CONESTOGA-ROVERS
& ASSOCIATES

6121 Indian School Road NE, Suite 200
Albuquerque, New Mexico 87110
Telephone: (505) 884-0672 Fax: (505) 884-4932
www.CRAworld.com

September 29, 2014 Reference No. 088210/04

Mr. Zane Kurtz
EOG Resources
5509 Champions Drive
Midland, TX 79706

Dear Mr. Kurtz:

Re: Summary of Soil Sampling
Diamond 31 Fed Com 2H
1RP-3137
Lea County, New Mexico

At the request of EOG Resources, Inc. (EOG), Conestoga Rovers and Associates (CRA), performed an excavation and subsurface assessment at the above referenced location on August 5-6, 2014. The Site is located at coordinates 32.1810 N, -103.5154 W and is west of Jal, New Mexico, in Lea County (see Figure 1). The case number is 1RP-3137.

The site is currently an active Tank Battery. The Site's topography is relatively flat, covered with windblown sand, sparse vegetation, and mesquite trees. A release occurred at a polyethylene flow line (poly-line) to the east of the site, outside the battery spill containment. Based on the C-141 form, the release was estimated to be 60 barrels from the poly-line to the east of the tank battery containment just north of the access road that runs to the south of the battery. Approximately 50 barrels were recovered.

Impacted soil was excavated from the site on August 5th and 6th, 2013. Based on the soil stockpile that was accumulated after excavating on site, approximately 420 cubic yards of soil had been removed. The soil stockpile was placed on plastic sheeting. A natural gas line was located on the southern end of the site and excavation was performed up to within 10 feet of the line. A sample was collected 10 feet south of the line to confirm that the southern extent had been assessed. The excavation has yet to be backfilled with clean soil at the time of CRA's assessment. Presented below is a summary of the August 5-6, 2014 sampling event.

Site Risk Ranking

The New Mexico Oil Conservation Division (NMOCD) has a risk ranking system to establish the regulatory limits for petroleum hydrocarbons. The risk ranking system is based on the depth to groundwater, the presence of wellhead protection areas, and the distance of the site to surface water bodies.

Based on the New Mexico Tech Pit Portal, the depth to groundwater in the vicinity of the site is estimated to be approximately 150-160 feet (ft) below ground surface (bgs). This estimate is based on data from the Bell Lake Compressor Station, located approximately 5 miles northwest of the site (approximately 90 ft bgs, personal experience) and the Fairview windmill located approximately 5 miles southeast of the site (approximately 220 ft bgs, NM Tech Pit Portal). There are no well head protection areas in the vicinity of the site. There are 2 intermittent streams located within the 200-1000 feet of the site which are ranked as surface water bodies. Surface water bodies within 200-1000' score a 10. Based on this, the NMOCD Risk Ranking score for the site is 10. The Recommended Remediation Action Levels (RRALs) for the site are 1000 parts per million (ppm) for TPH, 10 ppm for benzene, 50 ppm for total BTEX. The recommended concentration for chlorides is 500 ppm (see table below).

New Mexico Oil Conservation Division Spill Guidelines	
Ranking Criteria	Score
Depth to Ground Water (less than 50 ft) Wellhead Protection Area Distance to Surface Body Water	0 0 10
Ranking Criteria Total Score	10
*Because the ranking criteria total score is 10, NMOCD RRALs are 10 ppm for benzene, 50 ppm for BTEX, 1000 ppm for total TPH, and 500 ppm for chlorides.	

Sampling Activities

The sampling activities performed at the Site consisted of excavating to depths of 4-7.5 feet (ft) below ground surface (bgs). Excavation of impacted soil was guided by soil sampling and field screening. Sampling tools were cleaned with an alconox wash solution and clean water rinse prior to collecting each soil sample. Field screening was performed for chlorides using Hach Cloride Test strips and total petroleum hydrocarbons (TPH) using a Petroflag Hydocarbon analysis kit and PID. Results of the field screening indicated that final TPH and chloride concentrations from the bottom of the excavation were below regulatory limits.

Following field screening, soil samples were collected for laboratory analysis of chlorides by EPA Method 300.0, TPH by EPA Method 8015, and benzene, toluene, ethylbenzene, and xylene

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(BTEX) by EPA Method 8021. Soil samples were submitted under chain of custody documentation via overnight delivery to Trace Analysis Laboratories of Midland, Texas.

Laboratory Analytical Results

The laboratory analytical results indicated that concentrations of BTEX and TPH were below the laboratory reporting limit for the samples that were submitted for analysis. Chloride concentrations were below the NMOCD RRALs for the samples that were submitted for analysis (see Figure 2). A copy of the laboratory analyses is included as Appendix A.

Based on the results of the laboratory analyses, CRA recommends backfilling the site with clean soil. A request for no further action should be submitted to the NMOCD. If you have any questions or comments with regards to this work plan, please do not hesitate to contact our Albuquerque office at (505) 884-0672.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Steven Perez,
Staff Scientist

Reviewed by:

Bernard Bockisch, PMP
Senior Project Manager

BB/mc/1
Encl. (5)

Attachments:

Figure 1. Site Location Map
Figure 3. Site Detail Map
Appendix A. Laboratory Analytical Results

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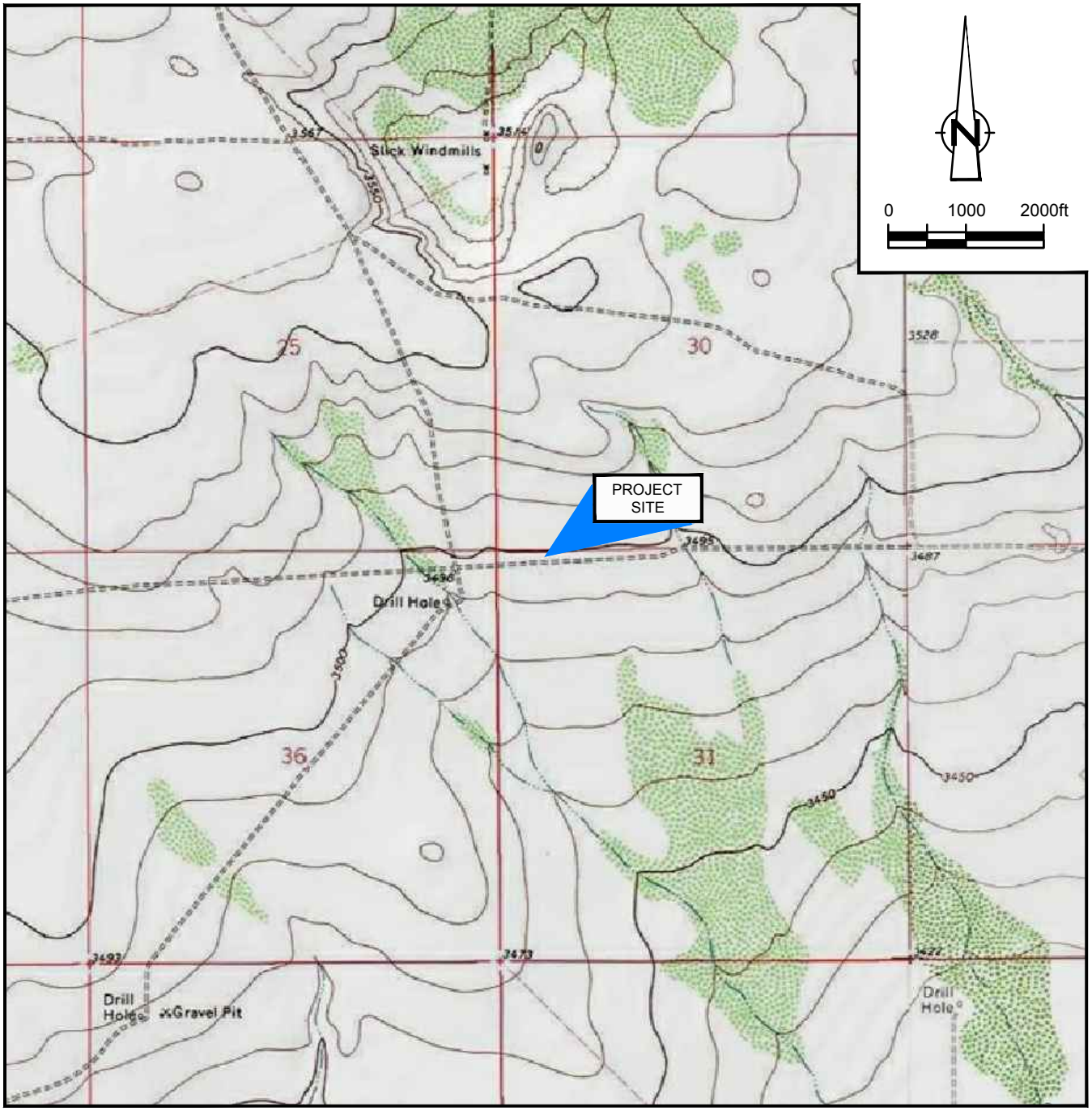


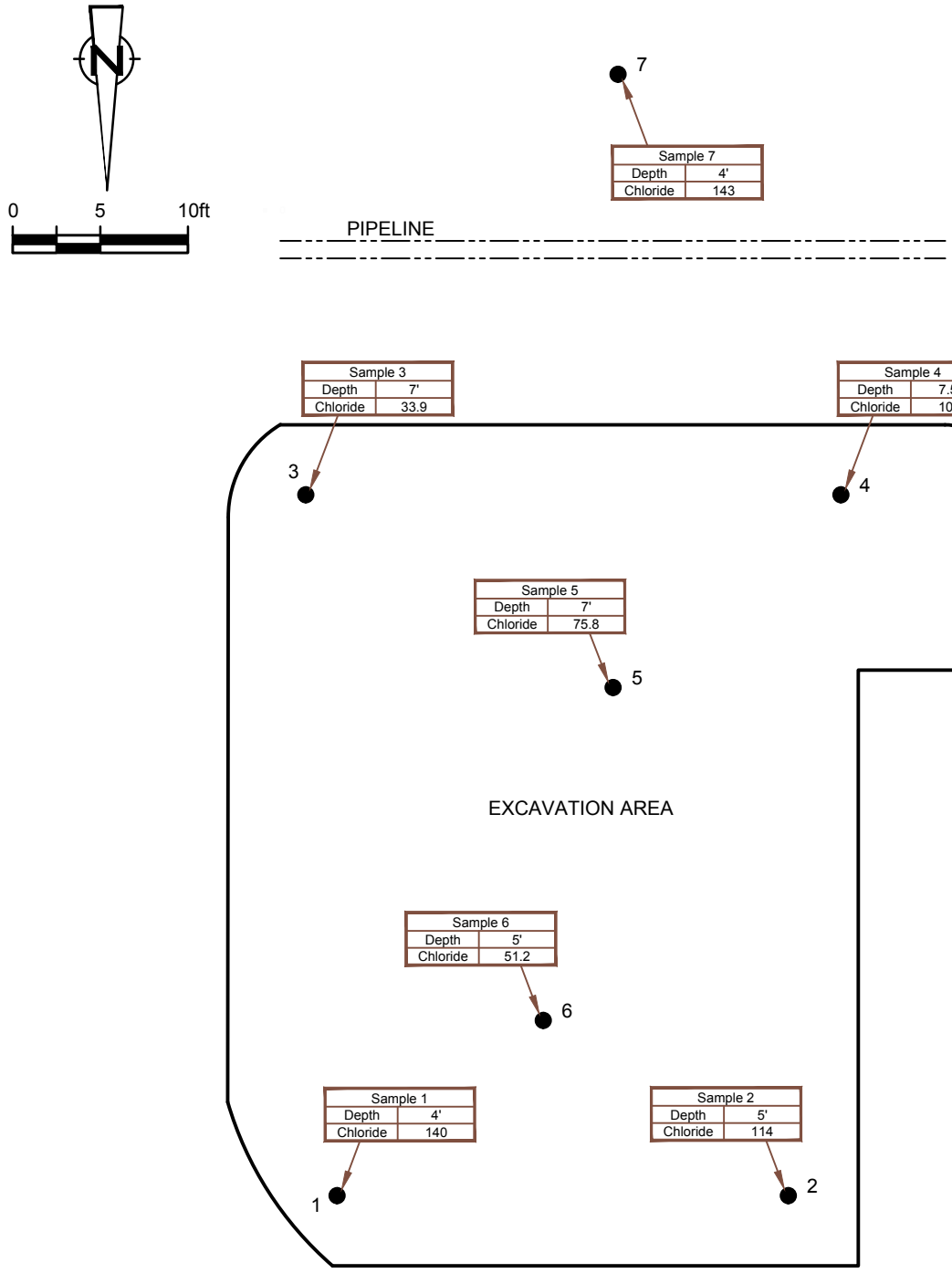
SOURCE: USGS 7.5 MINUTE QUAD
"BELL LAKE AND WOODLEY FLAT, NEW MEXICO"

LAT/LONG: 32.1810° NORTH, 103.5154° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

Figure 1

SITE LOCATION MAP
DIAMOND 31 FED COM 2H
EOG
near Jal, New Mexico

088210-04(PRES001)GN-DL001 SEP 26/2014



LEGEND	
●	Surface Sample Location
————	Pipeline
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes Concentration (ppm)
TPH	Total Petroleum Hydrocarbons Concentration (ppm)
DRO	TPH as Diesel Range Organics
GRO	TPH as Gasoline Range Organics

Constituent	Regulatory Limits
Chloride	25.0
BTEX	0.0200
TPH-DRO	50.0
TPH-GRO	4.0

NOTES:

1. All results are in ppm.
2. TPH and BTEX were below regulatory limits for all samples.

Figure 2

SITE DETAIL MAP
DIAMOND 31 FED COM 2H
EOG
near Jal, New Mexico

088210-04(PRES001)GN-DL001 SEP 5/2014

Attachment A

Laboratory Analytical Results

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313
(BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972•242•7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Bernie Bocuisch
CRA-Albuquerque
6121 Indian School Rd NE
Albuquerque, NM, 87110

Report Date: September 2, 2014

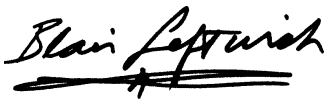
Work Order: 14080819

Project Location: Jal, NM
Project Name: EOG/Diamond 31 Fed Com 2H
Project Number: 088210-04

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
370966	088210-080514-SP-1	soil	2014-08-05	16:00	2014-08-08
370967	088210-080514-SP-2	soil	2014-08-05	16:05	2014-08-08
370968	088210-080614-SP-3	soil	2014-08-06	11:00	2014-08-08
370969	088210-080614-SP-4	soil	2014-08-06	11:05	2014-08-08
370970	088210-080614-SP-5	soil	2014-08-06	12:00	2014-08-08
370971	088210-080614-SP-6	soil	2014-08-06	12:15	2014-08-08
370972	088210-080614-SP-7	soil	2014-08-06	13:00	2014-08-08

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.



Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

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Case Narrative

Samples for project EOG/Diamond 31 Fed Com 2H were received by TraceAnalysis, Inc. on 2014-08-08 and assigned to work order 14080819. Samples for work order 14080819 were received intact at a temperature of 5.9 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	96988	2014-08-18 at 09:38	114689	2014-08-18 at 09:38
Chloride (IC)	E 300.0	96891	2014-08-13 at 12:00	114560	2014-08-13 at 15:01
Chloride (IC)	E 300.0	97030	2014-08-19 at 08:30	114736	2014-08-19 at 09:04
Chloride (IC)	E 300.0	97280	2014-08-28 at 08:00	115036	2014-08-28 at 09:16
TPH DRO - NEW	S 8015 D	96780	2014-08-08 at 17:23	114435	2014-08-11 at 09:08
TPH GRO	S 8015 D	96988	2014-08-18 at 09:38	114691	2014-08-18 at 09:38

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 14080819 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.

Analytical Report

Sample: 370966 - 088210-080514-SP-1

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	114689	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	Jb	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	2.06	mg/Kg	1	2.00	103	66.2 - 120
4-Bromofluorobenzene (4-BFB)		6	2.00	mg/Kg	1	2.00	100	59.5 - 120

Sample: 370966 - 088210-080514-SP-1

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	114560	Date Analyzed:	2014-08-13	Analyzed By:	RL
Prep Batch:	96891	Sample Preparation:		Prepared By:	RL

Parameter	Flag	Cert	Result	Units	Dilution	RL
Chloride		3,4,6	**140**	mg/Kg	1	25.0

Sample: 370966 - 088210-080514-SP-1

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	114435	Date Analyzed:	2014-08-11	Analyzed By:	SC
Prep Batch:	96780	Sample Preparation:	2014-08-08	Prepared By:	SC

Parameter	Flag	Cert	Result	Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			120	mg/Kg	1	100	120	70 - 130

Sample: 370966 - 088210-080514-SP-1

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	114691	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.32	mg/Kg	1	2.00	116	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.16	mg/Kg	1	2.00	108	74.6 - 120

Sample: 370967 - 088210-080514-SP-2

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	114689	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [1]	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	6	0.958	mg/Kg	1	2.00	48	66.2 - 120
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	6	0.949	mg/Kg	1	2.00	47	59.5 - 120

Sample: 370967 - 088210-080514-SP-2

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	114560	Date Analyzed:	2014-08-13	Analyzed By:	RL
Prep Batch:	96891	Sample Preparation:		Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		3,4,6	**114**	mg/Kg	1	25.0

Sample: 370967 - 088210-080514-SP-2

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	114435	Date Analyzed:	2014-08-11	Analyzed By:	SC
Prep Batch:	96780	Sample Preparation:	2014-08-08	Prepared By:	SC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		143	mg/Kg	1	100	143	70 - 130

Sample: 370967 - 088210-080514-SP-2

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	114691	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO [2]	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	3	1.07	mg/Kg	1	2.00	54	73 - 122
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3	1.03	mg/Kg	1	2.00	52	74.6 - 120

Sample: 370968 - 088210-080614-SP-3

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	114689	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	Jb	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.88	mg/Kg	1	2.00	94	66.2 - 120
4-Bromofluorobenzene (4-BFB)		6	1.82	mg/Kg	1	2.00	91	59.5 - 120

Sample: 370968 - 088210-080614-SP-3

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	115036	Date Analyzed:	2014-08-28	Analyzed By:	RL
Prep Batch:	97280	Sample Preparation:		Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		3,4,6	**33.9**	mg/Kg	1	25.0

Sample: 370968 - 088210-080614-SP-3

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	114435	Date Analyzed:	2014-08-11	Analyzed By:	SC
Prep Batch:	96780	Sample Preparation:	2014-08-08	Prepared By:	SC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			122	mg/Kg	1	100	122	70 - 130

Sample: 370968 - 088210-080614-SP-3

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	114691	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.13	mg/Kg	1	2.00	106	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.96	mg/Kg	1	2.00	98	74.6 - 120

Sample: 370969 - 088210-080614-SP-4

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	114689	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.83	mg/Kg	1	2.00	92	66.2 - 120
4-Bromofluorobenzene (4-BFB)		6	1.75	mg/Kg	1	2.00	88	59.5 - 120

Sample: 370969 - 088210-080614-SP-4

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	114736	Date Analyzed:	2014-08-19	Analyzed By:	RL
Prep Batch:	97030	Sample Preparation:		Prepared By:	RL

continued ...

sample 370969 continued . . .

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	**103**	mg/Kg	2	25.0

Sample: 370969 - 088210-080614-SP-4

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	114435	Date Analyzed:	2014-08-11	Analyzed By:	SC
Prep Batch:	96780	Sample Preparation:	2014-08-08	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			112	mg/Kg	1	100	112	70 - 130

Sample: 370969 - 088210-080614-SP-4

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	114691	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.05	mg/Kg	1	2.00	102	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.88	mg/Kg	1	2.00	94	74.6 - 120

Sample: 370970 - 088210-080614-SP-5

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	114689	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.89	mg/Kg	1	2.00	94	66.2 - 120
4-Bromofluorobenzene (4-BFB)		6	1.81	mg/Kg	1	2.00	90	59.5 - 120

Sample: 370970 - 088210-080614-SP-5

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	114736	Date Analyzed:	2014-08-19	Analyzed By:	RL
Prep Batch:	97030	Sample Preparation:		Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		3,4,6	**75.8**	mg/Kg	1	25.0

Sample: 370970 - 088210-080614-SP-5

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	114435	Date Analyzed:	2014-08-11	Analyzed By:	SC
Prep Batch:	96780	Sample Preparation:	2014-08-08	Prepared By:	SC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			104	mg/Kg	1	100	104	70 - 130

Sample: 370970 - 088210-080614-SP-5

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	114691	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.14	mg/Kg	1	2.00	107	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.95	mg/Kg	1	2.00	98	74.6 - 120

Sample: 370971 - 088210-080614-SP-6

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	114689	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	Jb	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.92	mg/Kg	1	2.00	96	66.2 - 120
4-Bromofluorobenzene (4-BFB)		6	1.90	mg/Kg	1	2.00	95	59.5 - 120

Sample: 370971 - 088210-080614-SP-6

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	114736	Date Analyzed:	2014-08-19	Analyzed By:	RL
Prep Batch:	97030	Sample Preparation:		Prepared By:	RL

continued ...

sample 370971 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride		3,4,6	**51.2**	mg/Kg	1	25.0

Sample: 370971 - 088210-080614-SP-6

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	114435	Date Analyzed:	2014-08-11	Analyzed By:	SC
Prep Batch:	96780	Sample Preparation:	2014-08-08	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		139	mg/Kg	1	100	139	70 - 130

Sample: 370971 - 088210-080614-SP-6

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	114691	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.15	mg/Kg	1	2.00	108	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.04	mg/Kg	1	2.00	102	74.6 - 120

Sample: 370972 - 088210-080614-SP-7

Laboratory:	Lubbock				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	114689	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Toluene	Jb	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200
Xylene	Jb	1,2,3,4,6	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.80	mg/Kg	1	2.00	90	66.2 - 120
4-Bromofluorobenzene (4-BFB)		6	1.81	mg/Kg	1	2.00	90	59.5 - 120

Sample: 370972 - 088210-080614-SP-7

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	114736	Date Analyzed:	2014-08-19	Analyzed By:	RL
Prep Batch:	97030	Sample Preparation:		Prepared By:	RL

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride		3,4,6	**143**	mg/Kg	1	25.0

Sample: 370972 - 088210-080614-SP-7

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	114435	Date Analyzed:	2014-08-11	Analyzed By:	SC
Prep Batch:	96780	Sample Preparation:	2014-08-08	Prepared By:	SC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	134	mg/Kg	1	100	134	70 - 130

Sample: 370972 - 088210-080614-SP-7

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	114691	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	Sample Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.10	mg/Kg	1	2.00	105	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.97	mg/Kg	1	2.00	98	74.6 - 120

Method Blanks

Method Blank (1) QC Batch: 114435

QC Batch:	114435	Date Analyzed:	2014-08-11	Analyzed By:	SC
Prep Batch:	96780	QC Preparation:	2014-08-08	Prepared By:	SC

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		5	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			98.8	mg/Kg	1	100	99	70 - 130

Method Blank (1) QC Batch: 114560

QC Batch:	114560	Date Analyzed:	2014-08-13	Analyzed By:	RL
Prep Batch:	96891	QC Preparation:	2014-08-13	Prepared By:	RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<2.66	mg/Kg	25

Method Blank (1) QC Batch: 114689

QC Batch:	114689	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	QC Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,6	<0.00487	mg/Kg	0.02
Toluene		1,2,3,4,6	0.00410	mg/Kg	0.02
Ethylbenzene		1,2,3,4,6	<0.00283	mg/Kg	0.02
Xylene		1,2,3,4,6	0.00430	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.74	mg/Kg	1	2.00	87	66.2 - 120

continued ...

method blank continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		6	1.60	mg/Kg	1	2.00	80	59.5 - 120

Method Blank (1) QC Batch: 114691

QC Batch:	114691	Date Analyzed:	2014-08-18	Analyzed By:	JS
Prep Batch:	96988	QC Preparation:	2014-08-18	Prepared By:	JS

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1,2,3,4	<0.217	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.92	mg/Kg	1	2.00	96	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.72	mg/Kg	1	2.00	86	74.6 - 120

Method Blank (1) QC Batch: 114736

QC Batch:	114736	Date Analyzed:	2014-08-19	Analyzed By:	RL
Prep Batch:	97030	QC Preparation:	2014-08-19	Prepared By:	RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<2.66	mg/Kg	25

Method Blank (1) QC Batch: 115036

QC Batch:	115036	Date Analyzed:	2014-08-28	Analyzed By:	RL
Prep Batch:	97280	QC Preparation:	2014-08-28	Prepared By:	RL

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride		3,4,6	<2.66	mg/Kg	25

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 114435 | Date Analyzed: 2014-08-11 | Analyzed By: SC
Prep Batch: 96780 | QC Preparation: 2014-08-08 | Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		5	216	mg/Kg	1	250	<7.41	86	70 - 130

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		5	233	mg/Kg	1	250	<7.41	93	70 - 130	8	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-Tricosane	100	110	mg/Kg	1	100	100	110	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 114560 | Date Analyzed: 2014-08-13 | Analyzed By: RL
Prep Batch: 96891 | QC Preparation: 2014-08-13 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	241	mg/Kg	1	250	<2.66	96	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	238	mg/Kg	1	250	<2.66	95	90 - 110	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 114689 | Date Analyzed: 2014-08-18 | Analyzed By: JS
Prep Batch: 96988 | QC Preparation: 2014-08-18 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,6	1.71	mg/Kg	1	2.00	<0.00487	86	69.3 - 120
Toluene		1,2,3,4,6	1.77	mg/Kg	1	2.00	0.0041	88	70.5 - 120
Ethylbenzene		1,2,3,4,6	1.81	mg/Kg	1	2.00	<0.00283	90	70.6 - 120
Xylene		1,2,3,4,6	5.38	mg/Kg	1	6.00	0.0043	90	70.7 - 120

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,6	1.64	mg/Kg	1	2.00	<0.00487	82	69.3 - 120	4	20
Toluene		1,2,3,4,6	1.68	mg/Kg	1	2.00	0.0041	84	70.5 - 120	5	20
Ethylbenzene		1,2,3,4,6	1.75	mg/Kg	1	2.00	<0.00283	88	70.6 - 120	3	20
Xylene		1,2,3,4,6	5.17	mg/Kg	1	6.00	0.0043	86	70.7 - 120	4	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)	6	1.79	1.71	mg/Kg	1	2.00	90	86	66.2 - 120
4-Bromofluorobenzene (4-BFB)	6	1.64	1.58	mg/Kg	1	2.00	82	79	59.5 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 114691 | Date Analyzed: 2014-08-18 | Analyzed By: JS
Prep Batch: 96988 | QC Preparation: 2014-08-18 | Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	15.1	mg/Kg	1	20.0	<0.217	76	60.1 - 120

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	16.4	mg/Kg	1	20.0	<0.217	82	60.1 - 120	8	20

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

continued ...

control spikes continued ...

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	3	1.81	1.81	mg/Kg	1	2.00	90	90	73 - 122
4-Bromofluorobenzene (4-BFB)	3	1.76	1.78	mg/Kg	1	2.00	88	89	74.6 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 114736 | Date Analyzed: 2014-08-19 | Analyzed By: RL
Prep Batch: 97030 | QC Preparation: 2014-08-19 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	237	mg/Kg	1	250	<2.66	95	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	237	mg/Kg	1	250	<2.66	95	90 - 110	0	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 115036 | Date Analyzed: 2014-08-28 | Analyzed By: RL
Prep Batch: 97280 | QC Preparation: 2014-08-28 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	246	mg/Kg	1	250	<2.66	98	90 - 110

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	248	mg/Kg	1	250	<2.66	99	90 - 110	1	20

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

Matrix Spikes

Matrix Spike (xMS-1) Spiked Sample: 370823

QC Batch: 114435 | Date Analyzed: 2014-08-11 | Analyzed By: SC
Prep Batch: 96780 | QC Preparation: 2014-08-08 | Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		5	239	mg/Kg	1	250	<7.41	96	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		5	248	mg/Kg	1	250	<7.41	99	70 - 130	4	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
n-Tricosane	112	118	mg/Kg	1	100	112	118	70 - 130

Matrix Spike (xMS-1) Spiked Sample: 370968

QC Batch: 114560 | Date Analyzed: 2014-08-13 | Analyzed By: RL
Prep Batch: 96891 | QC Preparation: 2014-08-13 | Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	1220	mg/Kg	5	1250	80.1	91	80 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	1190	mg/Kg	5	1250	80.1	89	80 - 120	2	20

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

Matrix Spike (MS-1) Spiked Sample: 370971

QC Batch: 114689 | Date Analyzed: 2014-08-18 | Analyzed By: JS
Prep Batch: 96988 | QC Preparation: 2014-08-18 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,6	1.92	mg/Kg	1	2.00	<0.00487	96	63.6 - 120
Toluene		1,2,3,4,6	1.98	mg/Kg	1	2.00	<0.00358	99	67.8 - 128
Ethylbenzene		1,2,3,4,6	2.08	mg/Kg	1	2.00	<0.00283	104	69.5 - 136
Xylene		1,2,3,4,6	6.08	mg/Kg	1	6.00	0.0033	101	69.3 - 139

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,6	1.99	mg/Kg	1	2.00	<0.00487	100	63.6 - 120	4	20
Toluene		1,2,3,4,6	2.06	mg/Kg	1	2.00	<0.00358	103	67.8 - 128	4	20
Ethylbenzene		1,2,3,4,6	2.16	mg/Kg	1	2.00	<0.00283	108	69.5 - 136	4	20
Xylene		1,2,3,4,6	6.37	mg/Kg	1	6.00	0.0033	106	69.3 - 139	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)	6	2.02	1.97	mg/Kg	1	2	101	98	66.2 - 120
4-Bromofluorobenzene (4-BFB)	6	1.81	1.93	mg/Kg	1	2	90	96	59.5 - 120

Matrix Spike (MS-1) Spiked Sample: 370971

QC Batch: 114691 | Date Analyzed: 2014-08-18 | Analyzed By: JS
Prep Batch: 96988 | QC Preparation: 2014-08-18 | Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	12.4	mg/Kg	1	20.0	<0.217	62	40.3 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	13.2	mg/Kg	1	20.0	<0.217	66	40.3 - 120	6	20

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

continued ...

matrix spikes continued ...

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	3	1.98	2.05	mg/Kg	1	2	99	102	73 - 122
4-Bromofluorobenzene (4-BFB)	3	2.08	2.12	mg/Kg	1	2	104	106	74.6 - 120

Matrix Spike (MS-1) Spiked Sample: 370969

QC Batch: 114736 | Date Analyzed: 2014-08-19 | Analyzed By: RL
Prep Batch: 97030 | QC Preparation: 2014-08-19 | Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	600	mg/Kg	2	500	103	99	80 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	585	mg/Kg	2	500	103	96	80 - 120	2	20

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

Matrix Spike (MS-1) Spiked Sample: 370968

QC Batch: 115036 | Date Analyzed: 2014-08-28 | Analyzed By: RL
Prep Batch: 97280 | QC Preparation: 2014-08-28 | Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	241	mg/Kg	1	208	33.9	100	80 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride		3,4,6	237	mg/Kg	1	208	33.9	98	80 - 120	2	20

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

Calibration Standards

Standard (CCV-1)

QC Batch: 114435 | Date Analyzed: 2014-08-11 | Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	205	82	80 - 120	2014-08-11

Standard (CCV-2)

QC Batch: 114435 | Date Analyzed: 2014-08-11 | Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	217	87	80 - 120	2014-08-11

Standard (CCV-3)

QC Batch: 114435 | Date Analyzed: 2014-08-11 | Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		5	mg/Kg	250	213	85	80 - 120	2014-08-11

Standard (CCV-1)

QC Batch: 114560 | Date Analyzed: 2014-08-13 | Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	23.8	95	90 - 110	2014-08-13

Standard (CCV-2)

QC Batch: 114560 | Date Analyzed: 2014-08-13 | Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	23.9	96	90 - 110	2014-08-13

Standard (CCV-1)

QC Batch: 114689 | Date Analyzed: 2014-08-18 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,6	mg/kg	0.100	0.0905	90	80 - 120	2014-08-18
Toluene		1,2,3,4,6	mg/kg	0.100	0.0866	87	80 - 120	2014-08-18
Ethylbenzene		1,2,3,4,6	mg/kg	0.100	0.0878	88	80 - 120	2014-08-18
Xylene		1,2,3,4,6	mg/kg	0.300	0.260	87	80 - 120	2014-08-18

Standard (CCV-2)

QC Batch: 114689 | Date Analyzed: 2014-08-18 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,6	mg/kg	0.100	0.0876	88	80 - 120	2014-08-18
Toluene		1,2,3,4,6	mg/kg	0.100	0.0852	85	80 - 120	2014-08-18
Ethylbenzene		1,2,3,4,6	mg/kg	0.100	0.0867	87	80 - 120	2014-08-18
Xylene		1,2,3,4,6	mg/kg	0.300	0.258	86	80 - 120	2014-08-18

Standard (CCV-3)

QC Batch: 114689 | Date Analyzed: 2014-08-18 | Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,6	mg/kg	0.100	0.0878	88	80 - 120	2014-08-18

continued ...

standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Toluene		1,2,3,4,6	mg/kg	0.100	0.0844	84	80 - 120	2014-08-18
Ethylbenzene		1,2,3,4,6	mg/kg	0.100	0.0864	86	80 - 120	2014-08-18
Xylene		1,2,3,4,6	mg/kg	0.300	0.256	85	80 - 120	2014-08-18

Standard (CCV-1)

QC Batch: 114691 Date Analyzed: 2014-08-18 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.941	94	80 - 120	2014-08-18

Standard (CCV-2)

QC Batch: 114691 Date Analyzed: 2014-08-18 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.887	89	80 - 120	2014-08-18

Standard (CCV-3)

QC Batch: 114691 Date Analyzed: 2014-08-18 Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.881	88	80 - 120	2014-08-18

Standard (CCV-1)

QC Batch: 114736 Date Analyzed: 2014-08-19 Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	23.7	95	90 - 110	2014-08-19

Standard (CCV-2)

QC Batch: 114736 Date Analyzed: 2014-08-19 Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	24.1	96	90 - 110	2014-08-19

Standard (CCV-1)

QC Batch: 115036 Date Analyzed: 2014-08-28 Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	24.5	98	90 - 110	2014-08-28

Standard (CCV-2)

QC Batch: 115036 Date Analyzed: 2014-08-28 Analyzed By: RL

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	24.4	98	90 - 110	2014-08-28

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2013-083	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

1 Last day of hold time.
2 Last day of hold time.

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 1408D819

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9, **Lubbock, Texas 79424**, Tel (806) 794-1296, Fax (806) 794-1298, 1 (800) 378-1296

5002 Basin Street, Suite A1, **Midland, Texas 79703**, Tel (432) 689-6301, Fax (432) 689-6313

200 East Sunset Rd., Suite E, **El Paso, Texas 79922**, Tel (915) 585-3443, Fax (915) 585-4944, 1 (888) 588-3443

BioAquatic Testing, 2501 Mayes Rd., Ste 100, **Carrollton, Texas 75006**, Tel (972) 242-7750

Brandon & Clark, 3403 Industrial Blvd., **Hobbs, NM 88240**, Tel (575) 392-7561, Fax (575) 392-4508

Company Name: CRA **Phone #:** (505) 280-0572

Address: (Street, City, Zip) 6121 Indian School Rd NE, Albuquerque, NM, 87110 **Fax #:**

Contact Person: Bernie Bockisch **E-mail:** BBockisch@craworld.com

Invoice to: (If different from above)

Project #: 088210/04 **Project Name:** EOG-Diamond 31 Fed Com 2H

Project Location (including state): Near Jal, NM **Sampler Signature:** Steven S Perez

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC	Chlorides 300.0	Turn Around Time if different from standard	Hold
370966	088210-080514-SP-1	1			X								X	8/5/14	1600		X		X																X		
967	088210-080514-SP-2	1			X								X	8/5/14	1605		↓		↓																↓		
968	088210-080514-SP-3	↓			↓								↓	8/6/14	1100		↓		↓																↓		
969	088210-080614-SP-4	↓			↓								↓	8/6/14	1105		↓		↓																↓		
970	088210-080614-SP-5	↓			↓								↓	8/6/14	1200		↓		↓																↓		
971	088210-080614-SP-6	↓			↓								↓	8/6/14	1215		↓		↓																↓		
972	088210-080614-SP-7	↓			↓								↓	8/6/14	1300		↓		↓																↓		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Steven Perez	CRA	08/07/14	7:30	Natt	CRA	8/7/14	7:30	INST 1R-A; OBS 6.0 °C; COR 5.9 °C
Natta	CRA	8/8/14	10:49	Alli	TA	8/8/14	10:58	INST 1R; OBS 6.0 °C; COR 5.9 °C
				[illegible]	TA	8/8/14	11:10	INST; OBS °C; COR °C

LAB USE ONLY
Intact (Y) / N
Headspace Y / N / (NA)
Log-in-Review ✓

REMARKS:

☐ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

[illegible] TA 8/11/14 [illegible] ST TA 8-9-14 11:30 3.2 Carrier # CARRY-IN

[illegible] TA 8/12 ORIGINAL COPY 8/12/14 910 3.2 LSO 2R521853