

AP - 36

STAGE 1 & 2 REPORTS

DATE:

4-15-10

Hansen, Edward J., EMNRD

From: Daniel M Bryant [dmbryant@paalp.com]
Sent: Thursday, April 15, 2010 2:55 PM
To: Hansen, Edward J., EMNRD
Cc: Jeffrey P Dann
Subject: AP-36 (TNM 97-23)
Attachments: MW-4 Sept. 08.pdf; Summary_Report (36).pdf; Report_Packet (35).pdf

Ed,

Per our conversation yesterday, attached are the analytical reports you need for the subject remediation project. The first report is the groundwater sample from MW-4 taken 9/25/08. The other two analytical reports document the sampling performed on the onsite stockpiled material.

In order to advance this site to obtain closure, Plains is requesting approval to perform the following actions:

1. Plug and abandon the existing onsite monitoring wells
2. Line the excavation per the approved abatement plan
3. According to the agreement made with the landowner, utilize the existing on-site soils as backfill material
4. A final site closure report will be developed documenting remedial activities and include a final C-141

Upon your approval, these actions will be implemented. Let me know if you need additional information to help you in your determination of this proposal.

*Daniel Bryant
Environmental & Regulatory Compliance Specialist
Plains All American*

*Office: 432/687-8918
Cellular: 432/557-5865
Fax: 432/687-8921*



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1296
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•3443
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail: lab@traceanalysis.com

Certifications

WBENC: 237019

HUB: 1752439743100-86536

DBE: VN 20657

NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX

El Paso: T104704221-08-TX

Midland: T104704392-08-TX

LELAP-02003

LELAP-02002

Kansas E-10317

Analytical and Quality Control Report

Cliff Brunson
BBC International
1324 W. Marland
Hobbs, NM, 88240

Report Date: October 1, 2008

Work Order: 8093010



Project Location: Eunice, NM
Project Name: Plains TNM 97-23
Project Number: TNM 97-23

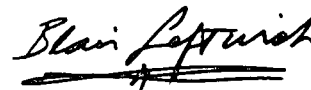
Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
175015	MW #4	water	2008-09-25	14:27	2008-09-30

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 6 pages and shall not be reproduced except in its entirety, without written approval of

TraceAnalysis, Inc.

A handwritten signature in black ink, reading "Blair Leftwich". The signature is written in a cursive style and is positioned above a horizontal line.

Dr. Blair Leftwich, Director

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project Plains TNM 97-23 were received by TraceAnalysis, Inc. on 2008-09-30 and assigned to work order 8093010. Samples for work order 8093010 were received intact without headspace and at a temperature of 3.2 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
BTEX	S 8021B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8093010 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: October 1, 2008
TNM 97-23

Work Order: 8093010
Plains TNM 97-23

Page Number: 4 of 6
Eunice, NM

Analytical Report

Sample: 175015 - MW #4

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 52881
Prep Batch: 45314

Analytical Method: S 8021B
Date Analyzed: 2008-09-30
Sample Preparation: 2008-09-30

Prep Method: S 5030B
Analyzed By: ER
Prepared By: ER

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	61.9 - 136.3
4-Bromofluorobenzene (4-BFB)		0.108	mg/L	1	0.100	108	53.2 - 129.7

Method Blank (1) QC Batch: 52881

QC Batch: 52881
Prep Batch: 45314

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: ER
Prepared By: ER

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.000208	mg/L	0.001
Toluene		<0.000199	mg/L	0.001
Ethylbenzene		<0.000347	mg/L	0.001
Xylene		<0.000468	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.102	mg/L	1	0.100	102	70.5 - 111.5
4-Bromofluorobenzene (4-BFB)		0.107	mg/L	1	0.100	107	56.5 - 109.3

Laboratory Control Spike (LCS-1)

QC Batch: 52881
Prep Batch: 45314

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: ER
Prepared By: ER

Report Date: October 1, 2008
TNM 97-23

Work Order: 8093010
Plains TNM 97-23

Page Number: 5 of 6
Eunice, NM

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.104	mg/L	1	0.100	<0.000208	104	79.4 - 113.7
Toluene	0.104	mg/L	1	0.100	<0.000199	104	80.3 - 114.6
Ethylbenzene	0.105	mg/L	1	0.100	<0.000347	105	82.2 - 116.2
Xylene	0.311	mg/L	1	0.300	<0.000468	104	84.2 - 117.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.104	mg/L	1	0.100	<0.000208	104	79.4 - 113.7	0	20
Toluene	0.105	mg/L	1	0.100	<0.000199	105	80.3 - 114.6	1	20
Ethylbenzene	0.105	mg/L	1	0.100	<0.000347	105	82.2 - 116.2	0	20
Xylene	0.312	mg/L	1	0.300	<0.000468	104	84.2 - 117.8	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0966	0.0966	mg/L	1	0.100	97	97	72.3 - 115.2
4-Bromofluorobenzene (4-BFB)	0.102	0.102	mg/L	1	0.100	102	102	79 - 121.8

Matrix Spike (MS-1) Spiked Sample: 175015

QC Batch: 52881
Prep Batch: 45314

Date Analyzed: 2008-09-30
QC Preparation: 2008-09-30

Analyzed By: ER
Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.119	mg/L	1	0.100	<0.000208	119	66.8 - 128.4
Toluene	0.120	mg/L	1	0.100	<0.000199	120	69 - 125.8
Ethylbenzene	0.121	mg/L	1	0.100	<0.000347	121	69.7 - 126.1
Xylene	0.359	mg/L	1	0.300	<0.000468	120	69.2 - 128.8

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.113	mg/L	1	0.100	<0.000208	113	66.8 - 128.4	5	20
Toluene	0.114	mg/L	1	0.100	<0.000199	114	69 - 125.8	5	20
Ethylbenzene	0.115	mg/L	1	0.100	<0.000347	115	69.7 - 126.1	5	20
Xylene	0.342	mg/L	1	0.300	<0.000468	114	69.2 - 128.8	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0960	0.0956	mg/L	1	0.1	96	96	73.4 - 117.3

continued ...

Report Date: October 1, 2008
TNM 97-23

Work Order: 8093010
Plains TNM 97-23

Page Number: 6 of 6
Eunice, NM

matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	0.101	0.101	mg/L	1	0.1	101	101	74 - 129.4

Standard (ICV-1)

QC Batch: 52881

Date Analyzed: 2008-09-30

Analyzed By: ER

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.105	105	85 - 115	2008-09-30
Toluene		mg/L	0.100	0.105	105	85 - 115	2008-09-30
Ethylbenzene		mg/L	0.100	0.107	107	85 - 115	2008-09-30
Xylene		mg/L	0.300	0.314	105	85 - 115	2008-09-30

Standard (CCV-1)

QC Batch: 52881

Date Analyzed: 2008-09-30

Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.103	103	85 - 115	2008-09-30
Toluene		mg/L	0.100	0.102	102	85 - 115	2008-09-30
Ethylbenzene		mg/L	0.100	0.104	104	85 - 115	2008-09-30
Xylene		mg/L	0.300	0.306	102	85 - 115	2008-09-30

Summary Report

Cliff Brunson
BBC International
1324 W. Marland
Hobbs, NM, 88240

Report Date: April 17, 2008

Work Order: 8040902



Project Location: Eunice, NM
Project Name: Plains TNM 97-23
Project Number: TNM 97-23

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
156061	P1 3'	soil	2008-04-07	09:34	2008-04-08
156062	P1 Bottom	soil	2008-04-07	09:37	2008-04-08
156063	P2 West 5'	soil	2008-04-07	09:48	2008-04-08
156064	P2 West Bottom	soil	2008-04-07	09:55	2008-04-08
156065	P2 Center 4'	soil	2008-04-07	10:03	2008-04-08
156066	P2 Center Bottom	soil	2008-04-07	10:10	2008-04-08
156067	P2 East 4'	soil	2008-04-07	10:19	2008-04-08
156068	P2 East Bottom	soil	2008-04-07	10:23	2008-04-08
156069	P3 North 3'	soil	2008-04-07	10:33	2008-04-08
156070	P3 North Bottom	soil	2008-04-07	10:40	2008-04-08
156071	P3 South 3'	soil	2008-04-07	10:46	2008-04-08
156072	P3 South Bottom	soil	2008-04-07	10:55	2008-04-08

Sample - Field Code	TPH DRO DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
156061 - P1 3'	<50.0	<1.00
156062 - P1 Bottom	99.9	<1.00
156063 - P2 West 5'	<50.0	3.53
156064 - P2 West Bottom	<50.0	12.7
156065 - P2 Center 4'	155	<1.00
156066 - P2 Center Bottom	71.7	<1.00
156067 - P2 East 4'	238	<1.00
156068 - P2 East Bottom	<50.0	<1.00
156069 - P3 North 3'	<50.0	<1.00
156070 - P3 North Bottom	163	<1.00
156071 - P3 South 3'	<50.0	<1.00
156072 - P3 South Bottom	<50.0	<1.00

Sample: 156061 - P1 3'

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0

continued ...

sample 156061 continued ...

Param	Flag	Result	Units	RL
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0

Sample: 156062 - P1 Bottom

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0

Sample: 156063 - P2 West 5'

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0

Sample: 156064 - P2 West Bottom

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0

Sample: 156065 - P2 Center 4'

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0

Sample: 156066 - P2 Center Bottom

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0

continued ...

sample 156066 continued ...

Param	Flag	Result	Units	RL
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0

Sample: 156067 - P2 East 4'

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0

Sample: 156068 - P2 East Bottom

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0

Sample: 156069 - P3 North 3'

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0

Sample: 156070 - P3 North Bottom

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0

Sample: 156071 - P3 South 3'

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0

continued ...

sample 156071 continued ...

Param	Flag	Result	Units	RL
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0

Sample: 156072 - P3 South Bottom

Param	Flag	Result	Units	RL
Benzene		<10.0	µg/Kg	10.0
Toluene		<10.0	µg/Kg	10.0
Ethylbenzene		<10.0	µg/Kg	10.0
m,p-Xylene		<10.0	µg/Kg	10.0
o-Xylene		<10.0	µg/Kg	10.0



6701 Alherdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1296
200 East Sunset Road, Suite E El Paso, Texas 79922 885•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•589•6301 FAX 432•689•6313
8015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•261•5260
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Cliff Brunson
BBC International
1324 W. Marland
Hobbs, NM, 88240

Report Date: April 17, 2008

Work Order: 8040902



Project Location: Eunice, NM
Project Name: Plains TNM 97-23
Project Number: TNM 97-23

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
156061	P1 3'	soil	2008-04-07	09:34	2008-04-08
156062	P1 Bottom	soil	2008-04-07	09:37	2008-04-08
156063	P2 West 5'	soil	2008-04-07	09:48	2008-04-08
156064	P2 West Bottom	soil	2008-04-07	09:55	2008-04-08
156065	P2 Center 4'	soil	2008-04-07	10:03	2008-04-08
156066	P2 Center Bottom	soil	2008-04-07	10:10	2008-04-08
156067	P2 East 4'	soil	2008-04-07	10:19	2008-04-08
156068	P2 East Bottom	soil	2008-04-07	10:23	2008-04-08
156069	P3 North 3'	soil	2008-04-07	10:33	2008-04-08
156070	P3 North Bottom	soil	2008-04-07	10:40	2008-04-08
156071	P3 South 3'	soil	2008-04-07	10:46	2008-04-08
156072	P3 South Bottom	soil	2008-04-07	10:55	2008-04-08

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 21 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Analytical Report

Sample: 156061 - P1 3'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	47312	Date Analyzed:	2008-04-09	Analyzed By:	RM
Prep Batch:	40689	Sample Preparation:	2008-04-09	Prepared By:	RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		109	mg/Kg	1	100	109	59.6 - 168

Sample: 156061 - P1 3'

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	47282	Date Analyzed:	2008-04-09	Analyzed By:	KB
Prep Batch:	40665	Sample Preparation:	2008-04-09	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.926	mg/Kg	1	1.00	93	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.21	mg/Kg	1	1.00	121	78.5 - 139

Sample: 156061 - P1 3'

Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	47359	Date Analyzed:	2008-04-10	Analyzed By:	KB
Prep Batch:	40725	Sample Preparation:	2008-04-10	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		471	µg/Kg	1	500	94	83.7 - 113
Toluene-d8		516	µg/Kg	1	500	103	92.9 - 109
4-Bromofluorobenzene (4-BFB)		531	µg/Kg	1	500	106	81.2 - 108

Sample: 156062 - P1 Bottom

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	47312	Date Analyzed:	2008-04-09	Analyzed By:	RM
Prep Batch:	40689	Sample Preparation:	2008-04-09	Prepared By:	RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		99.9	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		130	mg/Kg	1	100	130	59.6 - 168

Sample: 156062 - P1 Bottom

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	47282	Date Analyzed:	2008-04-09	Analyzed By:	KB
Prep Batch:	40665	Sample Preparation:	2008-04-09	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.933	mg/Kg	1	1.00	93	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.15	mg/Kg	1	1.00	115	78.5 - 139

Sample: 156062 - P1 Bottom

Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	47359	Date Analyzed:	2008-04-10	Analyzed By:	KB
Prep Batch:	40725	Sample Preparation:	2008-04-10	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		469	µg/Kg	1	500	94	83.7 - 113
Toluene-d8		505	µg/Kg	1	500	101	92.9 - 109
4-Bromofluorobenzene (4-BFB)		523	µg/Kg	1	500	105	81.2 - 108

Sample: 156063 - P2 West 5'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	47312	Date Analyzed:	2008-04-09	Analyzed By:	RM
Prep Batch:	40689	Sample Preparation:	2008-04-09	Prepared By:	RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		102	mg/Kg	1	100	102	59.6 - 168

Sample: 156063 - P2 West 5'

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	47282	Date Analyzed:	2008-04-09	Analyzed By:	KB
Prep Batch:	40665	Sample Preparation:	2008-04-09	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		3.53	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.945	mg/Kg	1	1.00	94	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.18	mg/Kg	1	1.00	118	78.5 - 139

Sample: 156063 - P2 West 5'

Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	47359	Date Analyzed:	2008-04-10	Analyzed By:	KB
Prep Batch:	40725	Sample Preparation:	2008-04-10	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		465	µg/Kg	1	500	93	83.7 - 113
Toluene-d8		505	µg/Kg	1	500	101	92.9 - 109
4-Bromofluorobenzene (4-BFB)		524	µg/Kg	1	500	105	81.2 - 108

Sample: 156064 - P2 West Bottom

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	47312	Date Analyzed:	2008-04-09	Analyzed By:	RM
Prep Batch:	40689	Sample Preparation:	2008-04-09	Prepared By:	RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		122	mg/Kg	1	100	122	59.6 - 168

Sample: 156064 - P2 West Bottom

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	47282	Date Analyzed:	2008-04-09	Analyzed By:	KB
Prep Batch:	40665	Sample Preparation:	2008-04-09	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		12.7	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.943	mg/Kg	1	1.00	94	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.12	mg/Kg	1	1.00	112	78.5 - 139

Sample: 156064 - P2 West Bottom

Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	47359	Date Analyzed:	2008-04-10	Analyzed By:	KB
Prep Batch:	40725	Sample Preparation:	2008-04-10	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		468	µg/Kg	1	500	94	83.7 - 113
Toluene-d8		505	µg/Kg	1	500	101	92.9 - 109
4-Bromofluorobenzene (4-BFB)		519	µg/Kg	1	500	104	81.2 - 108

Sample: 156065 - P2 Center 4'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	47312	Date Analyzed:	2008-04-09	Analyzed By:	RM
Prep Batch:	40689	Sample Preparation:	2008-04-09	Prepared By:	RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO	0	155	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		134	mg/Kg	1	100	134	59.6 - 168

Sample: 156065 - P2 Center 4'

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	47282	Date Analyzed:	2008-04-09	Analyzed By:	KB
Prep Batch:	40665	Sample Preparation:	2008-04-09	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.09	mg/Kg	1	1.00	109	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.26	mg/Kg	1	1.00	126	78.5 - 139

Sample: 156065 - P2 Center 4'

Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	47359	Date Analyzed:	2008-04-10	Analyzed By:	KB
Prep Batch:	40725	Sample Preparation:	2008-04-10	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		462	µg/Kg	1	500	92	83.7 - 113
Toluene-d8		501	µg/Kg	1	500	100	92.9 - 109
4-Bromofluorobenzene (4-BFB)		524	µg/Kg	1	500	105	81.2 - 108

Sample: 156066 - P2 Center Bottom

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	47312	Date Analyzed:	2008-04-09	Analyzed By:	RM
Prep Batch:	40689	Sample Preparation:	2008-04-09	Prepared By:	RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		71.7	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		132	mg/Kg	1	100	132	59.6 - 168

Sample: 156066 - P2 Center Bottom

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	47282	Date Analyzed:	2008-04-09	Analyzed By:	KB
Prep Batch:	40665	Sample Preparation:	2008-04-09	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.05	mg/Kg	1	1.00	105	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.19	mg/Kg	1	1.00	119	78.5 - 139

Sample: 156066 - P2 Center Bottom

Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	47508	Date Analyzed:	2008-04-14	Analyzed By:	JG
Prep Batch:	40851	Sample Preparation:	2008-04-14	Prepared By:	JG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		460	µg/Kg	1	500	92	83.7 - 113
Toluene-d8		480	µg/Kg	1	500	96	92.9 - 109
4-Bromofluorobenzene (4-BFB)		505	µg/Kg	1	500	101	81.2 - 108

Sample: 156067 - P2 East 4'

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 47312	Date Analyzed: 2008-04-09	Analyzed By: RM
Prep Batch: 40689	Sample Preparation: 2008-04-09	Prepared By: RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		238	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		130	mg/Kg	1	100	130	59.6 - 168

Sample: 156067 - P2 East 4'

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 47282	Date Analyzed: 2008-04-09	Analyzed By: KB
Prep Batch: 40665	Sample Preparation: 2008-04-09	Prepared By: KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.01	mg/Kg	1	1.00	101	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.17	mg/Kg	1	1.00	117	78.5 - 139

Sample: 156067 - P2 East 4'

Analysis: Volatiles	Analytical Method: S 8260B	Prep Method: S 5030B
QC Batch: 47508	Date Analyzed: 2008-04-14	Analyzed By: JG
Prep Batch: 40851	Sample Preparation: 2008-04-14	Prepared By: JG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		446	µg/Kg	1	500	89	83.7 - 113
Toluene-d8		489	µg/Kg	1	500	98	92.9 - 109
4-Bromofluorobenzene (4-BFB)		510	µg/Kg	1	500	102	81.2 - 108

Sample: 156068 - P2 East Bottom

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	47312	Date Analyzed:	2008-04-09	Analyzed By:	RM
Prep Batch:	40689	Sample Preparation:	2008-04-09	Prepared By:	RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		114	mg/Kg	1	100	114	59.6 - 168

Sample: 156068 - P2 East Bottom

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	47282	Date Analyzed:	2008-04-09	Analyzed By:	KB
Prep Batch:	40665	Sample Preparation:	2008-04-09	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.01	mg/Kg	1	1.00	101	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.16	mg/Kg	1	1.00	116	78.5 - 139

Sample: 156068 - P2 East Bottom

Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	47508	Date Analyzed:	2008-04-14	Analyzed By:	JG
Prep Batch:	40851	Sample Preparation:	2008-04-14	Prepared By:	JG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		450	µg/Kg	1	500	90	83.7 - 113
Toluene-d8		495	µg/Kg	1	500	99	92.9 - 109
4-Bromofluorobenzene (4-BFB)		518	µg/Kg	1	500	104	81.2 - 108

Sample: 156069 - P3 North 3'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	47312	Date Analyzed:	2008-04-09	Analyzed By:	RM
Prep Batch:	40689	Sample Preparation:	2008-04-09	Prepared By:	RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		103	mg/Kg	1	100	103	59.6 - 168

Sample: 156069 - P3 North 3'

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	47282	Date Analyzed:	2008-04-09	Analyzed By:	KB
Prep Batch:	40665	Sample Preparation:	2008-04-09	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.971	mg/Kg	1	1.00	97	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.11	mg/Kg	1	1.00	111	78.5 - 139

Sample: 156069 - P3 North 3'

Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	47508	Date Analyzed:	2008-04-14	Analyzed By:	JG
Prep Batch:	40851	Sample Preparation:	2008-04-14	Prepared By:	JG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		448	µg/Kg	1	500	90	83.7 - 113
Toluene-d8		495	µg/Kg	1	500	99	92.9 - 109
4-Bromofluorobenzene (4-BFB)		515	µg/Kg	1	500	103	81.2 - 108

Sample: 156070 - P3 North Bottom

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	47312	Date Analyzed:	2008-04-09	Analyzed By:	RM
Prep Batch:	40689	Sample Preparation:	2008-04-09	Prepared By:	RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		163	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		114	mg/Kg	1	100	114	59.6 - 168

Sample: 156070 - P3 North Bottom

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	47282	Date Analyzed:	2008-04-09	Analyzed By:	KB
Prep Batch:	40665	Sample Preparation:	2008-04-09	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.10	mg/Kg	1	1.00	110	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.24	mg/Kg	1	1.00	124	78.5 - 139

Sample: 156070 - P3 North Bottom

Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	47508	Date Analyzed:	2008-04-14	Analyzed By:	JG
Prep Batch:	40851	Sample Preparation:	2008-04-14	Prepared By:	JG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		450	µg/Kg	1	500	90	83.7 - 113
Toluene-d8		498	µg/Kg	1	500	100	92.9 - 109
4-Bromofluorobenzene (4-BFB)		512	µg/Kg	1	500	102	81.2 - 108

Sample: 156071 - P3 South 3'

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	47312	Date Analyzed:	2008-04-09	Analyzed By:	RM
Prep Batch:	40689	Sample Preparation:	2008-04-09	Prepared By:	RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		108	mg/Kg	1	100	108	59.6 - 168

Sample: 156071 - P3 South 3'

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	47282	Date Analyzed:	2008-04-09	Analyzed By:	KB
Prep Batch:	40665	Sample Preparation:	2008-04-09	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.884	mg/Kg	1	1.00	88	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.01	mg/Kg	1	1.00	101	78.5 - 139

Sample: 156071 - P3 South 3'

Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	47508	Date Analyzed:	2008-04-14	Analyzed By:	JG
Prep Batch:	40851	Sample Preparation:	2008-04-14	Prepared By:	JG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		447	µg/Kg	1	500	89	83.7 - 113
Toluene-d8		495	µg/Kg	1	500	99	92.9 - 109
4-Bromofluorobenzene (4-BFB)		516	µg/Kg	1	500	103	81.2 - 108

Sample: 156072 - P3 South Bottom

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	47312	Date Analyzed:	2008-04-09	Analyzed By:	RM
Prep Batch:	40689	Sample Preparation:	2008-04-09	Prepared By:	RM

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		117	mg/Kg	1	100	117	59.6 - 168

Sample: 156072 - P3 South Bottom

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	47282	Date Analyzed:	2008-04-09	Analyzed By:	KB
Prep Batch:	40665	Sample Preparation:	2008-04-09	Prepared By:	KB

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.01	mg/Kg	1	1.00	101	75.6 - 128
4-Bromofluorobenzene (4-BFB)		1.14	mg/Kg	1	1.00	114	78.5 - 139

Sample: 156072 - P3 South Bottom

Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	47508	Date Analyzed:	2008-04-14	Analyzed By:	JG
Prep Batch:	40851	Sample Preparation:	2008-04-14	Prepared By:	JG

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<10.0	µg/Kg	1	10.0
Toluene		<10.0	µg/Kg	1	10.0
Ethylbenzene		<10.0	µg/Kg	1	10.0
m,p-Xylene		<10.0	µg/Kg	1	10.0
o-Xylene		<10.0	µg/Kg	1	10.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		444	µg/Kg	1	500	89	83.7 - 113
Toluene-d8		494	µg/Kg	1	500	99	92.9 - 109
4-Bromofluorobenzene (4-BFB)		518	µg/Kg	1	500	104	81.2 - 108

Method Blank (1) QC Batch: 47282

QC Batch: 47282
Prep Batch: 40665

Date Analyzed: 2008-04-09
QC Preparation: 2008-04-09

Analyzed By: KB
Prepared By: KB

Parameter	Flag	MDL Result	Units	RL
GRO		<0.144	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.01	mg/Kg	1	1.00	101	85 - 116
4-Bromofluorobenzene (4-BFB)		0.770	mg/Kg	1	1.00	77	45.2 - 98.8

Method Blank (1) QC Batch: 47312

QC Batch: 47312
Prep Batch: 40689

Date Analyzed: 2008-04-09
QC Preparation: 2008-04-09

Analyzed By: RM
Prepared By: RM

Parameter	Flag	MDL Result	Units	RL
DRO		<6.77	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		91.7	mg/Kg	1	100	92	76.1 - 136

Method Blank (1) QC Batch: 47359

QC Batch: 47359
Prep Batch: 40725

Date Analyzed: 2008-04-10
QC Preparation: 2008-04-10

Analyzed By: KB
Prepared By: KB

Parameter	Flag	MDL Result	Units	RL
Benzene		<1.51	µg/Kg	10
Toluene		<2.02	µg/Kg	10
Ethylbenzene		<1.96	µg/Kg	10
m,p-Xylene		<3.03	µg/Kg	10
o-Xylene		<2.12	µg/Kg	10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		478	µg/Kg	1	500	96	83.7 - 113
Toluene-d8		505	µg/Kg	1	500	101	92.9 - 109
4-Bromofluorobenzene (4-BFB)		517	µg/Kg	1	500	103	81.2 - 108

Method Blank (1) QC Batch: 47508

QC Batch: 47508
Prep Batch: 40851

Date Analyzed: 2008-04-14
QC Preparation: 2008-04-14

Analyzed By: JG
Prepared By: JG

Parameter	Flag	MDL Result	Units	RL
Benzene		<1.51	µg/Kg	10
Toluene		<2.02	µg/Kg	10
Ethylbenzene		<1.96	µg/Kg	10
m,p-Xylene		<3.03	µg/Kg	10
o-Xylene		<2.12	µg/Kg	10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		482	µg/Kg	1	500	96	83.7 - 113
Toluene-d8		516	µg/Kg	1	500	103	92.9 - 109
4-Bromofluorobenzene (4-BFB)		507	µg/Kg	1	500	101	81.2 - 108

Laboratory Control Spike (LCS-1)

QC Batch: 47282
Prep Batch: 40665

Date Analyzed: 2008-04-09
QC Preparation: 2008-04-09

Analyzed By: KB
Prepared By: KB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	9.59	mg/Kg	1	10.0	<0.144	96	76.4 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	9.73	mg/Kg	1	10.0	<0.144	97	76.4 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.950	0.953	mg/Kg	1	1.00	95	95	80.3 - 113
4-Bromofluorobenzene (4-BFB)	0.970	1.02	mg/Kg	1	1.00	97	102	70.7 - 110

Laboratory Control Spike (LCS-1)

QC Batch: 47312
Prep Batch: 40689

Date Analyzed: 2008-04-09
QC Preparation: 2008-04-09

Analyzed By: RM
Prepared By: RM

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	203	mg/Kg	1	250	<6.77	81	73.9 - 138

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	192	mg/Kg	1	250	<6.77	77	73.9 - 138	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	92.3	91.2	µg/Kg	1	100	92	91	67.6 - 138

Laboratory Control Spike (LCS-1)

QC Batch: 47359
Prep Batch: 40725

Date Analyzed: 2008-04-10
QC Preparation: 2008-04-10

Analyzed By: KB
Prepared By: KB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	513	µg/Kg	1	500	<0.644	103	88.8 - 109
Toluene	508	µg/Kg	1	500	<1.12	102	86.7 - 115
Ethylbenzene	501	µg/Kg	1	500	<0.376	100	86.4 - 114
m,p-Xylene	1010	µg/Kg	1	1000	<0.714	101	88.8 - 116
o-Xylene	515	µg/Kg	1	500	<0.679	103	89.8 - 118

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	506	µg/Kg	1	500	<0.644	101	88.8 - 109	1	20
Toluene	504	µg/Kg	1	500	<1.12	101	86.7 - 115	1	20
Ethylbenzene	495	µg/Kg	1	500	<0.376	99	86.4 - 114	1	20
m,p-Xylene	1000	µg/Kg	1	1000	<0.714	100	88.8 - 116	1	20
o-Xylene	509	µg/Kg	1	500	<0.679	102	89.8 - 118	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	491	490	µg/Kg	1	500	98	98	90.6 - 107
Toluene-d8	501	493	µg/Kg	1	500	100	99	88.4 - 109
4-Bromofluorobenzene (4-BFB)	524	517	µg/Kg	1	500	105	103	87.9 - 113

Laboratory Control Spike (LCS-1)

QC Batch: 47508
Prep Batch: 40851

Date Analyzed: 2008-04-14
QC Preparation: 2008-04-14

Analyzed By: JG
Prepared By: JG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	501	µg/Kg	1	500	<0.644	100	88.8 - 109
Toluene	509	µg/Kg	1	500	<1.12	102	86.7 - 115
Ethylbenzene	508	µg/Kg	1	500	<0.376	102	86.4 - 114
m,p-Xylene	1030	µg/Kg	1	1000	<0.714	103	88.8 - 116
o-Xylene	524	µg/Kg	1	500	<0.679	105	89.8 - 118

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	516	µg/Kg	1	500	<0.644	103	88.8 - 109	3	20

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Toluene	521	µg/Kg	1	500	<1.12	104	86.7 - 115	2	20
Ethylbenzene	521	µg/Kg	1	500	<0.376	104	86.4 - 114	2	20
m,p-Xylene	1050	µg/Kg	1	1000	<0.714	105	88.8 - 116	2	20
o-Xylene	538	µg/Kg	1	500	<0.679	108	89.8 - 118	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Dibromofluoromethane	498	494	µg/Kg	1	500	100	99	90.6 - 107
Toluene-d8	494	495	µg/Kg	1	500	99	99	88.4 - 109
4-Bromofluorobenzene (4-BFB)	503	509	µg/Kg	1	500	101	102	87.9 - 113

Matrix Spike (MS-1) Spiked Sample: 156061

QC Batch: 47282 Date Analyzed: 2008-04-09 Analyzed By: KB
Prep Batch: 40665 QC Preparation: 2008-04-09 Prepared By: KB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	11.7	mg/Kg	1	10.0	0.527	112	40.1 - 154

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	10.0	mg/Kg	1	10.0	0.527	95	40.1 - 154	16	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.782	0.825	mg/Kg	1	1	78	82	16.6 - 155
4-Bromofluorobenzene (4-BFB)	1.16	1.14	mg/Kg	1	1	116	114	40.1 - 176

Matrix Spike (MS-1) Spiked Sample: 156062

QC Batch: 47312 Date Analyzed: 2008-04-09 Analyzed By: RM
Prep Batch: 40689 QC Preparation: 2008-04-09 Prepared By: RM

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	300	mg/Kg	1	250	99.9	80	50.7 - 134

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	¹ 202	mg/Kg	1	250	99.9	41	50.7 - 134	39	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

¹ MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	127	99.0	mg/Kg	1	100	127	99	47.6 - 142

Matrix Spike (MS-1) Spiked Sample: 156061

QC Batch: 47359
Prep Batch: 40725

Date Analyzed: 2008-04-10
QC Preparation: 2008-04-10

Analyzed By: KB
Prepared By: KB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	496	µg/Kg	1	500	<0.644	99	57.6 - 120
Toluene	492	µg/Kg	1	500	<1.12	98	63.4 - 115
Ethylbenzene	493	µg/Kg	1	500	<0.376	99	62.8 - 122
m,p-Xylene	995	µg/Kg	1	1000	<0.714	100	53.1 - 135
o-Xylene	508	µg/Kg	1	500	<0.679	102	56.5 - 137

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	440	µg/Kg	1	500	<0.644	88	57.6 - 120	12	20
Toluene	434	µg/Kg	1	500	<1.12	87	63.4 - 115	12	20
Ethylbenzene	440	µg/Kg	1	500	<0.376	88	62.8 - 122	11	20
m,p-Xylene	886	µg/Kg	1	1000	<0.714	89	53.1 - 135	12	20
o-Xylene	452	µg/Kg	1	500	<0.679	90	56.5 - 137	12	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Dibromofluoromethane	478	476	µg/Kg	1	500	96	95	77.1 - 113
Toluene-d8	495	494	µg/Kg	1	500	99	99	89.9 - 105
4-Bromofluorobenzene (4-BFB)	517	518	µg/Kg	1	500	103	104	93.2 - 111

Matrix Spike (MS-1) Spiked Sample: 156066

QC Batch: 47508
Prep Batch: 40851

Date Analyzed: 2008-04-14
QC Preparation: 2008-04-14

Analyzed By: JG
Prepared By: JG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	374	µg/Kg	1	500	<0.644	75	57.6 - 120
Toluene	372	µg/Kg	1	500	<1.12	74	63.4 - 115
Ethylbenzene	382	µg/Kg	1	500	<0.376	76	62.8 - 122
m,p-Xylene	767	µg/Kg	1	1000	<0.714	77	53.1 - 135
o-Xylene	388	µg/Kg	1	500	<0.679	78	56.5 - 137

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	361	µg/Kg	1	500	<0.644	72	57.6 - 120	4	20

continued ...

matrix spikes continued ...

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Toluene	357	µg/Kg	1	500	<1.12	71	63.4 - 115	4	20
Ethylbenzene	373	µg/Kg	1	500	<0.376	75	62.8 - 122	2	20
m,p-Xylene	752	µg/Kg	1	1000	<0.714	75	53.1 - 135	2	20
o-Xylene	380	µg/Kg	1	500	<0.679	76	56.5 - 137	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Dibromofluoromethane	462	462	µg/Kg	1	500	92	92	77.1 - 113
Toluene-d8	496	498	µg/Kg	1	500	99	100	89.9 - 105
4-Bromofluorobenzene (4-BFB)	523	523	µg/Kg	1	500	105	105	93.2 - 111

Standard (ICV-1)

QC Batch: 47282

Date Analyzed: 2008-04-09

Analyzed By: KB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.15	115	85 - 115	2008-04-09

Standard (CCV-1)

QC Batch: 47282

Date Analyzed: 2008-04-09

Analyzed By: KB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.855	86	85 - 115	2008-04-09

Standard (ICV-1)

QC Batch: 47312

Date Analyzed: 2008-04-09

Analyzed By: RM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	212	85	85 - 115	2008-04-09

Standard (CCV-1)

QC Batch: 47312

Date Analyzed: 2008-04-09

Analyzed By: RM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	243	97	85 - 115	2008-04-09

Standard (CCV-2)

QC Batch: 47312

Date Analyzed: 2008-04-09

Analyzed By: RM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	241	96	85 - 115	2008-04-09

Standard (CCV-1)

QC Batch: 47359

Date Analyzed: 2008-04-10

Analyzed By: KB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		µg/Kg	50.0	50.3	101	70 - 130	2008-04-10
Toluene		µg/Kg	50.0	49.6	99	80 - 120	2008-04-10
Ethylbenzene		µg/Kg	50.0	49.3	99	80 - 120	2008-04-10
m,p-Xylene		µg/Kg	100	99.6	100	70 - 130	2008-04-10
o-Xylene		µg/Kg	50.0	50.7	101	70 - 130	2008-04-10

Standard (CCV-1)

QC Batch: 47508

Date Analyzed: 2008-04-14

Analyzed By: JG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		µg/Kg	50.0	51.2	102	70 - 130	2008-04-14
Toluene		µg/Kg	50.0	51.6	103	80 - 120	2008-04-14
Ethylbenzene		µg/Kg	50.0	51.5	103	80 - 120	2008-04-14
m,p-Xylene		µg/Kg	100	104	104	70 - 130	2008-04-14
o-Xylene		µg/Kg	50.0	52.9	106	70 - 130	2008-04-14

Standard (CCV-2)

QC Batch: 47508

Date Analyzed: 2008-04-14

Analyzed By: JG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		µg/Kg	50.0	48.4	97	70 - 130	2008-04-14
Toluene		µg/Kg	50.0	48.0	96	80 - 120	2008-04-14
Ethylbenzene		µg/Kg	50.0	47.8	96	80 - 120	2008-04-14
m,p-Xylene		µg/Kg	100	95.8	96	70 - 130	2008-04-14
o-Xylene		µg/Kg	50.0	49.6	99	70 - 130	2008-04-14

