sample Identification

T4-COMP1
T4-COMP2

Introduction

This data review covers 2 sediment and water composite samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per ASTM Method D421/D422 for Grain Size, ASTM Method D854 for Specific Gravity, ASTM Method D2216 for Percent Moisture, ASTM Method D4318 for Atterberg Limits, and Army Corps of Engineers Method for Column Setting Test.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2002) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were not required by these methods.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were not required by these methods.

V. Duplicates/Triplicates

Duplicate (DUP) and triplicate (TRP) sample analyses were not required by these methods.

VI. Laboratory Control Samples

Laboratory control samples were not required by these methods.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Wet Chemistry - Data Qualification Summary - SDG JQ30

No Sample Data Qualified in this SDG

Terminal 4 Early Action
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG JQ30

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

GEOTECHNICAL ANALYSIS DATA SHEET
Specific Gravity by Method ASTM D854

Data Release Authorized:
Reported: 08/23/06
Date Received: 07/21/06
Page 1 of 1

QC Report No: JQ30-Anchor Environmental
Project: T4 EARLY ACTION
050332-01

Client/ ARI ID	Date Sampled	Matrix	Analysis Date	Result
T4-COMP-01 JQ30A 06-12857	07/20/06	Sediment	08/16/06 12:00	2.70
T4-COMP-02 JQ30B 06-12858	07/20/06	Sediment	08/16/06 12:00	2.64
T4-COMP-01 (< 0.074 mm) JQ30C 06-13115	07/20/06	Sediment	08/16/06 12:00	2.62
T4-COMP-01 (> 0.074 mm) JQ30D 06-13116	07/20/06	Sediment	08/16/06 12:00	2.69
T4-COMP-02 (< 0.074 mm) JQ30E 06-13117	07/20/06	Sediment	08/16/06 12:00	2.63
T4-COMP-02 (> 0.074 mm) JQ30F 06-13118	07/20/06	Sediment	08/16/06 12:00	2.62

Reported in Std Units

9/7/06

ANALYTICAL RESOURCES INCORPORATED

GEOTECHNICAL ANALYSIS DATA SHEET
Moisture Content by Method ASTM D2216

Data Release Authorized:
Reported: 08/23/06
Date Received: 07/21/06
Page 1 of 1

QC Report No: JQ30-Anchor Environmental
Project: T4 EARLY ACTION
050332-01

Client/ ARI ID	Date Sampled	Matrix	Analysis Date	Result
T4-COMP-01 JQ30A 06-12857	07/20/06	Sediment	08/16/06 12:00	60.57
T4-COMP-02 JQ30B 06-12858	07/20/06	Sediment	08/16/06 12:00	71.60

Reported in Percent

8/24/06

ANALYTICAL RESOURCES INCORPORATED

Column Settling Test

Sample ID: Comp 1

Initial mix:	
Water volume, liters:	85
Sediment mass, grams, dry weight basis:	22,335.3
Initial mix ratio, g/L:	262.8
Initial measured TSS, in column:	30.9

Sediment Moisture Content, % of dry weight: 60.6

Percent of Initial TSS Concentration over Time

	Depth from Top of Settling Column (ft)										
	0.63	1.13	1.63	2.13	2.63	3.13	3.63	4.13.	4.63	5.13	5.63
Time, hrs											
1	13.5	13.3	15.4	13.1	16.4	13.8	16.9	13.5	17.3	13.8	
2	11.0	11.5	12.3	12.2	12.5	12.6	12.7	12.2	12.4	13.4	13.4
4		9.6	10.5	10.9	10.8	11.6	10.8	11.1	11.3	11.6	10.9
6		9.6	10.4	10.3	10.0	10.5	10.4	10.6	10.4	10.5	10.4
8		7.0	9.1	9.4	9.7	10.0	9.6	10.0	10.2	9.8	10.1
12			7.8	8.4	9.3	9.0	9.3	9.4	8.9	9.2	9.2
24			6.0	7.0	7.1	7.1	7.7	8.4	7.6	7.5	7.7
48			3.4	4.9	5.8	5.7	6.2	6.3	6.1	6.8	6.7
97			0.4	3.6	3.9	4.7	4.9	5.1	5.3	5.3	5.4
174				0.1	1.0	2.4	2.4	2.8	3.0	3.3	3.4
240				0.2	0.2	2.3	1.8	2.4	2.7	2.8	3.0

JQ30

0017

9/26/05

ANALYTICAL RESOURCES INCORPORATED

Column Settling Test

Sample ID: Comp 1

Turbidity Over Time and Depth

	Depth from Top of Settling Column (ft)										
	0.63	1.13	1.63	2.13	2.63	3.13	3.63	4.13	4.63	5.13	5.63
Time, hrs											
1	3880	3960	4000	3980	4000	3980	4000	3940	4000	3840	3500
2	3500	3760	3720	3600	3620	4200	3700	3820	3700	3740	3700
4	2000	3320	3380	3400	3380	3420	3440	3420	3440	3480	3340
6		3240	3360	3360	3320	3360	3360	3260	3360	3240	3360
8		2720	2980	3020	3140	3180	3080	3080	3160	3220	3160
12			2820	2820	2960	2960	2940	2980	2980	3000	2980
24			2500	2700	2660	2660	2720	2840	2800	2680	2720
48			1840	2100	2260	2300	2360	2400	2420	2360	2440
97			620	1760	1840	2000	1980	2140	2160	2220	2200
174				631	1360	1530	1600	1640	1760	1790	1820
240				375	390	1520	1250	1380	1550	1510	1540

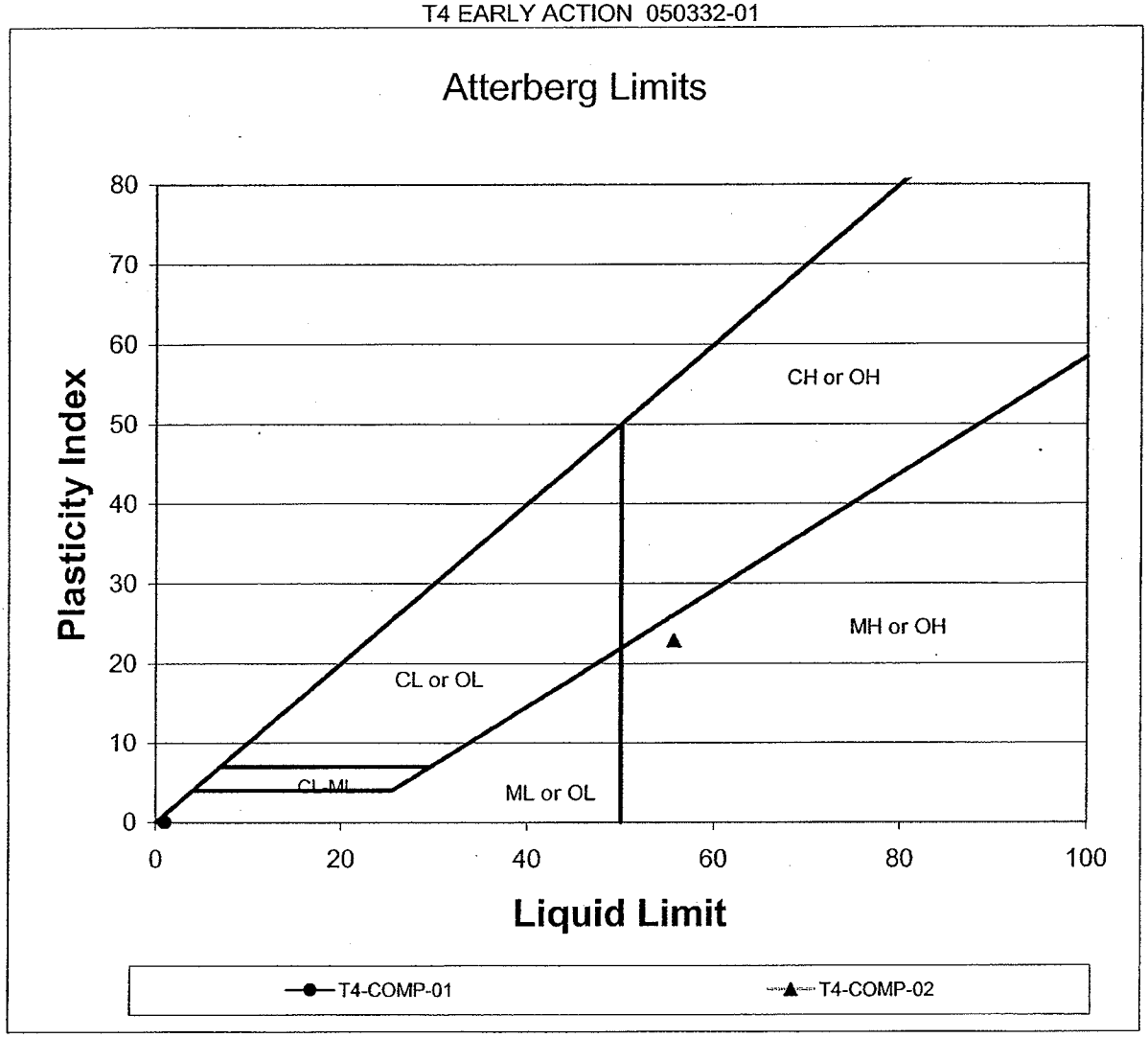
JQ30

0011

9/11/02

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental
T4 EARLY ACTION 050332-01



Sample Number	Depth	Plasticity Index	Liquid Limit	Plastic Limit	Classification
T4-COMP-01	NA	NA	NA	NA	Non-Plastic
T4-COMP-02	NA	22.8	55.7	32.9	OH

JQ30

9/28/05

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental
T4 EARLY ACTION 050332-01

Percent Finer (Passing) Than the Indicated Size

Sieve Size (microns)	2"	1"	3/4"	1/2"	3/8"	#4 (4750)	#10 (2000)	#20 (850)	#40 (425)	#60 (250)	#100 (150)	#200 (75)	32	22	13	9	7	3.2	1.3
T4-COMP-01	100.0	100.0	100.0	98.9	98.7	97.8	97.0	94.8	75.8	45.8	35.8	30.5	27.2	22.9	19.2	16.1	13.0	9.3	6.2
T4-COMP-02	100.0	100.0	100.0	100.0	100.0	99.9	99.8	99.4	92.6	77.8	72.8	66.6	54.7	48.9	39.5	33.1	27.3	19.4	13.7

Testing performed according to ASTM D421/D422

JQ30

0007

8/28/07

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental
T4 EARLY ACTION 050332-01

Percent Retained in Each Size Fraction

Description	% Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Very Coarse Silt	% Coarse Silt	% Medium Silt	% Fine Silt	% Fine Silt	% Very Fine Silt	% Clay
Particle Size (microns)	> 4750	4750-2000	2000-425	425-75	75-32	32-22	22-13	13-9	9-7	7-3.2	<3.2
T4-COMP-01	2.2	0.8	21.2	45.2	3.4	4.3	3.7	3.1	3.1	3.7	9.3
T4-COMP-02	0.1	0.1	7.2	26.0	12.0	5.8	9.3	6.5	5.8	7.9	19.4

8000

JQ30

9/28/04

LDC #: 15488A6
SDG #: JQ30
Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 9/21/06
Page: 1 of 1
Reviewer: MM
2nd Reviewer: [illegible]

METHOD: (Analyte) Atterberg Limits (ASTM D4318), Grain Size (ASTM D422), Specific Gravity (ASTM D854), Percent Moisture (ASTM D2216), Column Setting Test (ACOE)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/20/06
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	N	Not required
IV	Matrix Spike/Matrix Spike Duplicates	N	Not required
V	Duplicates	N	client specified
VI.	Laboratory control samples	N	Not required.
VII.	Sample result verification	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Sediment + water

1	T4-COMP1	11		21		31	
2	T4-COMP2	12		22		32	
3		13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 15488A6
SDG #: JQ30

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: MY
2nd reviewer: K

All circled methods are applicable to each sample.

Sample ID	Matrix	Parameter
1,2	sediment + H2O	TS TOC (Grain Size) (Gravity) Density Porosity (Moisture) (Atterberg) (Column Settling Test)
1	↓	TS TOC Grain Size Gravity Density Porosity Moisture Atterberg (Column Settling Test)
		TS TOC Grain Size Gravity Density Porosity Moisture Atterberg
		TS TOC Grain Size Gravity Density Porosity Moisture Atterberg
		TS TOC Grain Size Gravity Density Porosity Moisture Atterberg
		TS TOC Grain Size Gravity Density Porosity Moisture Atterberg
		TS TOC Grain Size Gravity Density Porosity Moisture Atterberg
		TS TOC Grain Size Gravity Density Porosity Moisture Atterberg
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		TS TOC Grain Size Gravity Density Porosity Moisture Atterberg
		TS TOC Grain Size Gravity Density Porosity Moisture Atterberg

Comments:

LDC Report# 15488B6

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Wet Chemistry

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ33

Sample Identification

T4-B414-01-A	T4-B414-04-ATRP
T4-B414-01-B	T4-B414-02-ATRP
T4-B414-01-C	
T4-B414-02-A	
T4-B414-02-B	
T4-B414-02-C	
T4-B414-03-A	
T4-B414-03-B	
T4-B414-03-C	
T4-B414-04-A	
T4-B414-04-B	
T4-B414-04-C	
T4-S3-01-D	
T4-S3-01-E	
T4-S3-01-F	
T4-S3-01-G	
T4-S3-01-H	
T4-B414-02-AMS	
T4-B414-02-ADUP	
T4-B414-04-ADUP	

Introduction

This data review covers 22 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 160.3 for Total Solids, Plumb Method for Total Organic Carbon, and ASTM Method D421 for Grain Size.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2002) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Duplicates/Triplicates

Duplicate (DUP) and triplicate (TRP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

Standard reference material (SRM) percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

Samples T4-B414-02-A and T4-B414-02-A-DUP (from SDG JQ52) were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (%)		RPD (Limits)
	T4-B414-02-A-DUP	T4-B414-02-A	
Total solids	50.10	50.90	2 (≤75)
Total organic carbon	1.74	1.83	5 (≤75)

X. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Wet Chemistry - Data Qualification Summary - SDG JQ33

No Sample Data Qualified in this SDG

Terminal 4 Early Action
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG JQ33

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental
T4 EARLY ACTION - 050332-01

Percent Finer (Passing) Than the Indicated Size

Sieve Size (microns)	2"	1"	3/4"	1/2"	3/8"	#4 (4750)	#10 (2000)	#20 (850)	#40 (425)	#60 (250)	#100 (150)	#200 (75)	32	22	13	9	7	3.2	1.3
T4-B414-01-A	100.0	100.0	100.0	100.0	100.0	99.9	99.7	99.2	97.8	92.8	88.3	73.4	51.1	43.2	35.4	30.7	25.9	18.1	11.0
T4-B414-01-B	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.4	97.1	88.4	84.2	77.9	62.8	50.7	39.9	33.1	29.0	18.2	12.8
T4-B414-01-C	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.8	99.0	96.7	94.9	89.3	62.2	52.8	38.8	32.8	27.4	19.4	12.7
T4-B414-02-A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.1	97.6	95.8	84.0	60.4	49.2	38.0	31.7	26.8	18.7	11.2
T4-B414-02-B	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.5	98.7	96.4	85.8	63.3	52.7	40.7	35.3	30.0	19.3	12.0
T4-B414-02-C	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	97.9	92.2	90.0	84.2	66.3	52.9	43.6	36.9	30.8	20.8	13.4
T4-B414-03-A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	97.3	92.2	88.6	73.5	51.0	40.7	30.3	25.9	21.4	13.3	8.9
T4-B414-03-B	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	98.5	96.1	93.3	78.8	59.9	54.4	39.2	32.3	26.8	17.2	11.7
T4-B414-03-C	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	98.6	96.7	95.2	88.6	67.3	54.8	42.3	35.4	28.4	17.3	11.1
T4-B414-04-A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.4	98.6	97.2	86.7	59.8	47.7	36.9	30.9	25.5	17.5	11.4
T4-B414-04-A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	99.1	98.4	97.3	87.9	67.3	51.7	39.9	32.5	26.6	18.5	10.3
T4-B414-04-A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	99.3	98.7	97.8	87.5	64.4	53.6	41.3	34.7	28.2	21.7	12.3
T4-B414-04-B	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.6	99.2	98.6	96.5	83.3	58.0	47.5	36.3	30.3	23.7	16.5	10.5
T4-B414-04-C	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	99.1	97.6	93.9	78.0	56.8	47.0	37.2	31.3	24.8	17.0	9.8
T4-S3-01-D	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.6	99.4	99.1	3.0	2.5	2.0	1.7	1.3	0.8	0.5
T4-S3-01-E	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.6	97.6	88.9	79.9	66.6	51.4	33.4	31.5	24.4	19.3	11.6	7.7
T4-S3-01-F	100.0	100.0	100.0	100.0	100.0	99.1	98.7	97.2	92.1	72.6	54.5	38.9	32.4	26.4	22.8	18.0	14.4	8.4	4.8
T4-S3-01-G	100.0	100.0	100.0	100.0	100.0	98.8	98.7	97.9	94.2	83.1	74.5	65.9	57.2	48.5	39.8	32.4	26.8	16.8	10.6
T4-S3-01-H	100.0	100.0	100.0	100.0	100.0	94.2	93.5	92.3	89.3	80.2	73.2	66.3	56.8	46.0	38.8	33.1	27.3	16.5	10.1

Testing performed according to ASTM D421/D422

JQ33

1675

9/26/06

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental
T4 EARLY ACTION - 050332-01

Percent Retained in Each Size Fraction

Description	% Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Very Coarse Silt	% Coarse Silt	% Medium Silt	% Fine Silt	% Fine Silt	% Very Fine Silt	% Clay
Particle Size (microns)	> 4750	4750-2000	2000-425	425-75	75-32	32-22	22-13	13-9	9-7	7-3.2	<3.2
T4-B414-01-A	0.1	0.2	1.9	24.3	22.4	7.9	7.9	4.7	4.7	7.9	18.1
T4-B414-01-B	0.0	0.1	2.8	19.2	15.1	12.2	10.8	6.8	4.1	10.8	18.2
T4-B414-01-C	0.0	0.1	0.9	9.7	27.1	9.4	14.0	6.0	5.4	8.0	19.4
T4-B414-02-A	0.0	0.0	0.9	15.1	23.7	11.2	11.2	6.2	5.0	8.1	18.7
T4-B414-02-B	0.0	0.0	0.5	13.8	22.5	10.7	12.0	5.3	5.3	10.7	19.3
T4-B414-02-C	0.0	0.0	2.0	13.7	17.9	13.4	9.4	6.7	6.0	10.1	20.8
T4-B414-03-A	0.0	0.0	2.7	23.8	22.5	10.4	10.4	4.4	4.4	8.1	13.3
T4-B414-03-B	0.0	0.0	1.4	19.8	18.9	5.5	15.1	6.9	5.5	9.6	17.2
T4-B414-03-C	0.0	0.0	1.4	10.0	21.4	12.5	12.5	6.9	6.9	11.1	17.3
T4-B414-04-A	0.0	0.0	0.6	12.6	27.0	12.1	10.7	6.0	5.4	8.1	17.5
T4-B414-04-A	0.0	0.0	0.9	11.1	20.7	15.5	11.8	7.4	5.9	8.1	18.5
T4-B414-04-A	0.0	0.0	0.7	11.8	23.1	10.9	12.3	6.5	6.5	6.5	21.7
T4-B414-04-B	0.0	0.3	0.5	15.9	25.3	10.5	11.2	5.9	6.6	7.3	16.5
T4-B414-04-C	0.0	0.0	0.9	21.1	21.3	9.8	9.8	5.9	6.5	7.8	17.0
T4-S3-01-D	0.0	0.0	0.1	0.8	96.1	0.5	0.5	0.3	0.4	0.4	0.8
T4-S3-01-E	0.0	0.1	2.3	31.0	15.2	18.0	1.9	7.1	5.1	7.7	11.6
T4-S3-01-F	0.9	0.4	6.5	53.2	6.5	6.0	3.6	4.8	3.6	6.0	8.4
T4-S3-01-G	1.2	0.2	4.5	28.3	8.7	8.7	8.7	7.5	5.6	10.0	16.8
T4-S3-01-H	5.8	0.7	4.2	23.0	9.5	10.8	7.2	5.8	5.8	10.8	16.5

JQ33

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SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-B414-01-A
ARI ID: 06-12923 JQ33A

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	54.60
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.21

RL Analytical reporting limit
U Undetected at reported detection limit

1639 9/18/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-B414-01-B
ARI ID: 06-12924 JQ33B

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	52.10
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	2.13

RL Analytical reporting limit
U Undetected at reported detection limit

1640 9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-B414-01-C
ARI ID: 06-12925 JQ33C

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	53.10
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.70

RL Analytical reporting limit
U Undetected at reported detection limit

1641 9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-B414-02-A
ARI ID: 06-12926 JQ33D

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	50.90
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.83

RL Analytical reporting limit
U Undetected at reported detection limit

1642 9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-B414-02-B
ARI ID: 06-12927 JQ33E

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	51.40
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.80

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-B414-02-C
ARI ID: 06-12928 JQ33F

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	52.40
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	2.60

RL Analytical reporting limit
U Undetected at reported detection limit

1644 9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-B414-03-A
ARI ID: 06-12929 JQ33G

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	52.80
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.29

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-B414-03-B
ARI ID: 06-12930 JQ33H

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	51.90
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.52

RL Analytical reporting limit
U Undetected at reported detection limit

9/26/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MR
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-B414-03-C
ARI ID: 06-12931 JQ33I

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	51.30
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	2.23

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-B414-04-A
ARI ID: 06-12932 JQ33J

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	49.50
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.81

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-B414-04-B
ARI ID: 06-12933 JQ33K

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	55.70
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.47

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-B414-04-C
ARI ID: 06-12934 JQ33L

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	53.10
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.46

RL Analytical reporting limit
U Undetected at reported detection limit

7/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MMB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Client ID: T4-S3-01-D
ARI ID: 06-12935 JQ33M

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	52.90
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.97

RL Analytical reporting limit
U Undetected at reported detection limit

9/7&/52

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Client ID: T4-S3-01-E
ARI ID: 06-12936 JQ33N

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	55.90
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	2.01

RL Analytical reporting limit
U Undetected at reported detection limit

9/7/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Client ID: T4-S3-01-F
ARI ID: 06-12937 JQ330

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	58.80
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	2.35

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Client ID: T4-S3-01-G
ARI ID: 06-12938 JQ33P

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	55.90
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	2.57

RL Analytical reporting limit
U Undetected at reported detection limit

7/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ33-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Client ID: T4-S3-01-H
ARI ID: 06-12939 JQ33Q

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#3	EPA 160.3	Percent	0.01	57.50
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	2.25

RL Analytical reporting limit
U Undetected at reported detection limit

1655 7/28/06

LDC #: 15488B6
SDG #: JQ33
Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 9/21/06
Page: 1 of 1
Reviewer: MM
2nd Reviewer: [signature]

METHOD: (Analyte) Grain Size (ASTM D421), Total Solids (EPA Method 160.3) TOC (Plumb)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18 – 20/06
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	MS
V	Duplicates	A	Triplicate
VI.	Laboratory control samples	A	LCS, SRM
VII.	Sample result verification	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	SW	(4, T4-B414-02-A-DUP (SDG JQ52))
X	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Sediment.

1	T4-B414-01-A	11	T4-B414-04-B	21	T4-B414-04-ATRP	31	
2	T4-B414-01-B	12	T4-B414-04-C	22	T4-B414-02-ATRP	32	
3	T4-B414-01-C	13	T4-S3-01-D	23	MB	33	
4	T4-B414-02-A	14	T4-S3-01-E	24		34	
5	T4-B414-02-B	15	T4-S3-01-F	25		35	
6	T4-B414-02-C	16	T4-S3-01-G	26		36	
7	T4-B414-03-A	17	T4-S3-01-H	27		37	
8	T4-B414-03-B	18	T4-B414-02-AMS	28		38	
9	T4-B414-03-C	19	T4-B414-02-ADUP	29		39	
10	T4-B414-04-A	20	T4-B414-04-ADUP	30		40	

Notes:

LDC #: 15488 B6
SDG #: JQ33

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: MM
2nd reviewer:

All circled methods are applicable to each sample.

Sample ID	Parameter
1-17	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+} (TS) (Grain size)
" 18	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+}
" 19	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+} (TS)
" 20, 21	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} (Grain size)
" 22	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} (TS)
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}

Comments:

LDC#: 15488B6
SDG#: JB33

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: MM
2nd Reviewer: [signature]

Inorganics, Method See cover

(Y) N NA Were field duplicate pairs identified in this SDG?
(Y) N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (%)		(≤75) RPD	
	T4-B414-02-A-DUP	T4-B414-02-A		
Total Solids	50.10	50.90	2	
TOC	1.74	1.83	5	

V:\FIELD DUPLICATES\FD_inorganic\15488B6.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Wet Chemistry

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ35

Sample Identification

T4-S3-02-C	T4-S3-02-FTRP
T4-S3-02-D	
T4-S3-02-E	
T4-S3-02-F	
T4-S3-03-B	
T4-S3-03-C	
T4-S3-03-D	
T4-S3-05-E	
T4-S3-05-F	
T4-S3-05-G	
T4-S3-05-H	
T4-S3-05-J	
T4-S3-06-A	
T4-S3-06-B	
T4-S3-08-B	
T4-S3-08-C	
T4-S3-02-FMS	
T4-S3-02-FDUP	
T4-S3-03-BDUP	
T4-S3-03-BTRP	

Introduction

This data review covers 21 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 160.3 for Total Solids, Plumb Method for Total Organic Carbon, and ASTM Method D421 for Grain Size.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2002) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	%R (Limits)	Flag	A or P
T4-S3-02-FMS (T4-S3-02-C T4-S3-02-D T4-S3-02-E T4-S3-02-F T4-S3-03-B T4-S3-03-C T4-S3-03-D T4-S3-05-E T4-S3-05-F T4-S3-05-G T4-S3-05-H T4-S3-06-A T4-S3-06-B T4-S3-08-B T4-S3-08-C)	Total organic carbon	142.7 (75-125)	J (all detects)	A

V. Duplicates/Triplicates

Duplicate (DUP) and triplicate (TRP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

Standard reference material (SRM) percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

Samples T4-S3-02-F and T4-S3-02-F-DUP (from SDG JQ52), samplesT4-S3-03-C and T4-S3-03-C-DUP (from SDG JQ52), and samples T4-S3-08-C and T4-S3-08-C-DUP (from SDG JQ52) were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (%)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
Total solids	53.60	54.50	2 (≤75)
Total organic carbon	1.62	1.98	20 (≤75)

Analyte	Concentration (%)		RPD (Limits)
	T4-S3-03-C-DUP	T4-S3-03-C	
Total solids	60.90	59.90	2 (≤75)
Total organic carbon	1.82	1.86	2 (≤75)

Analyte	Concentration (%)		RPD (Limits)
	T4-S3-08-C-DUP	T4-S3-08-C	
Total solids	83.00	89	0 (≤75)
Total organic carbon	0.130	0.196	40 (≤75)

X. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Wet Chemistry - Data Qualification Summary - SDG JQ35

SDG	Sample	Analyte	Flag	A or P	Reason
JQ35	T4-S3-02-C T4-S3-02-D T4-S3-02-E T4-S3-02-F T4-S3-03-B T4-S3-03-C T4-S3-03-D T4-S3-05-E T4-S3-05-F T4-S3-05-G T4-S3-05-H T4-S3-06-A T4-S3-06-B T4-S3-08-B T4-S3-08-C	Total organic carbon	J (all detects)	A	Matrix spike analysis (%R)

Terminal 4 Early Action
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG JQ35

No Sample Data Qualified in this SDG

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Client ID: T4-S3-02-C
ARI ID: 06-12956 JQ35A

Analyte	Date	Method	Units	RL	Sample	
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	53.50	
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	2.04	J

RL Analytical reporting limit
U Undetected at reported detection limit

7/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Client ID: T4-S3-02-D
ARI ID: 06-12957 JQ35B

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	56.20
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	1.94 J

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Client ID: T4-S3-02-E
ARI ID: 06-12958 JQ35C

Analyte	Date	Method	Units	RL	Sample	
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	58.60	
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	2.10	J

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Client ID: T4-S3-02-F
ARI ID: 06-12959 JQ35D

Analyte	Date	Method	Units	RL	Sample	
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	54.50	
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	1.98	J

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-03-B
ARI ID: 06-12960 JQ35E

Analyte	Date	Method	Units	RL	Sample	
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	56.20	
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	1.88	J

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-03-C
ARI ID: 06-12961 JQ35F

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	59.90
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	1.86 J

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-03-D
ARI ID: 06-12962 JQ35G

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	66.80
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	1.56 J

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-05-E
ARI ID: 06-12963 JQ35H

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	52.80
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	1.95 J

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-05-F
ARI ID: 06-12964 JQ35I

Analyte	Date	Method	Units	RL	Sample	
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	56.40	
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	2.26	J

RL Analytical reporting limit
U Undetected at reported detection limit

0110 9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: NB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-05-G
ARI ID: 06-12965 JQ35J

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	56.80
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	2.00 J

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-05-H
ARI ID: 06-12966 JQ35K

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	56.20
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	2.48 J

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-05-J
ARI ID: 06-12967 JQ35L

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	80.80
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	0.503

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-S3-06-A
ARI ID: 06-12968 JQ35M

Analyte	Date	Method	Units	RL	Sample	
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	42.40	
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	1.83	J

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MR
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-S3-06-B
ARI ID: 06-12969 JQ35N

Analyte	Date	Method	Units	RL	Sample	
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	78.10	
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	0.154	J

RL Analytical reporting limit
U Undetected at reported detection limit

0115 9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-08-B
ARI ID: 06-12970 JQ350

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	68.50
Total Organic Carbon	07/25/06 072506#1	Plumb,1981	Percent	0.020	1.87 J

RL Analytical reporting limit
U Undetected at reported detection limit

8/7/06

SAMPLE RESULTS-CONVENTIONALS
JQ35-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-08-C
ARI ID: 06-12971 JQ35P

Analyte	Date	Method	Units	RL	Sample	
Total Solids	07/24/06 072406#2	EPA 160.3	Percent	0.01	83.00	
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	0.196	J

RL Analytical reporting limit
U Undetected at reported detection limit

8/28/06

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental
T4 Early Action 050332-01

Percent Finer (Passing) Than the Indicated Size

Sieve Size (microns)	2"	1"	3/4"	1/2"	3/8"	#4 (4750)	#10 (2000)	#20 (850)	#40 (425)	#60 (250)	#100 (150)	#200 (75)	32	22	13	9	7	3.2	1.3
T4-S3-03-B	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	98.0	90.8	86.9	81.9	72.6	59.3	45.3	39.0	32.0	20.3	13.3
T4-S3-03-B	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	97.9	91.0	87.1	82.0	70.0	60.0	46.2	40.0	32.3	21.5	13.1
T4-S3-03-B	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	97.8	90.6	86.8	81.2	71.2	60.1	45.9	38.8	30.9	18.2	11.1
T4-S3-02-C	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.4	88.7	84.1	77.6	63.4	52.9	41.7	35.0	28.3	17.9	10.4
T4-S3-02-D	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	96.2	83.3	74.0	61.6	46.9	39.9	29.7	25.0	20.3	13.3	7.0
T4-S3-02-E	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	91.6	67.3	54.8	46.3	38.9	33.4	24.1	21.0	16.3	10.9	6.2
T4-S3-02-F	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.7	97.4	90.6	85.7	78.8	70.5	57.8	46.7	39.6	32.5	20.6	11.9
T4-S3-03-C	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	94.6	78.9	73.6	68.6	58.3	51.6	40.4	32.9	26.9	17.9	10.5
T4-S3-03-D	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	93.9	80.9	75.4	64.8	47.6	37.2	29.0	23.8	18.6	11.9	7.4
T4-S3-05-E	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	98.2	93.6	90.8	84.5	67.4	58.0	47.1	37.7	30.5	20.3	12.3
T4-S3-05-F	100.0	100.0	100.0	100.0	100.0	99.8	99.6	99.2	95.0	86.1	81.9	76.0	62.4	54.5	41.8	34.0	27.6	18.2	11.1
T4-S3-05-G	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.1	90.7	75.9	70.2	63.3	50.2	43.4	33.5	27.4	22.1	12.2	8.4
T4-S3-05-H	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	94.1	83.9	79.5	73.4	59.1	53.8	42.4	34.9	29.5	19.7	12.9
T4-S3-05-J	100.0	100.0	100.0	100.0	100.0	100.0	99.9	97.2	61.1	13.9	3.7	2.1	0.9	0.9	0.9	0.4	0.0	0.0	0.0
T4-S3-06-A	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	94.9	76.8	65.2	58.2	50.7	43.9	32.6	27.0	21.4	11.3	6.8
T4-S3-06-B	100.0	100.0	100.0	100.0	100.0	100.0	99.9	97.8	61.6	13.3	5.0	4.0	0.9	0.9	0.9	0.9	0.9	0.0	0.0
T4-S3-08-B	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.4	74.1	42.9	34.5	30.1	23.6	20.5	14.3	11.8	8.7	5.0	3.7
T4-S3-08-C	100.0	100.0	100.0	100.0	100.0	99.8	99.4	95.2	57.3	15.7	6.1	4.0	2.2	1.8	1.8	1.3	0.4	0.0	0.0

Testing performed according to ASTM D421/D422

JQ35

0124

9/28/02

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental
T4 Early Action 050332-01

Percent Retained in Each Size Fraction

Description	% Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Very Coarse Silt	% Coarse Silt	% Medium Silt	% Fine Silt	% Fine Silt	% Very Fine Silt	% Clay
Particle Size (microns)	> 4750	4750-2000	2000-425	425-75	75-32	32-22	22-13	13-9	9-7	7-3.2	<3.2
T4-S3-03-B	0.0	0.0	2.0	16.1	9.2	13.3	14.1	6.2	7.0	11.7	20.3
T4-S3-03-B	0.0	0.0	2.1	15.9	12.0	10.0	13.8	6.2	7.7	10.8	21.5
T4-S3-03-B	0.0	0.0	2.2	16.6	10.0	11.1	14.2	7.1	7.9	12.7	18.2
T4-S3-02-C	0.0	0.0	2.6	19.8	14.2	10.4	11.2	6.7	6.7	10.4	17.9
T4-S3-02-D	0.0	0.0	3.8	34.6	14.7	7.0	10.2	4.7	4.7	7.0	13.3
T4-S3-02-E	0.0	0.0	8.4	45.3	7.4	5.4	9.3	3.1	4.7	5.4	10.9
T4-S3-02-F	0.0	0.2	2.4	18.6	8.3	12.7	11.1	7.1	7.1	11.9	20.6
T4-S3-03-C	0.0	0.0	5.4	26.1	10.2	6.7	11.2	7.5	6.0	9.0	17.9
T4-S3-03-D	0.0	0.0	6.1	29.1	17.2	10.4	8.2	5.2	5.2	6.7	11.9
T4-S3-05-E	0.0	0.0	1.8	13.7	17.1	9.4	10.9	9.4	7.3	10.2	20.3
T4-S3-05-F	0.2	0.2	4.6	19.0	13.7	7.9	12.6	7.9	6.3	9.5	18.2
T4-S3-05-G	0.0	0.2	9.1	27.5	13.0	6.8	9.9	6.1	5.3	9.9	12.2
T4-S3-05-H	0.0	0.0	5.9	20.7	14.3	5.3	11.4	7.6	5.3	9.8	19.7
T4-S3-05-J	0.0	0.1	38.8	59.0	1.3	0.0	0.0	0.4	0.4	0.0	0.0
T4-S3-06-A	0.0	0.0	5.1	36.7	7.5	6.8	11.3	5.6	5.6	10.1	11.3
T4-S3-06-B	0.0	0.1	38.3	57.6	3.2	0.0	0.0	0.0	0.0	0.9	0.0
T4-S3-08-B	0.0	0.0	25.9	44.0	6.4	3.1	6.2	2.5	3.1	3.7	5.0
T4-S3-08-C	0.2	0.3	42.2	53.2	1.8	0.4	0.0	0.4	0.9	0.4	0.0

0125

JQ35

N 09-806

LDC #: 15488C6
SDG #: JQ35
Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 9/21/06
Page: 1 of 1
Reviewer: MM
2nd Reviewer: JL

METHOD: (Analyte) Grain Size (ASTM D421), Total Solids (EPA Method 160.3) TOC (Plumb)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 9/18-20/06
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	~~A~~	
IV	Matrix Spike/Matrix Spike Duplicates	SW	~~Ins~~
V	Duplicates	A	~~LCS, SRM~~ Triplicate
VI.	Laboratory control samples	A	LCS, SRM
VII.	Sample result verification	N	
VIII.	Overall assessment of data	A	SDG JQ35
IX.	Field duplicates	SW	(4, T4-S3-02-F-DUP), (6, T4-S3-03-C-DUP), (16, T4-S3-08-C-DUP)
X	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Sediment

1	T4-S3-02-C	11	T4-S3-05-H	21	T4-S3-02-F TRP	31	
2	T4-S3-02-D	12	T4-S3-05-J	22	MB	32	
3	T4-S3-02-E	13	T4-S3-06-A	23		33	
4	T4-S3-02-F	14	T4-S3-06-B	24		34	
5	T4-S3-03-B	15	T4-S3-08-B	25		35	
6	T4-S3-03-C	16	T4-S3-08-C	26		36	
7	T4-S3-03-D	17	T4-S3-02-FMS	27		37	
8	T4-S3-05-E	18	T4-S3-02-FDUP	28		38	
9	T4-S3-05-F	19	T4-S3-03-BDUP	29		39	
10	T4-S3-05-G	20	T4-S3-03-BTRP	30		40	

Notes:

LDC #: 15488c6
SDG #: JQ35

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: MM
2nd reviewer:

All circled methods are applicable to each sample.

Sample ID	Parameter
1-16	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+} (TS) (Grain Size)
17	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+}
18,21	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+} (TS)
19,20	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} (Grain Size)
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}

Comments:

LDC #: 54886

SDG #: 7835

VALIDATION FINDINGS WORKSHEET
Matrix Spike Analysis

Reviewer: MF

2nd Reviewer: [illegible]

METHOD: Inorganics, Method See cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y (N) N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125 (85-115% for Method 300.0)? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

LEVEL IV ONLY:

Y N (N/A) Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Matrix Spike ID	Matrix	Analyte	%R	Associated Samples	Qualifications
1	17	Sediment	TOC	142.7	1-11, 13-15	J+ (a)

Comments:

LDC#: 15488C6
SDG#: JQ35

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

Inorganics, Method See cover

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (%)		(≤75) RPD	
	T4-S3-02-F-DUP	T4-S3-02-F		
Total Solids	53.60	54.50	2	
TOC	1.62	1.98	20	

Analyte	Concentration (%)		(≤75) RPD	
	T4-S3-03-C-DUP	T4-S3-03-C		
Total Solids	60.90	59.90	2	
TOC	1.82	1.86	2	

Analyte	Concentration (%)		(≤75) RPD	
	T4-S3-08-C-DUP	T4-S3-08-C		
Total Solids	83.00	83.00	0	
TOC	0.130	0.196	40	

V:\FIELD DUPLICATES\FD_inorganic\15488C6.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Wet Chemistry

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ35

Sample Identification

T4-S3-07-B
T4-S3-07-C
T4-S3-07-D
T4-S3-07-E
T4-S3-04-A
T4-S3-04-B
T4-S3-04-C
T4-S3-04-D
T4-WB-01
T4-WB-02
T4-WB-03
T4-WB-04
T4-S3-07-BMS
T4-S3-07-BDUP
T4-WB-03DUP
T4-WB-03TRP
T4-S3-07-BTRP

Introduction

This data review covers 17 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 160.3 for Total Solids, Plumb Method for Total Organic Carbon, and ASTM Method D421 for Grain Size.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2002) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Duplicates/Triplicates

Duplicate (DUP) and triplicate (TRP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

Standard reference material (SRM) percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Wet Chemistry - Data Qualification Summary - SDG JQ35

No Sample Data Qualified in this SDG

Terminal 4 Early Action
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG JQ35

No Sample Data Qualified in this SDG

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-S3-07-B
ARI ID: 06-12972 JQ36A

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	51.60
Total Organic Carbon	07/27/06 072706#1	Plumb,1981	Percent	0.020	1.66

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-S3-07-C
ARI ID: 06-12973 JQ36B

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	55.70
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	2.07

RL Analytical reporting limit
U Undetected at reported detection limit

7/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: JM
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-S3-07-D
ARI ID: 06-12974 JQ36C

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	66.60
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.71

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-S3-07-E
ARI ID: 06-12975 JQ36D

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	82.30
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	0.442

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-S3-04-A
ARI ID: 06-12976 JQ36E

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	58.90
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	2.42

RL Analytical reporting limit
U Undetected at reported detection limit

8/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-S3-04-B
ARI ID: 06-12977 JQ36F

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	72.30
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	0.402

RL Analytical reporting limit
U Undetected at reported detection limit

8/24/06

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-S3-04-C
ARI ID: 06-12978 JQ36G

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	77.50
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.27

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-S3-04-D
ARI ID: 06-12979 JQ36H

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	82.90
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	0.232

RL Analytical reporting limit
U Undetected at reported detection limit

9/22/06

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-WB-01
ARI ID: 06-12980 JQ36I

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	40.30
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.81

RL Analytical reporting limit
U Undetected at reported detection limit

7/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-WB-02
ARI ID: 06-12981 JQ36J

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	52.70
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.72

RL Analytical reporting limit
U Undetected at reported detection limit

7/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-WB-03
ARI ID: 06-12982 JQ36K

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	43.90
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	2.05

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ36-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/20/06
Date Received: 07/21/06

Client ID: T4-WB-04
ARI ID: 06-12983 JQ36L

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/06 072406#1	EPA 160.3	Percent	0.01	44.30
Total Organic Carbon	07/26/06 072606#1	Plumb,1981	Percent	0.020	1.69

RL Analytical reporting limit
U Undetected at reported detection limit

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental
T4 Early Action, 050332-01

Percent Finer (Passing) Than the Indicated Size

Sieve Size (microns)	2"	1"	3/4"	1/2"	3/8"	#4 (4750)	#10 (2000)	#20 (850)	#40 (425)	#60 (250)	#100 (150)	#200 (75)	32	22	13	9	7	3.2	1.3
T4-WB-03	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	99.1	98.6	92.7	66.1	53.2	41.1	35.5	28.2	19.3	13.7
T4-WB-03	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	99.1	98.5	92.7	64.3	50.8	39.7	31.7	27.0	17.5	11.9
T4-WB-03	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.5	99.0	98.4	93.0	65.5	50.1	38.0	30.7	25.1	16.2	10.5
T4-S3-07-B	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	98.9	95.8	93.6	86.1	62.5	55.5	43.0	35.2	28.1	18.7	13.3
T4-S3-07-C	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	98.7	95.6	94.3	87.7	71.2	59.8	49.8	40.6	32.9	20.7	13.8
T4-S3-07-D	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.0	84.5	62.2	56.3	52.3	44.6	36.9	29.1	23.4	19.1	12.0	7.8
T4-S3-07-E	100.0	100.0	100.0	100.0	100.0	100.0	99.8	98.5	65.2	18.0	7.1	5.5	4.4	4.0	3.5	2.6	2.2	1.3	1.3
T4-S3-04-A	100.0	100.0	100.0	100.0	99.9	99.8	99.6	97.7	78.9	52.9	44.6	37.2	29.8	25.9	18.1	14.9	11.8	7.1	4.7
T4-S3-04-B	100.0	100.0	100.0	100.0	100.0	100.0	99.5	95.5	55.9	15.2	7.7	5.0	3.5	3.1	2.2	2.2	1.3	0.4	0.4
T4-S3-04-C	100.0	100.0	99.5	99.5	99.2	98.7	98.2	96.8	77.8	42.9	29.2	21.5	13.9	10.8	9.4	7.2	5.8	3.1	2.2
T4-S3-04-D	100.0	100.0	100.0	100.0	100.0	100.0	99.6	96.6	63.0	17.2	5.9	3.1	2.2	1.7	1.3	0.9	0.4	0.4	0.4
T4-WB-01	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.9	99.3	98.8	98.1	93.2	62.2	51.0	37.5	30.3	23.9	14.3	10.4
T4-WB-02	100.0	100.0	99.4	99.4	99.4	99.4	99.1	98.7	93.4	70.4	55.4	47.0	37.7	28.3	22.0	16.5	14.9	9.4	5.5
T4-WB-04	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.9	94.2	91.3	81.8	54.1	44.8	34.0	28.6	22.4	13.9	9.3

Testing performed according to ASTM D421/D422

JQ36

0103

2/28/06

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental
T4 Early Action, 050332-01

Percent Retained in Each Size Fraction

Description	% Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Very Coarse Silt	% Coarse Silt	% Medium Silt	% Fine Silt	% Fine Silt	% Very Fine Silt	% Clay
Particle Size (microns)	> 4750	4750-2000	2000-425	425-75	75-32	32-22	22-13	13-9	9-7	7-3.2	<3.2
T4-WB-03	0.0	0.0	0.5	6.9	26.6	12.9	12.1	5.6	7.3	8.9	19.3
T4-WB-03	0.0	0.0	0.4	6.9	28.4	13.5	11.1	7.9	4.8	9.5	17.5
T4-WB-03	0.0	0.0	0.5	6.5	27.5	15.4	12.1	7.3	5.7	8.9	16.2
T4-S3-07-B	0.0	0.0	1.1	12.9	23.6	7.0	12.5	7.8	7.0	9.4	18.7
T4-S3-07-C	0.0	0.0	1.3	11.0	16.5	11.5	10.0	9.2	7.7	12.3	20.7
T4-S3-07-D	0.0	0.1	15.4	32.2	7.6	7.8	7.8	5.7	4.3	7.1	12.0
T4-S3-07-E	0.0	0.2	34.6	59.7	1.1	0.4	0.4	0.9	0.4	0.9	1.3
T4-S3-04-A	0.2	0.2	20.6	41.7	7.4	3.9	7.8	3.1	3.1	4.7	7.1
T4-S3-04-B	0.0	0.5	43.6	50.9	1.5	0.4	0.9	0.0	0.9	0.9	0.4
T4-S3-04-C	1.3	0.4	20.5	56.3	7.6	3.1	1.3	2.2	1.3	2.7	3.1
T4-S3-04-D	0.0	0.4	36.6	60.0	0.9	0.4	0.4	0.4	0.4	0.0	0.4
T4-WB-01	0.0	0.1	0.7	6.0	31.1	11.2	13.6	7.2	6.4	9.6	14.3
T4-WB-02	0.6	0.3	5.8	46.4	9.3	9.4	6.3	5.5	1.6	5.5	9.4
T4-WB-04	0.0	0.0	1.1	17.1	27.7	9.3	10.8	5.4	6.2	8.5	13.9

0104

JQ36

LDC #: 15488D6 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/22/06
SDG #: JQ36 Level III Page: 1 of 1
Laboratory: Analytical Resources, Inc. Reviewer: MM
2nd Reviewer:

METHOD: (Analyte) Grain Size (ASTM D421), Total Solids (EPA Method 160.3) TOC (Plumb)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/20/06
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	MS
V	Duplicates	A	Triplicates,
VI.	Laboratory control samples	A	LCS, SRM
VII.	Sample result verification	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Sediment

1	T4-S3-07-B	11	T4-WB-03	21		31	
2	T4-S3-07-C	12	T4-WB-04	22		32	
3	T4-S3-07-D	13	T4-S3-07-BMS	23		33	
4	T4-S3-07-E	14	T4-S3-07-BDUP	24		34	
5	T4-S3-04-A	15	T4-WB-03DUP	25		35	
6	T4-S3-04-B	16	T4-WB-03TRP	26		36	
7	T4-S3-04-C	17	T4-S3-07-BTRP	27		37	
8	T4-S3-04-D	18	MB	28		38	
9	T4-WB-01	19		29		39	
10	T4-WB-02	20		30		40	

Notes:

LDC #: 15488D6
SDG #: JQ36

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Reviewer: MM
2nd reviewer:

All circled methods are applicable to each sample.

Sample ID	Parameter
1-12	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+} (TS) (Grain size)
13	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+}
14, 17	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+} (TS)
15, 16	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+} (Grain size)
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 19, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Wet Chemistry

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ52

Sample Identification

T4-S3-02-F-DUP
T4-S3-03-C-DUP
T4-B414-02-A-DUP
T4-S3-08-C-DUP
T4-B414-02-A-DUPMS
T4-B414-02-A-DUPDUP
T4-B414-02-A-DUPTRP

Introduction

This data review covers 7 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 160.3 for Total Solids and Plumb Method for Total Organic Carbon.

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2002) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method when applicable.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Duplicates/Triplicates

Duplicate (DUP) and triplicate (TRP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

Standard reference material (SRM) percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

IX. Field Duplicates

Samples T4-S3-02-F (from SDG JQ35) and T4-S3-02-F-DUP, samplesT4-S3-03-C (from SDG JQ35) and T4-S3-03-C-DUP, samples T4-S3-08-C (from SDG JQ35) and T4-S3-08-C-DUP, and samples T4-B414-02-A (from SDG JQ35) and T4-B414-02-A-DUP were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

Analyte	Concentration (%)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
Total solids	53.60	54.50	2 (≤75)
Total organic carbon	1.62	1.98	20 (≤75)

Analyte	Concentration (%)		RPD (Limits)
	T4-S3-03-C-DUP	T4-S3-03-C	
Total solids	60.90	59.90	2 (≤75)
Total organic carbon	1.82	1.86	2 (≤75)

Analyte	Concentration (%)		RPD (Limits)
	T4-B414-02-A-DUP	T4-B414-02-A	
Total solids	50.10	50.90	2 (≤75)
Total organic carbon	1.74	1.83	5 (≤75)

Analyte	Concentration (%)		RPD (Limits)
	T4-S3-08-C-DUP	T4-S3-08-C	
Total solids	83.00	89	0 (≤75)
Total organic carbon	0.130	0.196	40 (≤75)

X. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Wet Chemistry - Data Qualification Summary - SDG JQ52

No Sample Data Qualified in this SDG

Terminal 4 Early Action
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG JQ52

No Sample Data Qualified in this SDG

SAMPLE RESULTS-CONVENTIONALS
JQ52-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/18/06
Date Received: 07/21/06

Client ID: T4-S3-02-F-DUP
ARI ID: 06-13102 JQ52A

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/26/06 072606#1	EPA 160.3	Percent	0.01	53.60
Total Organic Carbon	07/27/06 072706#1	Plumb,1981	Percent	0.020	1.62

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ52-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MR
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-03-C-DUP
ARI ID: 06-13103 JQ52B

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/26/06 072606#1	EPA 160.3	Percent	0.01	60.90
Total Organic Carbon	07/27/06 072706#1	Plumb,1981	Percent	0.020	1.82

RL Analytical reporting limit
U Undetected at reported detection limit

7/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ52-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: JMB
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-B414-02-A-DUP
ARI ID: 06-13104 JQ52C

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/26/06 072606#1	EPA 160.3	Percent	0.01	50.10
Total Organic Carbon	07/27/06 072706#1	Plumb,1981	Percent	0.020	1.74

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

SAMPLE RESULTS-CONVENTIONALS
JQ52-Anchor Environmental

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MP
Reported: 07/31/06

Project: T4 EARLY ACTION
Event: 050332-01
Date Sampled: 07/19/06
Date Received: 07/21/06

Client ID: T4-S3-08-C-DUP
ARI ID: 06-13114 JQ52D

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/26/06 072606#1	EPA 160.3	Percent	0.01	83.00
Total Organic Carbon	07/27/06 072706#1	Plumb,1981	Percent	0.020	0.130

RL Analytical reporting limit
U Undetected at reported detection limit

9/28/06

LDC #: 15488E6
SDG #: JQ52
Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 9/22/06
Page: 1 of 1
Reviewer: MM
2nd Reviewer: JA

METHOD: (Analyte) Total Solids (EPA Method 160.3) TOC (Plumb)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18/06, 7/19/06
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	MS
V	Duplicates	A	Triplicates
VI.	Laboratory control samples	A	LCS, SRM
VII.	Sample result verification	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	SW	(1, T4-S3-02-F), (2, T4-S3-03-C), (4,T4-S3-08-C), (3, T4-B414-02-A)
X	Field blanks	N	SDG SA35 SDG SA33

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet

ND = No compounds detected
R = Rinsate
FB = Field blank

D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: Sediment

1	T4-S3-02-F-DUP	11		21		31	
2	T4-S3-03-C-DUP	12		22		32	
3	T4-B414-02-A-DUP	13		23		33	
4	T4-S3-08-C-DUP	14		24		34	
5	T4-B414-02-A-DUPMS	15		25		35	
6	T4-B414-02-A-DUPDUP	16		26		36	
7	J TRP	17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

LDC #: 15488 E6
SDG #: JQ52

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: WY
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Parameter
1-4	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+} (TS)
[illegible] *5	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+}
[illegible] *6, 7	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN (TOC) CR^{6+} (TS)
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}
	pH TDS Cl F NO_3 NO_2 SO_4 PO_4 ALK CN^- NH_3 TKN TOC CR^{6+}

Comments:

METHODS.6

LDC#: 15488E6
SDG#: [illegible]

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

Inorganics, Method See cover

Y N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Analyte	Concentration (%)		(≤75) RPD	
	T4-S3-02-F-DUP	T4-S3-02-F		
Total Solids	53.60	54.50	2	
TOC	1.62	1.98	20	

Analyte	Concentration (%)		(≤75) RPD	
	T4-S3-03-C-DUP	T4-S3-03-C		
Total Solids	60.90	59.90	2	
TOC	1.82	1.86	2	

Analyte	Concentration (%)		(≤75) RPD	
	T4-B414-02-A-DUP	T4-B414-02-A		
Total Solids	50.10	50.90	2	
TOC	1.74	1.83	5	

Analyte	Concentration (%)		(≤75) RPD	
	T4-S3-08-C-DUP	T4-S3-08-C		
Total Solids	83.00	83.00	0	
TOC	0.130	0.196	40	

Terminal 4 Early Action
Data Validation Reports
LDC# 15488

Diesel Range Organics & Motor Oil Range Organics

LDC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Diesel Range Organics & Motor Oil Range Organics

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ33

Sample Identification

T4-B414-01-A
T4-B414-01-B
T4-B414-01-C
T4-B414-02-A
T4-B414-02-B
T4-B414-02-C
T4-B414-03-A
T4-B414-03-B
T4-B414-03-C
T4-B414-04-A
T4-B414-04-B
T4-B414-04-C
T4-S3-01-D
T4-S3-01-E
T4-S3-01-F
T4-S3-01-G
T4-S3-01-H
T4-B414-02-AMS
T4-B414-02-AMSD

Introduction

This data review covers 19 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method NWTPH-Dx for Diesel Range Organics and Motor Oil Range Organics.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 15.0% for all compounds.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No diesel range organic or motor oil range organic contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for several samples. Since the samples were diluted out, no data were qualified.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

The QAPP reporting limits were met with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG JQ33	Diesel range organics	Laboratory reporting limit reported at 5.0 mg/Kg.	Reporting limit should be reported at 0.25 mg/Kg per the QAPP.	None	P
All samples in SDG JQ33	Motor oil range organics	Laboratory reporting limit reported at 10 mg/Kg.	Reporting limit should be reported at 0.5 mg/Kg per the QAPP.	None	P

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags have been summarized at the end of this report if data has been qualified.

IX. Field Duplicates

Samples T4-B414-02-A-DUP (from SDG JQ52) and T4-B414-02-A were identified as field duplicates. No diesel range organics or motor oil range organics were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)		RPD (Limits)
	T4-B414-02-A-DUP	T4-B414-02-A	
Diesel range organics	21	26	21 (≤75)
Motor oil range organics	52	97	60 (≤75)

X. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Diesel Range Organics & Motor Oil Range Organics - Data Qualification Summary - SDG JQ33

SDG	Sample	Compound	Flag	A or P	Reason
JQ33	T4-B414-01-A T4-B414-01-B T4-B414-01-C T4-B414-02-A T4-B414-02-B T4-B414-02-C T4-B414-03-A T4-B414-03-B T4-B414-03-C T4-B414-04-A T4-B414-04-B T4-B414-04-C T4-S3-01-D T4-S3-01-E T4-S3-01-F T4-S3-01-G T4-S3-01-H	Diesel range organics Motor oil range organics	None None	P	Compound quantitation and CRQLs

Terminal 4 Early Action
Diesel Range Organics & Motor Oil Range Organics - Laboratory Blank Data Qualification Summary - SDG JQ33

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID
Page 1 of 2
Matrix: Sediment

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Received: 07/21/06

Data Release Authorized: MW
Reported: 07/31/06

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
JQ33A	T4-B414-01-A	07/26/06	07/27/06	20	**Diesel**	**980**
06-12923	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**3,300**
					o-Terphenyl	D
JQ33B	T4-B414-01-B	07/26/06	07/27/06	1.0	**Diesel**	**51**
06-12924	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**160**
					o-Terphenyl	87.1%
JQ33C	T4-B414-01-C	07/26/06	07/27/06	1.0	**Diesel**	**120**
06-12925	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**320**
					o-Terphenyl	74.2%
MB-072606	Method Blank	07/26/06	07/27/06	1.0	Diesel	< 5.0 U
06-12926	HC ID: ---		FID3A		Motor Oil	< 10 U
					o-Terphenyl	82.2%
JQ33D	T4-B414-02-A	07/26/06	07/27/06	1.0	**Diesel**	**26**
06-12926	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**97**
					o-Terphenyl	85.1%
JQ33E	T4-B414-02-B	07/26/06	07/27/06	1.0	**Diesel**	**60**
06-12927	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**210**
					o-Terphenyl	79.3%
JQ33F	T4-B414-02-C	07/26/06	07/27/06	1.0	**Diesel**	**92**
06-12928	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**280**
					o-Terphenyl	81.8%
JQ33G	T4-B414-03-A	07/26/06	07/27/06	1.0	**Diesel**	**47**
06-12929	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**200**
					o-Terphenyl	70.9%
JQ33H	T4-B414-03-B	07/26/06	07/27/06	1.0	**Diesel**	**64**
06-12930	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**220**
					o-Terphenyl	74.2%
JQ33I	T4-B414-03-C	07/26/06	07/27/06	1.0	**Diesel**	**58**
06-12931	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**220**
					o-Terphenyl	77.3%
JQ33J	T4-B414-04-A	07/26/06	07/27/06	1.0	**Diesel**	**46**
06-12932	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**220**
					o-Terphenyl	79.8%
JQ33K	T4-B414-04-B	07/26/06	07/27/06	1.0	**Diesel**	**48**
06-12933	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**180**
					o-Terphenyl	80.9%
JQ33L	T4-B414-04-C	07/26/06	07/27/06	1.0	**Diesel**	**60**
06-12934	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**210**
					o-Terphenyl	72.4%

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7/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID
Page 2 of 2
Matrix: Sediment

QC Report No: JQ33-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Received: 07/21/06

Data Release Authorized: MW
Reported: 07/31/06

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
JQ33M	T4-S3-01-D	07/26/06	07/27/06	20	**Diesel**	**270**
06-12935	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**780**
					o-Terphenyl	D
JQ33N	T4-S3-01-E	07/26/06	07/27/06	20	**Diesel**	**530**
06-12936	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**1,500**
					o-Terphenyl	D
JQ33O	T4-S3-01-F	07/26/06	07/27/06	20	**Diesel**	**1,100**
06-12937	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**2,900**
					o-Terphenyl	D
JQ33P	T4-S3-01-G	07/26/06	07/27/06	20	**Diesel**	**910**
06-12938	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**2,300**
					o-Terphenyl	D
JQ33Q	T4-S3-01-H	07/26/06	07/27/06	20	**Diesel**	**710**
06-12939	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**2,100**
					o-Terphenyl	D

Reported in mg/kg (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

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9/28/06

LDC #: 15488B8
SDG #: JQ33
Laboratory: Analytical Resources, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level III

Date: 9/21/06
Page: 1 of 1
Reviewer: a
2nd Reviewer: [illegible]

METHOD: GC Diesel Range Organics (NWTPH-Dx) / NRO

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18 - 20/06
IIa.	Initial calibration	A	
IIb.	Calibration verification / ICV	A	
III.	Blanks	A	
IVa.	Surrogate recovery	SW	
IVb.	Matrix spike/Matrix spike duplicates	A	
IVc.	Laboratory control samples	A	LCS
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	SW N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	SW	~~D=4+4-DUP~~ (NOSO)
X.	Field blanks	N	D=4+4-DUP

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
All soils

1	T4-B414-01-A	11	T4-B414-04-B	21	MB-072606	31	
2	T4-B414-01-B	12	T4-B414-04-C	22		32	
3	T4-B414-01-C	13	T4-S3-01-D	23		33	
4	T4-B414-02-A	14	T4-S3-01-E	24		34	
5	T4-B414-02-B	15	T4-S3-01-F	25		35	
6	T4-B414-02-C	16	T4-S3-01-G	26		36	
7	T4-B414-03-A	17	T4-S3-01-H	27		37	
8	T4-B414-03-B	18	T4-B414-02-AMS	28		38	
9	T4-B414-03-C	19	T4-B414-02-AMSD	29		39	
10	T4-B414-04-A	20		30		40	

Notes: _____

LDC #: 154888
SDG #: 1033

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: a
2nd Reviewer: R

METHOD: ✓ **GC** ___ **HPLC**

Are surrogates required by the method? Yes ✓ or No ___.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were surrogates spiked into all samples and blanks?

Y N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	1,13-1T	NS	All	D (-)	No final (DF = 20x)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decafluorobiphenyl (DCB)	U	Tripentyltin
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	

LDC #: 15488B8
SDG #: V033

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: 9
2nd Reviewer: 9

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	RAPP < Finding	RL	Associated Samples	Qualifications
	DRO	0.25 MS/KG	5.0 MS/KG	All	None ↓ P
	MRO	0.5 MS/KG	10 MS/KG		

Comments: See sample calculation verification worksheet for recalculations

LDC #: 15488B8
SDG #: JQ33

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: [signature]
2nd reviewer: [signature]

METHOD: ✓ GC ___ HPLC

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (mg/kg)		%RPD Limit ≤ 75	Qualification Parent only / All Samples
	T4-B414-02-A-DUP	4		
DRO	21	26	21	
MRO	52	97	60	

Compound	Concentration ( )		%RPD Limit ≤ ____	Qualification Parent only / All Samples

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 18 through July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Diesel Range Organics & Motor Oil Range Organics

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ35

Sample Identification

T4-S3-02-C
T4-S3-02-D
T4-S3-02-E
T4-S3-02-F
T4-S3-03-B
T4-S3-03-C
T4-S3-03-D
T4-S3-05-E
T4-S3-05-F
T4-S3-05-G
T4-S3-05-H
T4-S3-05-J
T4-S3-06-A
T4-S3-06-B
T4-S3-08-B
T4-S3-08-C
T4-S3-08-CMS
T4-S3-08-CMSD

Introduction

This data review covers 18 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method NWTPH-Dx for Diesel Range Organics and Motor Oil Range Organics.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 15.0% for all compounds.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No diesel range organic or motor oil range organic contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for sample T4-S3-02-D. Since the sample was diluted out, no data were qualified.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

The QAPP reporting limits were met with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG JQ35	Diesel range organics	Laboratory reporting limit reported at 5.0 mg/Kg.	Reporting limit should be reported at 0.25 mg/Kg per the QAPP.	None	P
All samples in SDG JQ35	Motor oil range organics	Laboratory reporting limit reported at 10 mg/Kg.	Reporting limit should be reported at 0.5 mg/Kg per the QAPP.	None	P

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags have been summarized at the end of this report if data has been qualified.

IX. Field Duplicates

Samples T4-S3-02-F-DUP (from SDG JQ52) and T4-S3-02-F, samples T4-S3-03-C-DUP (from SDG JQ52) and T4-S3-03-C, and samples T4-S3-08-C-DUP (from SDG JQ52) and T4-S3-08-C were identified as field duplicates. No diesel range organics or motor oil range organics were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
Diesel range organics	590	610	3 (≤75)
Motor oil range organics	710	680	4 (≤75)

Compound	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-03-C-DUP	T4-S3-03-C	
Diesel range organics	360	400	11 (≤75)
Motor oil range organics	520	540	4 (≤75)

Compound	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-08-C-DUP	T4-S3-08-C	
Diesel range organics	43	6.2	150 (≤75)
Motor oil range organics	160	14	168 (≤75)

X. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Diesel Range Organics & Motor Oil Range Organics - Data Qualification Summary - SDG JQ35

SDG	Sample	Compound	Flag	A or P	Reason
JQ35	T4-S3-02-C T4-S3-02-D T4-S3-02-E T4-S3-02-F T4-S3-03-B T4-S3-03-C T4-S3-03-D T4-S3-05-E T4-S3-05-F T4-S3-05-G T4-S3-05-H T4-S3-05-J T4-S3-06-A T4-S3-06-B T4-S3-08-B T4-S3-08-C	Diesel range organics Motor oil range organics	None None	P	Compound quantitation and CRQLs

Terminal 4 Early Action
Diesel Range Organics & Motor Oil Range Organics - Laboratory Blank Data Qualification Summary - SDG JQ35

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID
Page 1 of 2
Matrix: Sediment

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Received: 07/21/06

Data Release Authorized:
Reported: 08/03/06

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
JQ35A	T4-S3-02-C	07/28/06	08/01/06	5.0	**Diesel**	**150**
06-12956	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**400**
					o-Terphenyl	67.7%
JQ35B	T4-S3-02-D	07/28/06	08/01/06	5.0	**Diesel**	**580**
06-12957	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**1,500**
					o-Terphenyl	NR
JQ35C	T4-S3-02-E	07/28/06	08/01/06	5.0	**Diesel**	**290**
06-12958	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**640**
					o-Terphenyl	69.3%
JQ35D	T4-S3-02-F	07/28/06	08/01/06	5.0	**Diesel**	**610**
06-12959	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**680**
					o-Terphenyl	60.2%
JQ35E	T4-S3-03-B	07/28/06	08/01/06	5.0	**Diesel**	**270**
06-12960	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**500**
					o-Terphenyl	74.1%
JQ35F	T4-S3-03-C	07/28/06	08/01/06	1.0	**Diesel**	**400**
06-12961	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**540**
					o-Terphenyl	62.9%
JQ35G	T4-S3-03-D	07/28/06	08/01/06	1.0	**Diesel**	**270**
06-12962	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**320**
					o-Terphenyl	68.7%
JQ35H	T4-S3-05-E	07/28/06	08/01/06	5.0	**Diesel**	**150**
06-12963	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**350**
					o-Terphenyl	64.2%
JQ35I	T4-S3-05-F	07/28/06	08/01/06	5.0	**Diesel**	**340**
06-12964	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**720**
					o-Terphenyl	63.3%
JQ35J	T4-S3-05-G	07/28/06	08/01/06	5.0	**Diesel**	**320**
06-12965	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**650**
					o-Terphenyl	54.0%
JQ35K	T4-S3-05-H	07/28/06	08/01/06	5.0	**Diesel**	**440**
06-12966	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**960**
					o-Terphenyl	69.2%
JQ35L	T4-S3-05-J	07/28/06	08/01/06	1.0	**Diesel**	**7.6**
06-12967	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**16**
					o-Terphenyl	73.8%
JQ35M	T4-S3-06-A	07/28/06	08/01/06	5.0	**Diesel**	**140**
06-12968	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**300**
					o-Terphenyl	55.6%

9/12/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID
Page 2 of 2
Matrix: Sediment

QC Report No: JQ35-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Received: 07/21/06

Data Release Authorized:
Reported: 08/03/06

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
JQ35N	T4-S3-06-B	07/28/06	08/01/06	1.0	Diesel	< 6.5 U
06-12969	HC ID: ---		FID3A		Motor Oil	< 13 U
					o-Terphenyl	71.8%
JQ35O	T4-S3-08-B	07/28/06	08/01/06	5.0	**Diesel**	**130**
06-12970	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**280**
					o-Terphenyl	62.8%
MB-072806	Method Blank	07/28/06	08/01/06	1.0	Diesel	< 5.0 U
06-12971	HC ID: ---		FID3A		Motor Oil	< 10 U
					o-Terphenyl	70.7%
JQ35P	T4-S3-08-C	07/28/06	08/01/06	1.0	**Diesel**	**6.2**
06-12971	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**14**
					o-Terphenyl	59.6%

Reported in mg/kg (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

LDC #: 15488C8 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/21/06
SDG #: JQ35 Level III Page: 1 of 1
Laboratory: Analytical Resources, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Diesel Range Organics (NWTPH-Dx) / MRO

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18 - 20/06
IIa.	Initial calibration	A	
IIb.	Calibration verification / ICV	A	
III.	Blanks	A	
IVa.	Surrogate recovery	SW	
IVb.	Matrix spike/Matrix spike duplicates	A	
IVc.	Laboratory control samples	A	LCS
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	SW N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	SW	D=4+4-DUP. 6+6-DUP. ~~15~~ 16 + ~~15~~ 16-DUP (JQ53)
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
All Soils

1	T4-S3-02-C	11	T4-S3-05-H	21	MB-072806	31	
2	T4-S3-02-D	12	T4-S3-05-J	22		32	
3	T4-S3-02-E	13	T4-S3-06-A	23		33	
4	T4-S3-02-F	14	T4-S3-06-B	24		34	
5	T4-S3-03-B	15	T4-S3-08-B	25		35	
6	T4-S3-03-C	16	T4-S3-08-C	26		36	
7	T4-S3-03-D	17	T4-S3-08-CMS	27		37	
8	T4-S3-05-E	18	T4-S3-08-CMSD	28		38	
9	T4-S3-05-F	19		29		39	
10	T4-S3-05-G	20		30		40	

Notes:

LDC #: 54885B
SDG #: 1835

VALIDATION FINDINDS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: A
2nd Reviewer: S

METHOD: ✓ **GC** __ **HPLC**

Are surrogates required by the method? Yes ✓ or No ____.

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were surrogates spiked into all samples and blanks?

(Y) N N/A Did all surrogate recoveries (%R) meet the QC limits?

#	Sample ID	Detector/ Column	Surrogate Compound	%R (Limits)	Qualifications
	2	N/S	All	D (—)	No final (5x)
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
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				( )	
				( )	

	Surrogate Compound		Surrogate Compound		Surrogate Compound		Surrogate Compound
A	Chlorobenzene (CBZ)	G	Octacosane	M	Benzo(e)Pyrene	S	1-Chloro-3-Nitrobenzene
B	4-Bromofluorobenzene (BFB)	H	Ortho-Terphenyl	N	Terphenyl-D14	T	3,4-Dinitrotoluene
C	a,a,a-Trifluorotoluene	I	Fluorobenzene (FBZ)	O	Decafluorobiphenyl (DCB)	U	Tripentyltin
D	Bromochlorobenene	J	n-Triacontane	P	1-methylnaphthalene	V	
E	1,4-Dichlorobutane	K	Hexacosane	Q	Dichlorophenyl Acetic Acid (DCAA)	W	
F	1,4-Difluorobenzene (DFB)	L	Bromobenzene	R	4-Nitrophenol	X	

LDC #: 15488C8
SDG #: J035

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Page: 1 of 1
Reviewer: 9
2nd Reviewer: 8

METHOD: __ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	RAPP < Finding	RL	Associated Samples	Qualifications
	DRO	0.25 MS/KS	5.0 MS/KS	All	None AP
	MRO	0.5 MS/KS	10 MS/KS		

Comments: See sample calculation verification worksheet for recalculations

LDC#: 15488C8
SDG#: JQ35

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: 9
2nd Reviewer: 9

METHOD: GC DRO/MRO (NWTPH-Dx)

(Y) N NA Were field duplicate pairs identified in this SDG?
Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (mg/Kg)		RPD	(≤ TS)
	T4-S3-02-F-DUP	4		
DRO	590	610	3	
MRO	710	680	4	

Compound	Concentration (mg/Kg)		RPD	(≤ TS)
	T4-S3-03-C-DUP	6		
DRO	360	400	11	
MRO	520	540	4	

Compound	Concentration (mg/Kg)		RPD	(≤ TS)
	T4-S3-08-C-DUP	~~18~~ 16		
DRO	43	6.2	150	
MRO	160	14	168	

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Terminal 4 Early Action

Collection Date: July 20, 2006

LDC Report Date: September 29, 2006

Matrix: Sediment

Parameters: Diesel Range Organics & Motor Oil Range Organics

Validation Level: EPA Level III

Laboratory: Analytical Resources, Inc.

Sample Delivery Group (SDG): JQ36

Sample Identification

T4-S3-07-B
T4-S3-07-C
T4-S3-07-D
T4-S3-07-E
T4-S3-04-A
T4-S3-04-B
T4-S3-04-C
T4-S3-04-D
T4-WB-01
T4-WB-02
T4-WB-03
T4-WB-04
T4-S3-04-AMS
T4-S3-04-AMSD

Introduction

This data review covers 14 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method NWTPH-Dx for Diesel Range Organics and Motor Oil Range Organics.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 15.0% for all compounds.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No diesel range organic or motor oil range organic contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were not within the QC limits. Since the samples were diluted out, no data were qualified.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

The QAPP reporting limits were met with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG JQ36	Diesel range organics	Laboratory reporting limit reported at 5.0 mg/Kg.	Reporting limit should be reported at 0.25 mg/Kg per the QAPP.	None	P
All samples in SDG JQ36	Motor oil range organics	Laboratory reporting limit reported at 10 mg/Kg.	Reporting limit should be reported at 0.5 mg/Kg per the QAPP.	None	P

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags have been summarized at the end of this report if data has been qualified.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Diesel Range Organics & Motor Oil Range Organics - Data Qualification Summary - SDG JQ36

SDG	Sample	Compound	Flag	A or P	Reason
JQ36	T4-S3-07-B T4-S3-07-C T4-S3-07-D T4-S3-07-E T4-S3-04-A T4-S3-04-B T4-S3-04-C T4-S3-04-D T4-WB-01 T4-WB-02 T4-WB-03 T4-WB-04	Diesel range organics Motor oil range organics	None None	P	Compound quantitation and CRQLs

Terminal 4 Early Action
Diesel Range Organics & Motor Oil Range Organics - Laboratory Blank Data Qualification Summary - SDG JQ36

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID
Page 1 of 2
Matrix: Sediment

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Received: 07/21/06

Data Release Authorized:
Reported: 08/03/06

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
JQ36A	T4-S3-07-B	08/01/06	08/02/06	5.0	**Diesel**	**110**
06-12972	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**330**
					o-Terphenyl	66.7%
JQ36B	T4-S3-07-C	08/01/06	08/02/06	1.0	**Diesel**	**88**
06-12973	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**290**
					o-Terphenyl	74.7%
JQ36C	T4-S3-07-D	08/01/06	08/02/06	5.0	**Diesel**	**130**
06-12974	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**370**
					o-Terphenyl	72.6%
JQ36D	T4-S3-07-E	08/01/06	08/02/06	1.0	**Diesel**	**9.2**
06-12975	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**25**
					o-Terphenyl	76.7%
MB-080106	Method Blank	08/01/06	08/02/06	1.0	Diesel	< 5.0 U
06-12976	HC ID: ---		FID3A		Motor Oil	< 10 U
					o-Terphenyl	80.9%
JQ36E	T4-S3-04-A	08/01/06	08/02/06	5.0	**Diesel**	**550**
06-12976	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**1,400**
					o-Terphenyl	78.3%
JQ36F	T4-S3-04-B	08/01/06	08/02/06	1.0	**Diesel**	**36**
06-12977	HC ID: **DRO/MOTOR OIL**		FID3A		**Motor Oil**	**220**
					o-Terphenyl	57.8%
JQ36G	T4-S3-04-C	08/01/06	08/02/06	5.0	**Diesel**	**96**
06-12978	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**200**
					o-Terphenyl	81.3%
JQ36H	T4-S3-04-D	08/01/06	08/02/06	1.0	**Diesel**	**8.1**
06-12979	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**15**
					o-Terphenyl	79.3%
JQ36I	T4-WB-01	08/01/06	08/02/06	1.0	**Diesel**	**32**
06-12980	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**130**
					o-Terphenyl	78.0%
JQ36J	T4-WB-02	08/01/06	08/02/06	1.0	**Diesel**	**22**
06-12981	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**110**
					o-Terphenyl	68.9%
JQ36K	T4-WB-03	08/01/06	08/02/06	1.0	**Diesel**	**32**
06-12982	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**140**
					o-Terphenyl	75.8%
JQ36L	T4-WB-04	08/01/06	08/02/06	1.0	**Diesel**	**31**
06-12983	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**150**
					o-Terphenyl	75.8%

FORM I

9/28/06

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID
Page 2 of 2
Matrix: Sediment

QC Report No: JQ36-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Received: 07/21/06

Data Release Authorized:
Reported: 08/03/06

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result

Reported in mg/kg (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

9/28/06

LDC #: 15488D8 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/21/06
SDG #: JQ36 Level III Page: 1 of 1
Laboratory: Analytical Resources, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC Diesel Range Organics (NWTPH-Dx) / HRD

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/20/06
IIa.	Initial calibration	A	
IIb.	Calibration verification / ICV	A	
III.	Blanks	A	
IVa.	Surrogate recovery	A	
IVb.	Matrix spike/Matrix spike duplicates	SW	
IVc.	Laboratory control samples	A	LCS
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	SW N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X.	Field blanks	N	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples:
All soils

1	T4-S3-07-B	11	T4-WB-03	21	MB-080106	31	
2	T4-S3-07-C	12	T4-WB-04	22		32	
3	T4-S3-07-D	13	T4-S3-04-AMS	23		33	
4	T4-S3-07-E	14	T4-S3-04-AMSD	24		34	
5	T4-S3-04-A	15		25		35	
6	T4-S3-04-B	16		26		36	
7	T4-S3-04-C	17		27		37	
8	T4-S3-04-D	18		28		38	
9	T4-WB-01	19		29		39	
10	T4-WB-02	20		30		40	

Notes: _____

LDC #: 154880B

SDG #: J836

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: ✓ **GC** ___ **HPLC**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG?

(Y) N N/A Was an MS/MSD analyzed every 20 samples for each matrix or whenever a sample extraction was performed?

Y (N) N/A Were the MS/MSD percent recoveries (%R) and relative percent differences (RPD) within QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	13/14 (5X)	Diesel	%R out due to dilution				No qual
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
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			( )	( )	( )		
			( )	( )	( )		

LDC #: 154888D8
SDG #: J0236

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: 9
2nd Reviewer: 9

METHOD: ✓ GC ___ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	QAPP < Finding	RL	Associated Samples	Qualifications
	ORD	0.25 MS/KG	5.0 MS/KG	All	None AP
	MRD	0.5 MS/KG	10 MS/KG		↓

Comments: See sample calculation verification worksheet for recalculations

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name:	Terminal 4 Early Action
Collection Date:	July 18 through July 19, 2006
LDC Report Date:	September 29, 2006
Matrix:	Sediment
Parameters:	Diesel Range Organics & Motor Oil Range Organics
Validation Level:	EPA Level III
Laboratory:	Analytical Resources, Inc.
Sample Delivery Group (SDG):	JQ52

Sample Identification

T4-S3-02-F-DUP
T4-S3-03-C-DUP
T4-B414-02-A-DUP
T4-S3-08-C-DUP
T4-S3-02-F-DUPMS
T4-S3-02-F-DUPMSD

Introduction

This data review covers 6 sediment samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per Method NWTPH-Dx for Diesel Range Organics and Motor Oil Range Organics.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified a P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent.

UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

The percent differences (%D) of the second source calibration standard were less than or equal to 15.0% for all compounds.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No diesel range organic or motor oil range organic contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

The QAPP reporting limits were met with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG JQ52	Diesel range organics	Laboratory reporting limit reported at 5.0 mg/Kg.	Reporting limit should be reported at 0.25 mg/Kg per the QAPP.	None	P
All samples in SDG JQ52	Motor oil range organics	Laboratory reporting limit reported at 10 mg/Kg.	Reporting limit should be reported at 0.5 mg/Kg per the QAPP.	None	P

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags have been summarized at the end of this report if data has been qualified.

IX. Field Duplicates

Samples T4-S3-02-F-DUP and T4-S3-02-F (from SDG JQ35), samples T4-S3-03-C-DUP and T4-S3-03-C (from SDG JQ35), T4-B414-02-A-DUP and T4-B414-02-A (from SDG JQ33), and samples T4-S3-08-C-DUP and T4-S3-08-C (from SDG JQ35) were identified as field duplicates. No diesel range organics or motor oil range organics were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-02-F-DUP	T4-S3-02-F	
Diesel range organics	590	610	3 (≤75)
Motor oil range organics	710	680	4 (≤75)

Compound	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-03-C-DUP	T4-S3-03-C	
Diesel range organics	360	400	11 (≤75)
Motor oil range organics	520	540	4 (≤75)

Compound	Concentration (mg/Kg)		RPD (Limits)
	T4-B414-02-A-DUP	T4-B414-02-A	
Diesel range organics	21	26	21 (≤75)
Motor oil range organics	52	97	60 (≤75)

Compound	Concentration (mg/Kg)		RPD (Limits)
	T4-S3-08-C-DUP	T4-S3-08-C	
Diesel range organics	43	6.2	150 (≤75)
Motor oil range organics	160	14	168 (≤75)

X. Field Blanks

No field blanks were identified in this SDG.

Terminal 4 Early Action
Diesel Range Organics & Motor Oil Range Organics - Data Qualification Summary - SDG JQ52

SDG	Sample	Compound	Flag	A or P	Reason
JQ52	T4-S3-02-F-DUP T4-S3-03-C-DUP T4-B414-02-A-DUP T4-S3-08-C-DUP	Diesel range organics Motor oil range organics	None None	P	Compound quantitation and CRQLs

Terminal 4 Early Action
Diesel Range Organics & Motor Oil Range Organics - Laboratory Blank Data Qualification Summary - SDG JQ52

No Sample Data Qualified in this SDG

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID
Page 1 of 1
Matrix: Sediment

QC Report No: JQ52-Anchor Environmental
Project: T4 EARLY ACTION
050332-01
Date Received: 07/21/06

Data Release Authorized:
Reported: 08/01/06

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
MB-072806	Method Blank	07/28/06	08/01/06	1.0	Diesel	< 5.0 U
06-13102	HC ID: ---		FID3A		Motor Oil	< 10 U
					o-Terphenyl	59.8%
JQ52A	T4-S3-02-F-DUP	07/28/06	08/01/06	10	**Diesel**	**590**
06-13102	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**710**
					o-Terphenyl	56.4%
JQ52B	T4-S3-03-C-DUP	07/28/06	08/01/06	1.0	**Diesel**	**360**
06-13103	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**520**
					o-Terphenyl	50.7%
JQ52C	T4-B414-02-A-DUP	07/28/06	08/01/06	1.0	**Diesel**	**21**
06-13104	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**52**
					o-Terphenyl	70.7%
JQ52D	T4-S3-08-C-DUP	07/28/06	08/01/06	1.0	**Diesel**	**43**
06-13114	HC ID: **DRO/RRO**		FID3A		**Motor Oil**	**160**
					o-Terphenyl	64.0%

Reported in mg/kg (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

9/18/06

LDC #: 15488E8 **VALIDATION COMPLETENESS WORKSHEET** Date: 9/22/06
SDG #: JQ52 Level III Page: 1 of 1
Laboratory: Analytical Resources, Inc. Reviewer: 9
2nd Reviewer: 9

METHOD: GC Diesel Range Organics (NWTPH-Dx) /HRO

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/18-19
IIa.	Initial calibration	A	
IIb.	Calibration verification /ICV	A	
III.	Blanks	A	
IVa.	Surrogate recovery	A	
IVb.	Matrix spike/Matrix spike duplicates	A	
IVc.	Laboratory control samples	A	LCS
V.	Target compound identification	N	
VI.	Compound Quantitation and CRQLs	SW N	
VII.	System Performance	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	SW	~~DFFF~~ see WS
X.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:
MI soils

1	T4-S3-02-F-DUP	11	MB-0T2806	21		31	
2	T4-S3-03-C-DUP	12		22		32	
3	T4-B414-02-A-DUP	13		23		33	
4	T4-S3-08-C-DUP	14		24		34	
5	T4-S3-02-F-DUPMS	15		25		35	
6	T4-S3-02-F-DUPMSD	16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes: _____

LDC #: 154828
SDG #: J252

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and Reported CRQLs

Reviewer: 9
2nd Reviewer: 8

METHOD: ✓ GC __ HPLC

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Level IV/D Only

Y N N/A Were CRQLs adjusted for sample dilutions, dry weight factors, etc.?

Y N N/A Did the reported results for detected target compounds agree within 10.0% of the recalculated results?

#	Compound Name	RAPP < Finding RL	Associated Samples	Qualifications
	ORD	0.25 MS/KS 5.0 MS/KS	All	None
	MRD	0.5 MS/KS 10 MS/KS		

Comments: See sample calculation verification worksheet for recalculations

LDC#: 15488E8
SDG#: JQ52

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: 9
2nd Reviewer:

METHOD: GC DRO/MRO (NWTPH-Dx)

(Y) N NA Were field duplicate pairs identified in this SDG?
(Y) N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (mg/Kg)		RPD	(≤ TS)
	1	T4-S3-02-F (JQ35)		
DRO	590	610	3	
MRO	710	680	4	

Compound	Concentration (mg/Kg)		RPD	(≤ TS)
	2	T4-S3-03-C (JQ35)		
DRO	360	400	11	
MRO	520	540	4	

Compound	Concentration (mg/Kg)		RPD	(≤ TS)
	3	T4-B414-02-A (JQ33)		
DRO	21	26	21	
MRO	52	97	60	

Compound	Concentration (mg/Kg)		RPD	(≤ TS)
	4	T4-S3-08-C (JQ35)		
DRO	43	6.2	150	
MRO	160	14	168	