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Dallas, Texas 75251
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RECEIVED
By JKeyes at 3:10 pm, Oct 26, 2015

APPROVED
By JKeyes at 3:10 pm, Oct 26, 2015

Ensure BLM concurrence/approval.

Mr. Jamie Keyes
New Mexico Oil Conservation Division
District 1
1625 N. French Drive
Hobbs, New Mexico 88240

Ms. Shelly Tucker
Environmental Protection Division
Bureau of Land Management
620 E. Greene Street
Carlsbad, NM 88220

October 23, 2015

Subject: Work Plan
EOG Resources, Inc.
Short Fuse Fed #1
1RP-3832 (API 30-025-29897)
Lea County, New Mexico

Dear Mr. Keyes and Ms. Tucker,

On behalf of EOG Resources, Inc. (EOG), CH2M HILL Engineers Inc. (CH2M) is providing this work plan to the New Mexico Oil Conservation Division (NMOCD) and Bureau of Land Management (BLM). This work plan presents the proposed approach for additional site investigation and remediation activities at the Short Fuse Fed #1 (site). The following sections provide the site background, summarize results from recent characterization sampling, and provide recommendations for additional characterization and remediation.

Site Description

The site is located approximately 35 miles west-northwest of Hobbs, New Mexico. The legal location for the site is Unit Letter H, Section 11, Township 18S, Range 32E in Lea County, New Mexico. The latitude and longitude for the release is 32.7636, -103.7306, respectively. The general site location is included as an inset in **Figure 1**.

Site Ranking and Recommended Remedial Action Levels

Analytical results were compared against the recommended remedial action levels (RRAL) per the August 13, 1993 NMOCD *Guidelines for Remediation of Leaks, Spills and Releases*. Based on this guidance, the ranking for this site is 10 based on the following criteria:

- Depth to Ground Water 50-99 feet (per USGS Site 324415103281501)
- Wellhead Protection Area >1,000 feet
- Distance to Surface Water Body >1,000 horizontal feet

Based on the site ranking of 10, NMOCD Recommended Remedial Action Levels (RRALs) are 50 milligrams per kilogram (mg/kg) for benzene, toluene, ethylbenzene, xylene (BTEX); 10 mg/kg for benzene; 1,000 mg/kg for total petroleum hydrocarbons (TPH); and 500 mg/kg for chloride. Site ranking criteria and RRALs are summarized in **Table 1** and **Table 2**, respectively.

Table 1
NMOCD Site Ranking Criteria
Short Fuse Fed. # 1 Work Plan
Lea County, New Mexico

Condition	Score[a]
Depth to Groundwater[b]	
< 50 feet	20
50 – 99 feet	10
> 100 feet	0
Wellhead Protection Area	
< 1000 feet from a water source	20
< 200 feet from private domestic water source	20
Distance to Surface Water Body	
< 200 horizontal feet	20
200 – 1000 horizontal feet	10
> 1,000 horizontal feet	0

Notes:
[a] Ranking criteria taken from the NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August, 1993)
[b] Guidance does not explicitly state whether this is depth from ground surface or depth from other reference point.

Table 2
NMOCD Recommended Remediation Action Levels
Short Fuse Fed. #1 Work Plan
Lea County, New Mexico

Analyte (ppm)	Score of >19	Score of 10 - 19	Score of 0 - 9
Benzene	10	10	10
BTEX	50	50	50
TPH	100	1,000	5,000
Chloride [b]	250	500	1,000

Notes:
[a] Scoring ranges are based on NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August, 1993).
[b] The RRAL for chloride was developed subsequent to the publication of the 1993 guidance document and is therefore not referenced within the 1993 version.
ppm parts per million
BTEX benzene, toluene, ethylbenzene, and xylene
TPH total petroleum hydrocarbons

Background Information

The Form C-141 submitted to the NMOCD for Short Fuse Fed #1 is attached as **Appendix A**. The NMOCD previously assigned Remediation Permit (RP) number 1RP-3832 to the site. The following summarizes the site history and analytical results collected subsequent to remediation actions that have been completed to date.

On August 16, 2015, approximately 5 barrels (bbls) of produced water with residual hydrocarbons were released due to a leak that developed on a pipe entering the heater. Impacted soil was subsequently excavated and disposed offsite at the Lea Land Disposal facility in Carlsbad, New Mexico. Approximately 100 cubic yards (CY) was removed. During the excavation process, impacted soil from what was interpreted to have been a historical

release was identified and estimated to extend approximately 50 feet into the adjacent pasture south of the well pad. Material removed from the site included soils impacted during August 2015 leak as well as the soil that was identified as being associated with a historical release. No water courses are near the site.

Additional site characterization was completed on September 21, 2015. A total of 20 soil samples were collected to evaluate the vertical and horizontal extent of impacts resulting from the release. The location of the samples relative to the visually impacted area are provided in the Sample Location Map (**Figure 1)**. Based on the source of the spill (predominantly produced water), the potential contaminants of concern (COCs) were identified as BTEX, TPH, and chloride. Analytical results are summarized in **Table 3.**

The majority of samples did not contain detectable concentrations of BTEX and TPH. The small number of samples with BTEX and TPH detections were at concentrations well below the site-specific RRALs for those compounds. However, the concentration of chlorides in samples collected at 8 and 10 feet below ground surface (bgs) at location C were slightly above the respective RRAL of 500 mg/kg. The following section outlines additional sampling and path forward for remediation at the site.

Scope of Work

The proposed scope of work for this investigation will include collection of additional soil samples that will be analyzed for chlorides to further delineate the area around location C and subsequent excavation of soils remaining above the chloride RRAL of 500 mg/kg. A chloride field screening kit will be used to guide the removal of impacted soil. A confirmation sample will be collected at approximately 9 feet bgs from each sidewall to document lateral delineation and a confirmation sample will be collected from the floor of the excavation to demonstrate vertical delineation. Confirmation samples will be submitted for laboratory analysis. Contingent upon verifying that chloride concentrations at the terminal excavation limits are protective of groundwater, the excavation will be backfilled to grade with clean material.

Health and Safety

The existing Health and Safety Plan (HSP) will be updated, if necessary, and used during the site investigation activities. The HSP will be maintained on-site and will be reviewed and signed by all personnel entering the work area. All staff will at a minimum be required to wear flame retardant clothing, steel-toed boots, safety glasses, and hard-hats.

Quality Assurance/Quality Control

Confirmation sampling will include standard quality control/quality assurance procedures to minimize cross-contamination of samples and provide reliable laboratory analytical results.

Table 3
Analytical Results, Soil Samples Collected September 21, 2015
Short Fuse Fed. #1 Work Plan
Lea County, New Mexico

Sample ID	Depth (ft bgs)	Unit	Benzene	Toluene	Ethylbenzene	Xylene	BTEX[a]	TPH-GRO	TPH-DRO	TPH[b]	Chloride
			RRAL (mg/kg)								
			10	**---**	**---**	**---**	**50**	**---**	**---**	**1,000**	**500**
Background											
FUSE-BG-0.5'-09212015[c]	0.5	mg/kg	<0.00550	<0.00665	<0.0120	<0.00902	ND	**<2.39**	<5.38	ND	**13.3**
Location A											
FUSE-A-2'-09212015	2	mg/kg	<0.00566	<0.00685	<0.0123	<0.00928	ND	<2.46	**41.7**	**41.7**	**16.1**
FUSE-A-4'-09212015	4	mg/kg	<0.00604	<0.00731	**0.0619**	**0.317**	**0.379**	**13.2**	**254**	**267.2**	**16.4**
FUSE-A-6'-09212015	6	mg/kg	<0.00626	<0.00757	<0.0136	<0.0102	ND	<2.72	<6.13	ND	**26.9**
FUSE-A-8'-09212015	8	mg/kg	<0.00610	<0.00739	<0.0133	<0.0100	ND	<2.66	**28.4**	**28.4**	**13.4**
FUSE-A-10'-09212015	10	mg/kg	<0.00608	<0.00736	<0.0132	<0.00998	ND	<2.65	<5.96	ND	**21.7**
Location B											
FUSE-B-2'-09212015	2	mg/kg	<0.00553	<0.00669	<0.0120	<0.00906	ND	<2.40	<5.41	ND	**16.2**
FUSE-B-4'-09212015	4	mg/kg	<0.00578	<0.00700	<0.0126	<0.00948	ND	<2.52	<5.66	ND	**67.6**
FUSE-B-6'-09212015	6	mg/kg	<0.00616	<0.00746	<0.0134	<0.0101	ND	<2.68	<6.03	ND	**95.6**
FUSE-B-8'-09212015	8	mg/kg	<0.00641	<0.00775	<0.0139	<0.0105	ND	<2.79	<6.27	ND	**145**
FUSE-B-10'-09212015	10	mg/kg	<0.00598	<0.00723	<0.0130	<0.00980	ND	<2.60	<5.85	ND	**63.2**
Location C											
FUSE-C-2'-09212015	2	mg/kg	<0.00555	<0.00671	<0.0121	<0.00910	ND	<2.41	<5.43	ND	**189**
FUSE-C-4'-09212015	4	mg/kg	<0.00648	<0.00785	<0.0141	<0.0106	ND	<2.82	<6.35	ND	**482**
FUSE-C-6'-09212015	6	mg/kg	<0.00566	<0.00685	<0.0123	<0.00929	ND	<2.46	<5.55	ND	**234**
FUSE-C-8'-09212015	8	mg/kg	<0.00601	<0.00727	<0.0131	<0.00985	ND	<2.62	<5.88	ND	**524**
FUSE-C-10'-09212015	10	mg/kg	<0.00307	<0.00735	<0.0132	<0.00995	ND	<2.64	<5.94	ND	**651**
Location D											
FUSE-D-2'-09212015	2	mg/kg	<0.00542	<0.00656	<0.0118	<0.00889	ND	<2.36	<5.31	ND	**22.9**
FUSE-D-4'-09212015	4	mg/kg	<0.00538	<0.00652	<0.0117	<0.00883	ND	<2.34	<5.27	ND	**7.24**
Location E											
FUSE-E-2'-09212015	2	mg/kg	<0.00559	<0.00677	<0.0122	<0.00917	ND	<2.44	**12.4**	**12.4**	**399**
FUSE-E-4'-09212015	4	mg/kg	<0.00559	<0.00676	<0.0122	<0.00916	ND	<2.34	**28.5**	**28.5**	**125**

Notes:
[a]: Total detected concentration of benzene, toluene, ethylbenzene, and xylene (BTEX)
[b]: Total concentration of TPH (GRO and DRO)
[c]: Background sample collected west of the excavated area.
Bold font represents a detected concentrations
Shaded cells represent a detected concentration above the respective RRAL.

--- An RRAL is not promulgated by the NMOCD for the specific compound.
ND Analyte not detected above the respective sample detection limit
RRAL Recommendation Remediation Action Level
mg/kg milligrams per kilogram

Reporting

A brief letter report will be prepared following completion of the site investigation activities included in this Work Plan and submitted to the NMOCD and BLM. It will include updates to the site description, summary of the field investigation and laboratory results, and recommendations for additional investigation or no-further-action.

Work Plan Approval Request

EOG is prepared to initiate the scope of work upon approval by the NMOCD and BLM. If you have any questions or comments with regards to this Work Plan, please do not hesitate to contact Jennifer Dussor at Jennifer.Dussor@ch2m.com or (972) 663-2287. Your timely response is appreciated.

Regards,
CH2M HILL Engineers, Inc.

Jennifer Dussor
Project Manager

Enclosures:

Figure 1	Sample Location Map
Appendix A	C-141 Form
Appendix B	Laboratory Analytical Data Packages

C: Tomáš 'Doc' Oberding, PhD, NMOCD
Kellie Jones, NMOCD
Zane Kurtz, EOG

Figure

N

LEGEND:

- Soil Sample Locations
- Approximate Limits of Excavation

BASE MAP SOURCE: ESRI World Imagery

0 50 100

Scale In Feet

eog resources

EOG Resources, Inc.
Lea County, NM

Figure 1
Sample Location Map
Short Fuse Fed #1

PN: 653209	DATE: 10/13/2015
CREATED BY: SS	ch2m.
REVIEWED BY: JD	

\\CREOLE\Groups\GIS\00_Proj\EEOG\Maps\Working\ShortFuse1.mxd

Appendix A
C-141 Form

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company EOG Resources, Inc.	Contact Zane Kurtz
Address 5509 Champions Drive, Midland, TX 79706	Telephone No. 432-425-2023
Facility Name Short Fuse Fed #1	Facility Type Oil and Gas Well and Tank Battery

Surface Owner BLM	Mineral Owner EOG Resources	API No. 30-025-29897

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	11	18S	32E	2036	N	613	E	Lea

Latitude 32.7636 **Longitude** -103.7306

NATURE OF RELEASE

Type of Release Produced Water/Oil	Volume of Release 5 bbls	Volume Recovered 0
Source of Release Steel elbow on inlet to Heater failed	Date and Hour of Occurrence 8/16/2015	Date and Hour of Discovery 8/16/2015
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Elbow on piping failed and leaked out about 5 bbls of produced water with some oil. Pumper immediately closed valve to stop release. Called clean up crew to remove impacted soil. Once they started removing impacted soil, they found impacted soil from historical release that reached into the pasture about 50 feet. They removed about 100 yards of soil and disposed of at Lea Land Disposal in Carlsbad, NM. Then replaced with clean backfill from pit at the entrance of lease area.

Describe Area Affected and Cleanup Action Taken.*
Environmental Dept. did not realize extent of impacts. 3rd party Consultant will go to site and collect soil samples to see if impacted soil has all been removed. If not, they will excavate impacted soil and place on poly liner for proper disposal. Clean soil will then be used for backfill. A work plan will be submitted to the OCD and BLM to make sure archeological survey has been completed for area.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Zane Kurtz, EOG Resources	Approved by Environmental Specialist:	
Title: Sr. Environmental Rep.	Approval Date:	Expiration Date:
E-mail Address: zane_kurtz@eogresources.com	Conditions of Approval:	Attached ☐
Date: 8-27-2015 Phone: 432-425-2023		

* Attach Additional Sheets If Necessary

Appendix B
Laboratory Analytical Data Packages, September 21, 2015

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

Jennifer Dussor
CH2M Hill
12750 Merit Dr.
Ste. 1100
Dallas, Tx, 75251

Report Date: October 6, 2015

Work Order: 15092228

Project Location: Lea Co, NM
Project Name: Short Fuse Fed #1

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
404978	FUSE-A-2'-09212015	soil	2015-09-21	11:50	2015-09-22
404979	FUSE-A-4'-09212015	soil	2015-09-21	11:54	2015-09-22
404980	FUSE-A-6'-09212015	soil	2015-09-21	11:58	2015-09-22
404981	FUSE-A-8'-09212015	soil	2015-09-21	12:02	2015-09-22
404982	FUSE-A-10'-09212015	soil	2015-09-21	12:06	2015-09-22

Notes

- **Work Order 15092228:** Separate report for "A" series Samples

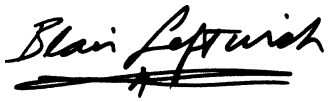
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

Notes:

All sample results are reported on a dry weight basis.

For inorganic analyses, the term MQL should actually read PQL.



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

Report Contents

Case Narrative

Samples for project Short Fuse Fed #1 were received by TraceAnalysis, Inc. on 2015-09-22 and assigned to work order 15092228. Samples for work order 15092228 were received intact at a temperature of 0.4 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	105841	2015-09-24 at 16:19	125138	2015-09-25 at 11:28
Chloride (IC)	E 300.0	106049	2015-10-05 at 11:30	125366	2015-10-05 at 16:04
Moisture Content	ASTM D 2216-05	105819	2015-09-23 at 09:20	125096	2015-09-24 at 08:30
TPH DRO	S 8015 D	105814	2015-09-23 at 15:00	125089	2015-09-24 at 07:53
TPH GRO	S 8015 D	105841	2015-09-24 at 16:19	125143	2015-09-25 at 13:28

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 15092228 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

Note: *All sample results are reported on a dry weight basis.*

Sample: 404978 - FUSE-A-2'-09212015

Laboratory:	Midland					
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035	
QC Batch:	125138	Date Analyzed:	2015-09-25	Analyzed By:	AK	
Prep Batch:	105841	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	Qs,U	5	<0.00566	<0.0212	<0.00566	mg/Kg	1	0.00566	0.02	0.00533
Toluene	U	5	<0.00685	<0.0212	<0.00685	mg/Kg	1	0.00685	0.02	0.00645
Ethylbenzene	U	5	<0.0123	<0.0212	<0.0123	mg/Kg	1	0.0123	0.02	0.0116
Xylene	U	5	<0.00928	<0.0212	<0.00928	mg/Kg	1	0.00928	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			1.66	mg/Kg	1	2.00	83	70 - 130

Sample: 404978 - FUSE-A-2'-09212015

Laboratory:	Lubbock					
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A	
QC Batch:	125366	Date Analyzed:	2015-10-05	Analyzed By:	RL	
Prep Batch:	106049	Sample Preparation:		Prepared By:	RL	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	J	3,4,6	**16.1**	<26.6	<4.98	mg/Kg	1	4.98	25	4.69

Sample: 404978 - FUSE-A-2'-09212015

Laboratory:	Midland					
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A	
QC Batch:	125096	Date Analyzed:	2015-09-24	Analyzed By:	AM	
Prep Batch:	105819	Sample Preparation:	2015-09-23	Prepared By:	AM	

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	5.84	%	1	0

Sample: 404978 - FUSE-A-2'-09212015

Laboratory:	Lubbock					
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A	
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ	
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	J	1,2,3,4	**41.7**	<53.1	<5.54	mg/Kg	1	5.54	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	37.3	mg/Kg	1	25.0	149	48.9 - 172

Sample: 404978 - FUSE-A-2'-09212015

Laboratory:	Midland					
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035	
QC Batch:	125143	Date Analyzed:	2015-09-25	Analyzed By:	AK	
Prep Batch:	105841	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	Qr,Qs,U	5	<2.46	<4.25	<2.46	mg/Kg	1	2.46	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.99	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.84	mg/Kg	1	2.00	92	70 - 130

Sample: 404979 - FUSE-A-4'-09212015

Laboratory:	Midland					
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035	
QC Batch:	125138	Date Analyzed:	2015-09-25	Analyzed By:	AK	
Prep Batch:	105841	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00604	<0.0227	<0.00604	mg/Kg	1	0.00604	0.02	0.00533
Toluene	U	5	<0.00731	<0.0227	<0.00731	mg/Kg	1	0.00731	0.02	0.00645
Ethylbenzene		5	**0.0619**	**0.0619**	<0.0132	mg/Kg	1	0.0132	0.02	0.0116

continued ...

sample 404979 continued ...

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Xylene		5	**0.317**	**0.317**	<0.00991	mg/Kg	1	0.00991	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.71	mg/Kg	1	2.00	86	70 - 130

Sample: 404979 - FUSE-A-4'-09212015

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	125366	Date Analyzed:	2015-10-05	Analyzed By:	RL
Prep Batch:	106049	Sample Preparation:		Prepared By:	RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	J	3,4,6	**16.4**	<28.3	<5.32	mg/Kg	1	5.32	25	4.69

Sample: 404979 - FUSE-A-4'-09212015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	125096	Date Analyzed:	2015-09-24	Analyzed By:	AM
Prep Batch:	105819	Sample Preparation:	2015-09-23	Prepared By:	AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	11.8	%	1	0

Sample: 404979 - FUSE-A-4'-09212015

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO		1,2,3,4	**254**	**254**	<5.92	mg/Kg	1	5.92	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J,Qsr	3	45.2	mg/Kg	1	25.0	181	48.9 - 172

Sample: 404979 - FUSE-A-4'-09212015

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015 D | Prep Method: S 5035
QC Batch: 125143 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105841 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	Qr	5	**13.2**	**13.2**	<2.63	mg/Kg	1	2.63	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.86	mg/Kg	1	2.00	93	70 - 130

Sample: 404980 - FUSE-A-6'-09212015

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5035
QC Batch: 125138 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105841 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00626	<0.0235	<0.00626	mg/Kg	1	0.00626	0.02	0.00533
Toluene	U	5	<0.00757	<0.0235	<0.00757	mg/Kg	1	0.00757	0.02	0.00645
Ethylbenzene	U	5	<0.0136	<0.0235	<0.0136	mg/Kg	1	0.0136	0.02	0.0116
Xylene	U	5	<0.0102	<0.0235	<0.0102	mg/Kg	1	0.0102	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.85	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.43	mg/Kg	1	2.00	72	70 - 130

Sample: 404980 - FUSE-A-6'-09212015

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A

QC Batch: 125366 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106049 | Sample Preparation: | Prepared By: RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	J	3,4,6	**26.9**	<29.3	<5.50	mg/Kg	1	5.50	25	4.69

Sample: 404980 - FUSE-A-6'-09212015

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2216-05 | Prep Method: N/A
QC Batch: 125096 | Date Analyzed: 2015-09-24 | Analyzed By: AM
Prep Batch: 105819 | Sample Preparation: 2015-09-23 | Prepared By: AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	14.8	%	1	0

Sample: 404980 - FUSE-A-6'-09212015

Laboratory: Lubbock
Analysis: TPH DRO | Analytical Method: S 8015 D | Prep Method: N/A
QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ
Prep Batch: 105814 | Sample Preparation: 2015-09-23 | Prepared By: HJ

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<6.13	<58.7	<6.13	mg/Kg	1	6.13	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	32.0	mg/Kg	1	25.0	128	48.9 - 172

Sample: 404980 - FUSE-A-6'-09212015

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015 D | Prep Method: S 5035
QC Batch: 125143 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105841 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	Qr,U	5	<2.72	<4.69	<2.72	mg/Kg	1	2.72	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.77	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.65	mg/Kg	1	2.00	82	70 - 130

Sample: 404981 - FUSE-A-8'-09212015

Laboratory:	Midland					
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035	
QC Batch:	125138	Date Analyzed:	2015-09-25	Analyzed By:	AK	
Prep Batch:	105841	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00610	<0.0229	<0.00610	mg/Kg	1	0.00610	0.02	0.00533
Toluene	U	5	<0.00739	<0.0229	<0.00739	mg/Kg	1	0.00739	0.02	0.00645
Ethylbenzene	U	5	<0.0133	<0.0229	<0.0133	mg/Kg	1	0.0133	0.02	0.0116
Xylene	U	5	<0.0100	<0.0229	<0.0100	mg/Kg	1	0.0100	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.46	mg/Kg	1	2.00	73	70 - 130

Sample: 404981 - FUSE-A-8'-09212015

Laboratory:	Lubbock					
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A	
QC Batch:	125366	Date Analyzed:	2015-10-05	Analyzed By:	RL	
Prep Batch:	106049	Sample Preparation:		Prepared By:	RL	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	J	3,4,6	**13.4**	<28.6	<5.37	mg/Kg	1	5.37	25	4.69

Sample: 404981 - FUSE-A-8'-09212015

Laboratory:	Midland					
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A	
QC Batch:	125096	Date Analyzed:	2015-09-24	Analyzed By:	AM	
Prep Batch:	105819	Sample Preparation:	2015-09-23	Prepared By:	AM	

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	12.7	%	1	0

Sample: 404981 - FUSE-A-8'-09212015

Laboratory:	Lubbock					
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A	
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ	
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	J	1,2,3,4	**28.4**	<57.3	<5.98	mg/Kg	1	5.98	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	35.2	mg/Kg	1	25.0	141	48.9 - 172

Sample: 404981 - FUSE-A-8'-09212015

Laboratory:	Midland					
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035	
QC Batch:	125143	Date Analyzed:	2015-09-25	Analyzed By:	AK	
Prep Batch:	105841	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	Qr,U	5	<2.66	<4.58	<2.66	mg/Kg	1	2.66	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.81	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.65	mg/Kg	1	2.00	82	70 - 130

Sample: 404982 - FUSE-A-10'-09212015

Laboratory:	Midland					
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035	
QC Batch:	125138	Date Analyzed:	2015-09-25	Analyzed By:	AK	
Prep Batch:	105841	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00608	<0.0228	<0.00608	mg/Kg	1	0.00608	0.02	0.00533
Toluene	U	5	<0.00736	<0.0228	<0.00736	mg/Kg	1	0.00736	0.02	0.00645
Ethylbenzene	U	5	<0.0132	<0.0228	<0.0132	mg/Kg	1	0.0132	0.02	0.0116
Xylene	U	5	<0.00998	<0.0228	<0.00998	mg/Kg	1	0.00998	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.44	mg/Kg	1	2.00	72	70 - 130

Sample: 404982 - FUSE-A-10'-09212015

Laboratory:	Lubbock					
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A	
QC Batch:	125366	Date Analyzed:	2015-10-05	Analyzed By:	RL	
Prep Batch:	106049	Sample Preparation:		Prepared By:	RL	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	J	3,4,6	**21.7**	<28.5	<5.35	mg/Kg	1	5.35	25	4.69

Sample: 404982 - FUSE-A-10'-09212015

Laboratory:	Midland					
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A	
QC Batch:	125096	Date Analyzed:	2015-09-24	Analyzed By:	AM	
Prep Batch:	105819	Sample Preparation:	2015-09-23	Prepared By:	AM	

Parameter	F	C	Result	RL	Units	Dilution	RL
Moisture		5	12.4		%	1	0

Sample: 404982 - FUSE-A-10'-09212015

Laboratory:	Lubbock					
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A	
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ	
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ	

continued ...

sample 404982 continued . . .

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.96	<57.1	<5.96	mg/Kg	1	5.96	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	34.5	mg/Kg	1	25.0	138	48.9 - 172

Sample: 404982 - FUSE-A-10'-09212015

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	125143	Date Analyzed:	2015-09-25	Analyzed By:	AK
Prep Batch:	105841	Sample Preparation:	2015-09-24	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	Qr,U	5	<2.65	<4.57	<2.65	mg/Kg	1	2.65	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.79	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.62	mg/Kg	1	2.00	81	70 - 130

Method Blanks

Method Blank (1)

QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ
Prep Batch: 105814 | QC Preparation: 2015-09-23 | Prepared By: HJ

Parameter	F	C	Result	Units	Reporting Limits
DRO		1,2,3,4	<5.22	mg/Kg	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	29.6	mg/Kg	1	25.0	118	48.9 - 172

Method Blank (1)

QC Batch: 125138 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105841 | QC Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		5	<0.00533	mg/Kg	0.00533
Toluene		5	<0.00645	mg/Kg	0.00645
Ethylbenzene		5	<0.0116	mg/Kg	0.0116
Xylene		5	<0.00874	mg/Kg	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.48	mg/Kg	1	2.00	74	70 - 130

Method Blank (1)

QC Batch: 125143 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105841 | QC Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
GRO		5	<2.32	mg/Kg	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BFB)			1.67	mg/Kg	1	2.00	84	70 - 130

Method Blank (1)

QC Batch: 125366 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106049 | QC Preparation: 2015-10-05 | Prepared By: RL

Parameter	F	C	Result	Units	Reporting Limits
Chloride		3,4,6	<4.69	mg/Kg	4.69

Duplicates

Duplicate (1) Duplicated Sample: 404982

QC Batch:	125096	Date Analyzed:	2015-09-24	Analyzed By:	AM
Prep Batch:	105819	QC Preparation:	2015-09-23	Prepared By:	AM

Param	F	C	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture		5	12.4	12.4	%	1	0	20

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ
Prep Batch: 105814 | QC Preparation: 2015-09-23 | Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	438	mg/Kg	1	500	<5.22	88	60.9 - 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		1,2,3,4	459	mg/Kg	1	500	<5.22	92	60.9 - 130	5	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane		3	29.4	33.0	mg/Kg	1	25.0	118	132	48.9 - 172

Laboratory Control Spike (LCS-1)

QC Batch: 125138 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105841 | QC Preparation: 2015-09-24 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	2.00	mg/Kg	1	2.00	<0.00533	100	70 - 130
Toluene		5	1.83	mg/Kg	1	2.00	<0.00645	92	70 - 130
Ethylbenzene		5	1.78	mg/Kg	1	2.00	<0.0116	89	70 - 130
Xylene		5	5.45	mg/Kg	1	6.00	<0.00874	91	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
Benzene		5	1.87	mg/Kg	1	2.00	<0.00533	94	70 - 130	7	20
Toluene		5	1.74	mg/Kg	1	2.00	<0.00645	87	70 - 130	5	20
Ethylbenzene		5	1.69	mg/Kg	1	2.00	<0.0116	84	70 - 130	5	20
Xylene		5	5.09	mg/Kg	1	6.00	<0.00874	85	70 - 130	7	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			1.80	1.81	mg/Kg	1	2.00	90	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.49	1.47	mg/Kg	1	2.00	74	74	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 125143 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105841 | QC Preparation: 2015-09-24 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		[5]	20.3	mg/Kg	1	20.0	<2.32	102	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
GRO		[5]	20.7	mg/Kg	1	20.0	<2.32	104	70 - 130	2	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			1.85	1.85	mg/Kg	1	2.00	92	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.70	1.69	mg/Kg	1	2.00	85	84	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 125366 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106049 | QC Preparation: 2015-10-05 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		[3,4,6]	275	mg/Kg	1	250	<4.69	110	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]	275	mg/Kg	1	250	<4.69	110	90 - 110	0	20

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

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 404963

QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ
Prep Batch: 105814 | QC Preparation: 2015-09-23 | Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	386	mg/Kg	1	500	<5.22	77	47.9 - 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		1,2,3,4	406	mg/Kg	1	500	<5.22	81	47.9 - 130	5	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane		3	31.6	33.1	mg/Kg	1	25	126	132	48.9 - 172

Matrix Spike (MS-1) Spiked Sample: 404978

QC Batch: 125138 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105841 | QC Preparation: 2015-09-24 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	Qs	5	1.07	mg/Kg	1	2.00	<0.00533	54	70 - 130
Toluene	Qs	5	1.27	mg/Kg	1	2.00	<0.00645	64	70 - 130
Ethylbenzene		5	1.40	mg/Kg	1	2.00	<0.0116	70	70 - 130
Xylene		5	4.29	mg/Kg	1	6.00	<0.00874	72	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
Benzene	Qs	5	1.28	mg/Kg	1	2.00	<0.00533	64	70 - 130	18	20
Toluene		5	1.42	mg/Kg	1	2.00	<0.00645	71	70 - 130	11	20
Ethylbenzene		5	1.55	mg/Kg	1	2.00	<0.0116	78	70 - 130	10	20
Xylene		5	4.72	mg/Kg	1	6.00	<0.00874	79	70 - 130	10	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			1.78	1.86	mg/Kg	1	2	89	93	70 - 130
4-Bromofluorobenzene (4-BFB)			1.50	1.48	mg/Kg	1	2	75	74	70 - 130

Matrix Spike (MS-1) Spiked Sample: 404978

QC Batch: 125143 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105841 | QC Preparation: 2015-09-24 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	5	10.7	mg/Kg	1	20.0	<2.32	54	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
GRO	Qr,Qs	5	2.78	mg/Kg	1	20.0	<2.32	14	70 - 130	118	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			1.72	1.76	mg/Kg	1	2	86	88	70 - 130
4-Bromofluorobenzene (4-BFB)			1.71	1.70	mg/Kg	1	2	86	85	70 - 130

Matrix Spike (MS-1) Spiked Sample: 404982

QC Batch: 125366 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106049 | QC Preparation: 2015-10-05 | Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	290	mg/Kg	1	250	19	108	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	286	mg/Kg	1	250	19	107	80 - 120	1	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: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	430	86	80 - 120	2015-09-24

Standard (CCV-2)

QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	438	88	80 - 120	2015-09-24

Standard (CCV-1)

QC Batch: 125138 | Date Analyzed: 2015-09-25 | Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/kg	0.100	0.0954	95	80 - 120	2015-09-25
Toluene		5	mg/kg	0.100	0.0891	89	80 - 120	2015-09-25
Ethylbenzene		5	mg/kg	0.100	0.0875	88	80 - 120	2015-09-25
Xylene		5	mg/kg	0.300	0.266	89	80 - 120	2015-09-25

Standard (CCV-2)

QC Batch: 125138 | Date Analyzed: 2015-09-25 | Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/kg	0.100	0.0970	97	80 - 120	2015-09-25
Toluene		5	mg/kg	0.100	0.0871	87	80 - 120	2015-09-25

continued ...

standard continued ...

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		5	mg/kg	0.100	0.0869	87	80 - 120	2015-09-25
Xylene		5	mg/kg	0.300	0.259	86	80 - 120	2015-09-25

Standard (CCV-1)

QC Batch: 125143 Date Analyzed: 2015-09-25 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.965	96	80 - 120	2015-09-25

Standard (CCV-2)

QC Batch: 125143 Date Analyzed: 2015-09-25 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.891	89	80 - 120	2015-09-25

Standard (CCV-1)

QC Batch: 125366 Date Analyzed: 2015-10-05 Analyzed By: RL

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	27.4	110	90 - 110	2015-10-05

Standard (CCV-2)

QC Batch: 125366 Date Analyzed: 2015-10-05 Analyzed By: RL

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	27.4	110	90 - 110	2015-10-05

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike Amount	Pass
BTEX	S 8021B	soil	BTEX-2	Benzene	0.0120	Pass
BTEX	S 8021B	soil	BTEX-2	Toluene	0.0120	Pass
BTEX	S 8021B	soil	BTEX-2	Ethylbenzene	0.0120	Pass
BTEX	S 8021B	soil	BTEX-2	Xylene	0.0120	Pass
Chloride (IC)	E 300.0	soil	Dionex IC	Chloride	10.0	Pass
TPH DRO	S 8015 D	soil	TPH-2	DRO	10.4	Pass
TPH GRO	S 8015 D	soil	BTEX-2	GRO	5.00	Pass

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	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-15-11	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2014-018	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.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

LAB Order ID # 15092228

Page 1 of 1

TraceAnalysis, Inc.

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

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

Company Name: CH2M HILL	**Phone #:** 972 663 2287
Address: 306 W. WALL ST. SUITE 1107 MIDLAND TX 79701	**Fax #:**
Contact Person: JENNIFER DUSSOR	**E-mail:** JENNIFER.DUSSOR@CH2M.COM
Invoice to: DIRECT BILL EOG RE: ZANE KURTZ	
Project #:	**Project Name:** SHORT FUSE FED #1
Project Location: (include state) LEA COUNTY NEW MEXICO	**Sampler Signature:**

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
404978	FUSE-A-2'-09212015	2	4OZ		✓							✓		9/21	1150
404979	FUSE-A-4'-09212015														1154
404980	FUSE-A-6'-09212015														1158
404981	FUSE-A-8'-09212015														1202
404982	FUSE-A-10'-09212015														1206

Analysis columns: MTBE 8021B / 602 / 8260B / 624; BTEX 8021B / 602 / 8260B / 624; TPH 418.1 / TX1005 / DRO / TVHC (GRO/DRO); PAH 8270C / 625; Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7; TCLP Metals Ag As Ba Cd Cr Pb Se Hg; TCLP Volatiles; TCLP Semi Volatiles; TCLP Pesticides; RCI; GC/MS Vol. 8260B / 624; GC/MS Semi. Vol. 8270C/625; PCB's 8082 / 608; Pesticides 8081A / 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; MOISTURE CONTENT; Turn Around Time if different from standard; Hold

8015

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Warren Maurer	CH2M	9/22	1455	Valley	TA	9-22-15	14:5	INST ✓ OBS 0.4 °C COR 0.3 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST OBS °C COR °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST OBS °C COR °C

LAB USE ONLY

Intact Y / N

Headspace Y / N /NA

Log-in Review

Carrier # Courier

REMARKS:

ANALYZE FOR MOISTURE CONTENT

☑ Dry Weight Basis Required

☐ TRRP Report Required

☐ Check If Special Reporting Limits Are Needed

Please generate separate report

Submittal of samples constitutes agreement to Terms and Conditions

ORIGINAL COPY

Separate report For "A" series Samples!

LAB Order ID # 150922 28

Page 1 of 1

TraceAnalysis, Inc.

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

Company Name: CH2M HILL	**Phone #:** 972 663 2287
Address: 306 W. WALL ST. SUITE 1107 MIDLAND TX 79701	**Fax #:**
Contact Person: JENNIFER DUSSOR	**E-mail:** JENNIFER.DUSSOR@CH2M.COM
Invoice to: DIRECT BILL EOG RE: ZANE KURTZ	
Project #:	**Project Name:** SHORT FUSE FED #1
Project Location: (include state) LEA COUNTY NEW MEXICO	**Sampler Signature:** Warren Maurer

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
404978	FUSE-A-2'-09212015	2	4OZ		✓							✓		9/21	1150
404979	FUSE-A-4'-09212015	↓	↓		↓							↓		↓	1154
404980	FUSE-A-6'-09212015														1158
404981	FUSE-A-8'-09212015														1202
404982	FUSE-A-10'-09212015	↓	↓		↓							↓		↓	1206

ANALYSIS REQUEST	
MTBE 8021B / 602 / 8260B / 624	
BTEX 8021B / 602 / 8260B / 624	✓
TPH 418.1 / TX1005 / DRO / TVHC	✓
PAH 8270C / 625	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B / 624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082 / 608	
Pesticides 8081A / 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	✓
MOISTURE CONTENT	✓
Turn Around Time if different from standard	
Hold	

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Warren Maurer	CH2M	9/22	1455	Nalley	TA	9-22-15	14:55	INST IR OBS 0.4 °C COR 0.3 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by: Brenda Ward	Company: TA Lubbock	Date: 9/23/15	Time: 9:15	INST IR 3 OBS 4.9 °C COR 4.6 °C

LAB USE ONLY

Intact Y / N

Headspace Y / N / NA

Log-in Review ____

Carrier # courier

REMARKS:

ANALYZE FOR MOISTURE CONTENT

- ✓ Dry Weight Basis Required
- ☐ TRRP Report Required — Please generate separate report
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions

ORIGINAL COPY

✓ Separate report For "A" series Samples!

TRACEANALYSIS, INC.

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200 East Sunset Road, Suite E El Paso, Texas 79922 915•585•3443 FAX 915•585•4944
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(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

Jennifer Dussor
CH2M Hill
12750 Merit Dr.
Ste. 1100
Dallas, Tx, 75251

Report Date: October 6, 2015

Work Order: 15092227

Project Location: Lea Co, NM
Project Name: Short Fuse Fed #1

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
404963	FUSE-B-2'-09212015	soil	2015-09-21	12:14	2015-09-22
404964	FUSE-B-4'-09212015	soil	2015-09-21	12:18	2015-09-22
404965	FUSE-B-6'-09212015	soil	2015-09-21	12:22	2015-09-22
404966	FUSE-B-8'-09212015	soil	2015-09-21	12:26	2015-09-22
404967	FUSE-B-10'-09212015	soil	2015-09-21	12:30	2015-09-22
404968	FUSE-C-2'-09212015	soil	2015-09-21	12:44	2015-09-22
404969	FUSE-C-4'-09212015	soil	2015-09-21	12:48	2015-09-22
404970	FUSE-C-6'-09212015	soil	2015-09-21	12:52	2015-09-22
404971	FUSE-C-8'-09212015	soil	2015-09-21	12:56	2015-09-22
404972	FUSE-C-10'-09212015	soil	2015-09-21	13:00	2015-09-22
404973	FUSE-D-2'-09212015	soil	2015-09-21	13:14	2015-09-22
404974	FUSE-D-4'-09212015	soil	2015-09-21	13:18	2015-09-22
404975	FUSE-E-2'-09212015	soil	2015-09-21	13:30	2015-09-22
404976	FUSE-E-4'-09212015	soil	2015-09-21	13:34	2015-09-22
404977	FUSE-BG-0.5'-09212015	soil	2015-09-21	13:40	2015-09-22

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.

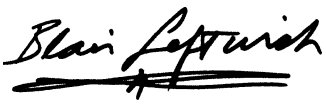
TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes

sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 46 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Notes:
All sample results are reported on a dry weight basis.

For inorganic analyses, the term MQL should actually read PQL.



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

Report Contents

Case Narrative

Samples for project Short Fuse Fed #1 were received by TraceAnalysis, Inc. on 2015-09-22 and assigned to work order 15092227. Samples for work order 15092227 were received intact at a temperature of 0.4 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	105811	2015-09-24 at 07:10	125111	2015-09-24 at 13:36
Chloride (IC)	E 300.0	106048	2015-10-05 at 11:30	125365	2015-10-05 at 16:04
Chloride (IC)	E 300.0	106049	2015-10-05 at 11:30	125366	2015-10-05 at 16:04
Moisture Content	ASTM D 2216-05	105818	2015-09-23 at 09:20	125095	2015-09-24 at 08:30
Moisture Content	ASTM D 2216-05	105819	2015-09-23 at 09:20	125096	2015-09-24 at 08:30
TPH DRO	S 8015 D	105814	2015-09-23 at 15:00	125089	2015-09-24 at 07:53
TPH GRO	S 8015 D	105811	2015-09-24 at 07:10	125132	2015-09-25 at 09:56

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 15092227 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

Note: *All sample results are reported on a dry weight basis.*

Sample: 404963 - FUSE-B-2'-09212015

Laboratory:	Midland					
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035	
QC Batch:	125111	Date Analyzed:	2015-09-24	Analyzed By:	AK	
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00553	<0.0207	<0.00553	mg/Kg	1	0.00553	0.02	0.00533
Toluene	U	5	<0.00669	<0.0207	<0.00669	mg/Kg	1	0.00669	0.02	0.00645
Ethylbenzene	U	5	<0.0120	<0.0207	<0.0120	mg/Kg	1	0.0120	0.02	0.0116
Xylene	U	5	<0.00906	<0.0207	<0.00906	mg/Kg	1	0.00906	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.12	mg/Kg	1	2.00	106	70 - 130

Sample: 404963 - FUSE-B-2'-09212015

Laboratory:	Lubbock					
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A	
QC Batch:	125365	Date Analyzed:	2015-10-05	Analyzed By:	RL	
Prep Batch:	106048	Sample Preparation:		Prepared By:	RL	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	J	3,4,6	**16.2**	<25.9	<4.86	mg/Kg	1	4.86	25	4.69

Sample: 404963 - FUSE-B-2'-09212015

Laboratory:	Midland					
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A	
QC Batch:	125095	Date Analyzed:	2015-09-24	Analyzed By:	AM	
Prep Batch:	105818	Sample Preparation:	2015-09-23	Prepared By:	AM	

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	3.55	%	1	0

Sample: 404963 - FUSE-B-2'-09212015

Laboratory:	Lubbock					
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A	
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ	
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.41	<51.8	<5.41	mg/Kg	1	5.41	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	29.7	mg/Kg	1	25.0	119	48.9 - 172

Sample: 404963 - FUSE-B-2'-09212015

Laboratory:	Midland					
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035	
QC Batch:	125132	Date Analyzed:	2015-09-25	Analyzed By:	AK	
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	Qs,U	5	<2.40	<4.15	<2.40	mg/Kg	1	2.40	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.81	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.80	mg/Kg	1	2.00	90	70 - 130

Sample: 404964 - FUSE-B-4'-09212015

Laboratory:	Midland					
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035	
QC Batch:	125111	Date Analyzed:	2015-09-24	Analyzed By:	AK	
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00578	<0.0217	<0.00578	mg/Kg	1	0.00578	0.02	0.00533
Toluene	U	5	<0.00700	<0.0217	<0.00700	mg/Kg	1	0.00700	0.02	0.00645
Ethylbenzene	U	5	<0.0126	<0.0217	<0.0126	mg/Kg	1	0.0126	0.02	0.0116

continued ...

sample 404964 continued ...

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Xylene	U	5	<0.00948	<0.0217	<0.00948	mg/Kg	1	0.00948	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.12	mg/Kg	1	2.00	106	70 - 130

Sample: 404964 - FUSE-B-4'-09212015

Laboratory:	Lubbock					
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A	
QC Batch:	125365	Date Analyzed:	2015-10-05	Analyzed By:	RL	
Prep Batch:	106048	Sample Preparation:		Prepared By:	RL	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		3,4,6	**67.6**	**67.6**	<5.09	mg/Kg	1	5.09	25	4.69

Sample: 404964 - FUSE-B-4'-09212015

Laboratory:	Midland					
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A	
QC Batch:	125095	Date Analyzed:	2015-09-24	Analyzed By:	AM	
Prep Batch:	105818	Sample Preparation:	2015-09-23	Prepared By:	AM	

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	7.85	%	1	0

Sample: 404964 - FUSE-B-4'-09212015

Laboratory:	Lubbock					
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A	
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ	
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.66	<54.2	<5.66	mg/Kg	1	5.66	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	32.3	mg/Kg	1	25.0	129	48.9 - 172

Sample: 404964 - FUSE-B-4'-09212015

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015 D | Prep Method: S 5035
QC Batch: 125132 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105811 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.52	<4.34	<2.52	mg/Kg	1	2.52	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.88	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.79	mg/Kg	1	2.00	90	70 - 130

Sample: 404965 - FUSE-B-6'-09212015

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5035
QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK
Prep Batch: 105811 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00616	<0.0231	<0.00616	mg/Kg	1	0.00616	0.02	0.00533
Toluene	U	5	<0.00746	<0.0231	<0.00746	mg/Kg	1	0.00746	0.02	0.00645
Ethylbenzene	U	5	<0.0134	<0.0231	<0.0134	mg/Kg	1	0.0134	0.02	0.0116
Xylene	U	5	<0.0101	<0.0231	<0.0101	mg/Kg	1	0.0101	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.15	mg/Kg	1	2.00	108	70 - 130
4-Bromofluorobenzene (4-BFB)			2.13	mg/Kg	1	2.00	106	70 - 130

Sample: 404965 - FUSE-B-6'-09212015

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A

QC Batch: 125365 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106048 | Sample Preparation: | Prepared By: RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		3,4,6	**95.6**	**95.6**	<5.42	mg/Kg	1	5.42	25	4.69

Sample: 404965 - FUSE-B-6'-09212015

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2216-05 | Prep Method: N/A
QC Batch: 125095 | Date Analyzed: 2015-09-24 | Analyzed By: AM
Prep Batch: 105818 | Sample Preparation: 2015-09-23 | Prepared By: AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	13.5	%	1	0

Sample: 404965 - FUSE-B-6'-09212015

Laboratory: Lubbock
Analysis: TPH DRO | Analytical Method: S 8015 D | Prep Method: N/A
QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ
Prep Batch: 105814 | Sample Preparation: 2015-09-23 | Prepared By: HJ

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<6.03	<57.8	<6.03	mg/Kg	1	6.03	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	32.7	mg/Kg	1	25.0	131	48.9 - 172

Sample: 404965 - FUSE-B-6'-09212015

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015 D | Prep Method: S 5035
QC Batch: 125132 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105811 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.68	<4.62	<2.68	mg/Kg	1	2.68	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.96	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.79	mg/Kg	1	2.00	90	70 - 130

Sample: 404966 - FUSE-B-8'-09212015

Laboratory:	Midland					
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035	
QC Batch:	125111	Date Analyzed:	2015-09-24	Analyzed By:	AK	
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00641	<0.0240	<0.00641	mg/Kg	1	0.00641	0.02	0.00533
Toluene	U	5	<0.00775	<0.0240	<0.00775	mg/Kg	1	0.00775	0.02	0.00645
Ethylbenzene	U	5	<0.0139	<0.0240	<0.0139	mg/Kg	1	0.0139	0.02	0.0116
Xylene	U	5	<0.0105	<0.0240	<0.0105	mg/Kg	1	0.0105	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	1	2.00	101	70 - 130

Sample: 404966 - FUSE-B-8'-09212015

Laboratory:	Lubbock					
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A	
QC Batch:	125365	Date Analyzed:	2015-10-05	Analyzed By:	RL	
Prep Batch:	106048	Sample Preparation:		Prepared By:	RL	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		3,4,6	**145**	**145**	<5.64	mg/Kg	1	5.64	25	4.69

Sample: 404966 - FUSE-B-8'-09212015

Laboratory:	Midland					
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A	
QC Batch:	125095	Date Analyzed:	2015-09-24	Analyzed By:	AM	
Prep Batch:	105818	Sample Preparation:	2015-09-23	Prepared By:	AM	

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	16.8	%	1	0

Sample: 404966 - FUSE-B-8'-09212015

Laboratory:	Lubbock					
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A	
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ	
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<6.27	<60.1	<6.27	mg/Kg	1	6.27	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	33.8	mg/Kg	1	25.0	135	48.9 - 172

Sample: 404966 - FUSE-B-8'-09212015

Laboratory:	Midland					
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035	
QC Batch:	125132	Date Analyzed:	2015-09-25	Analyzed By:	AK	
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.79	<4.81	<2.79	mg/Kg	1	2.79	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.76	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.70	mg/Kg	1	2.00	85	70 - 130

Sample: 404967 - FUSE-B-10'-09212015

Laboratory:	Midland					
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035	
QC Batch:	125111	Date Analyzed:	2015-09-24	Analyzed By:	AK	
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00598	<0.0224	<0.00598	mg/Kg	1	0.00598	0.02	0.00533
Toluene	U	5	<0.00723	<0.0224	<0.00723	mg/Kg	1	0.00723	0.02	0.00645
Ethylbenzene	U	5	<0.0130	<0.0224	<0.0130	mg/Kg	1	0.0130	0.02	0.0116
Xylene	U	5	<0.00980	<0.0224	<0.00980	mg/Kg	1	0.00980	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.10	mg/Kg	1	2.00	105	70 - 130
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	1	2.00	101	70 - 130

Sample: 404967 - FUSE-B-10'-09212015

Laboratory:	Lubbock					
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A	
QC Batch:	125365	Date Analyzed:	2015-10-05	Analyzed By:	RL	
Prep Batch:	106048	Sample Preparation:		Prepared By:	RL	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		3,4,6	**63.2**	**63.2**	<5.26	mg/Kg	1	5.26	25	4.69

Sample: 404967 - FUSE-B-10'-09212015

Laboratory:	Midland					
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A	
QC Batch:	125095	Date Analyzed:	2015-09-24	Analyzed By:	AM	
Prep Batch:	105818	Sample Preparation:	2015-09-23	Prepared By:	AM	

Parameter	F	C	Result	RL	Units	Dilution	RL
Moisture		5	10.8		%	1	0

Sample: 404967 - FUSE-B-10'-09212015

Laboratory:	Lubbock					
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A	
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ	
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ	

continued ...

sample 404967 continued ...

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.85	<56.0	<5.85	mg/Kg	1	5.85	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	33.0	mg/Kg	1	25.0	132	48.9 - 172

Sample: 404967 - FUSE-B-10'-09212015

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	125132	Date Analyzed:	2015-09-25	Analyzed By:	AK
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.60	<4.48	<2.60	mg/Kg	1	2.60	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.72	mg/Kg	1	2.00	86	70 - 130

Sample: 404968 - FUSE-C-2'-09212015

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	125111	Date Analyzed:	2015-09-24	Analyzed By:	AK
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00555	<0.0208	<0.00555	mg/Kg	1	0.00555	0.02	0.00533
Toluene	U	5	<0.00671	<0.0208	<0.00671	mg/Kg	1	0.00671	0.02	0.00645
Ethylbenzene	U	5	<0.0121	<0.0208	<0.0121	mg/Kg	1	0.0121	0.02	0.0116
Xylene	U	5	<0.00910	<0.0208	<0.00910	mg/Kg	1	0.00910	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)			2.02	mg/Kg	1	2.00	101	70 - 130

Sample: 404968 - FUSE-C-2'-09212015

Laboratory:	Lubbock					
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A	
QC Batch:	125365	Date Analyzed:	2015-10-05	Analyzed By:	RL	
Prep Batch:	106048	Sample Preparation:		Prepared By:	RL	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		3,4,6	**189**	**189**	<4.88	mg/Kg	1	4.88	25	4.69

Sample: 404968 - FUSE-C-2'-09212015

Laboratory:	Midland					
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A	
QC Batch:	125095	Date Analyzed:	2015-09-24	Analyzed By:	AM	
Prep Batch:	105818	Sample Preparation:	2015-09-23	Prepared By:	AM	

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	3.93	%	1	0

Sample: 404968 - FUSE-C-2'-09212015

Laboratory:	Lubbock					
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A	
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ	
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.43	<52.0	<5.43	mg/Kg	1	5.43	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	35.5	mg/Kg	1	25.0	142	48.9 - 172

Sample: 404968 - FUSE-C-2'-09212015

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015 D | Prep Method: S 5035
QC Batch: 125132 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105811 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.41	<4.16	<2.41	mg/Kg	1	2.41	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.70	mg/Kg	1	2.00	85	70 - 130

Sample: 404969 - FUSE-C-4'-09212015

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5035
QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK
Prep Batch: 105811 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00648	<0.0243	<0.00648	mg/Kg	1	0.00648	0.02	0.00533
Toluene	U	5	<0.00785	<0.0243	<0.00785	mg/Kg	1	0.00785	0.02	0.00645
Ethylbenzene	U	5	<0.0141	<0.0243	<0.0141	mg/Kg	1	0.0141	0.02	0.0116
Xylene	U	5	<0.0106	<0.0243	<0.0106	mg/Kg	1	0.0106	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)			1.99	mg/Kg	1	2.00	100	70 - 130

Sample: 404969 - FUSE-C-4'-09212015

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 125365 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106048 | Sample Preparation: | Prepared By: RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		3,4,6	**482**	**482**	<11.4	mg/Kg	2	11.4	25	4.69

Sample: 404969 - FUSE-C-4'-09212015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	125095	Date Analyzed:	2015-09-24	Analyzed By:	AM
Prep Batch:	105818	Sample Preparation:	2015-09-23	Prepared By:	AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	17.8	%	1	0

Sample: 404969 - FUSE-C-4'-09212015

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<6.35	<60.8	<6.35	mg/Kg	1	6.35	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	30.8	mg/Kg	1	25.0	123	48.9 - 172

Sample: 404969 - FUSE-C-4'-09212015

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	125132	Date Analyzed:	2015-09-25	Analyzed By:	AK
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.82	<4.87	<2.82	mg/Kg	1	2.82	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.83	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.69	mg/Kg	1	2.00	84	70 - 130

Sample: 404970 - FUSE-C-6'-09212015

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5035
QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK
Prep Batch: 105811 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00566	<0.0212	<0.00566	mg/Kg	1	0.00566	0.02	0.00533
Toluene	U	5	<0.00685	<0.0212	<0.00685	mg/Kg	1	0.00685	0.02	0.00645
Ethylbenzene	U	5	<0.0123	<0.0212	<0.0123	mg/Kg	1	0.0123	0.02	0.0116
Xylene	U	5	<0.00929	<0.0212	<0.00929	mg/Kg	1	0.00929	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.08	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	70 - 130

Sample: 404970 - FUSE-C-6'-09212015

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 125365 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106048 | Sample Preparation: | Prepared By: RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		3,4,6	**234**	**234**	<4.98	mg/Kg	1	4.98	25	4.69

Sample: 404970 - FUSE-C-6'-09212015

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2216-05 | Prep Method: N/A
QC Batch: 125095 | Date Analyzed: 2015-09-24 | Analyzed By: AM
Prep Batch: 105818 | Sample Preparation: 2015-09-23 | Prepared By: AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	5.89	%	1	0

Sample: 404970 - FUSE-C-6'-09212015

Laboratory: Lubbock
Analysis: TPH DRO | Analytical Method: S 8015 D | Prep Method: N/A
QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ
Prep Batch: 105814 | Sample Preparation: 2015-09-23 | Prepared By: HJ

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.55	<53.1	<5.55	mg/Kg	1	5.55	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	32.5	mg/Kg	1	25.0	130	48.9 - 172

Sample: 404970 - FUSE-C-6'-09212015

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 125132 Date Analyzed: 2015-09-25 Analyzed By: AK
Prep Batch: 105811 Sample Preparation: 2015-09-24 Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.46	<4.25	<2.46	mg/Kg	1	2.46	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.84	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.67	mg/Kg	1	2.00	84	70 - 130

Sample: 404971 - FUSE-C-8'-09212015

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 125111 Date Analyzed: 2015-09-24 Analyzed By: AK
Prep Batch: 105811 Sample Preparation: 2015-09-24 Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00601	<0.0225	<0.00601	mg/Kg	1	0.00601	0.02	0.00533
Toluene	U	5	<0.00727	<0.0225	<0.00727	mg/Kg	1	0.00727	0.02	0.00645
Ethylbenzene	U	5	<0.0131	<0.0225	<0.0131	mg/Kg	1	0.0131	0.02	0.0116
Xylene	U	5	<0.00985	<0.0225	<0.00985	mg/Kg	1	0.00985	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)			2.10	mg/Kg	1	2.00	105	70 - 130

Sample: 404971 - FUSE-C-8'-09212015

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	125365	Date Analyzed:	2015-10-05	Analyzed By:	RL
Prep Batch:	106048	Sample Preparation:		Prepared By:	RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		3,4,6	**524**	**524**	<10.6	mg/Kg	2	10.6	25	4.69

Sample: 404971 - FUSE-C-8'-09212015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	125095	Date Analyzed:	2015-09-24	Analyzed By:	AM
Prep Batch:	105818	Sample Preparation:	2015-09-23	Prepared By:	AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	11.3	%	1	0

Sample: 404971 - FUSE-C-8'-09212015

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.88	<56.4	<5.88	mg/Kg	1	5.88	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	30.8	mg/Kg	1	25.0	123	48.9 - 172

Sample: 404971 - FUSE-C-8'-09212015

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	125132	Date Analyzed:	2015-09-25	Analyzed By:	AK
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.62	<4.51	<2.62	mg/Kg	1	2.62	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.92	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.79	mg/Kg	1	2.00	90	70 - 130

Sample: 404972 - FUSE-C-10'-09212015

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5035
QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK
Prep Batch: 105811 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00607	<0.0228	<0.00607	mg/Kg	1	0.00607	0.02	0.00533
Toluene	U	5	<0.00735	<0.0228	<0.00735	mg/Kg	1	0.00735	0.02	0.00645
Ethylbenzene	U	5	<0.0132	<0.0228	<0.0132	mg/Kg	1	0.0132	0.02	0.0116
Xylene	U	5	<0.00995	<0.0228	<0.00995	mg/Kg	1	0.00995	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			1.90	mg/Kg	1	2.00	95	70 - 130

Sample: 404972 - FUSE-C-10'-09212015

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 125365 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106048 | Sample Preparation: | Prepared By: RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	Qs	3,4,6	**651**	**651**	<26.7	mg/Kg	5	26.7	25	4.69

Sample: 404972 - FUSE-C-10'-09212015

Laboratory: Midland

Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	125095	Date Analyzed:	2015-09-24	Analyzed By:	AM
Prep Batch:	105818	Sample Preparation:	2015-09-23	Prepared By:	AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	12.2	%	1	0

Sample: 404972 - FUSE-C-10'-09212015

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.94	<56.9	<5.94	mg/Kg	1	5.94	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	36.0	mg/Kg	1	25.0	144	48.9 - 172

Sample: 404972 - FUSE-C-10'-09212015

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	125132	Date Analyzed:	2015-09-25	Analyzed By:	AK
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.64	<4.56	<2.64	mg/Kg	1	2.64	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.62	mg/Kg	1	2.00	81	70 - 130

Sample: 404973 - FUSE-D-2'-09212015

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035

QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK
Prep Batch: 105811 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00542	<0.0203	<0.00542	mg/Kg	1	0.00542	0.02	0.00533
Toluene	U	5	<0.00656	<0.0203	<0.00656	mg/Kg	1	0.00656	0.02	0.00645
Ethylbenzene	U	5	<0.0118	<0.0203	<0.0118	mg/Kg	1	0.0118	0.02	0.0116
Xylene	U	5	<0.00889	<0.0203	<0.00889	mg/Kg	1	0.00889	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.97	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.93	mg/Kg	1	2.00	96	70 - 130

Sample: 404973 - FUSE-D-2'-09212015

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 125366 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106049 | Sample Preparation: | Prepared By: RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	J	3,4,6	**22.9**	<25.4	<4.77	mg/Kg	1	4.77	25	4.69

Sample: 404973 - FUSE-D-2'-09212015

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2216-05 | Prep Method: N/A
QC Batch: 125096 | Date Analyzed: 2015-09-24 | Analyzed By: AM
Prep Batch: 105819 | Sample Preparation: 2015-09-23 | Prepared By: AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	1.69	%	1	0

Sample: 404973 - FUSE-D-2'-09212015

Laboratory: Lubbock
Analysis: TPH DRO | Analytical Method: S 8015 D | Prep Method: N/A
QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ
Prep Batch: 105814 | Sample Preparation: 2015-09-23 | Prepared By: HJ

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.31	<50.8	<5.31	mg/Kg	1	5.31	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	32.0	mg/Kg	1	25.0	128	48.9 - 172

Sample: 404973 - FUSE-D-2'-09212015

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	125132	Date Analyzed:	2015-09-25	Analyzed By:	AK
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.36	<4.07	<2.36	mg/Kg	1	2.36	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.80	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.65	mg/Kg	1	2.00	82	70 - 130

Sample: 404974 - FUSE-D-4'-09212015

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	125111	Date Analyzed:	2015-09-24	Analyzed By:	AK
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00538	<0.0202	<0.00538	mg/Kg	1	0.00538	0.02	0.00533
Toluene	U	5	<0.00652	<0.0202	<0.00652	mg/Kg	1	0.00652	0.02	0.00645
Ethylbenzene	U	5	<0.0117	<0.0202	<0.0117	mg/Kg	1	0.0117	0.02	0.0116
Xylene	U	5	<0.00883	<0.0202	<0.00883	mg/Kg	1	0.00883	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.07	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.07	mg/Kg	1	2.00	104	70 - 130

Sample: 404974 - FUSE-D-4'-09212015

Laboratory:	Lubbock					
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A	
QC Batch:	125366	Date Analyzed:	2015-10-05	Analyzed By:	RL	
Prep Batch:	106049	Sample Preparation:		Prepared By:	RL	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	J	3,4,6	**7.24**	<25.2	<4.74	mg/Kg	1	4.74	25	4.69

Sample: 404974 - FUSE-D-4'-09212015

Laboratory:	Midland					
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A	
QC Batch:	125096	Date Analyzed:	2015-09-24	Analyzed By:	AM	
Prep Batch:	105819	Sample Preparation:	2015-09-23	Prepared By:	AM	

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	1.02	%	1	0

Sample: 404974 - FUSE-D-4'-09212015

Laboratory:	Lubbock					
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A	
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ	
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.27	<50.5	<5.27	mg/Kg	1	5.27	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	33.0	mg/Kg	1	25.0	132	48.9 - 172

Sample: 404974 - FUSE-D-4'-09212015

Laboratory:	Midland					
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035	
QC Batch:	125132	Date Analyzed:	2015-09-25	Analyzed By:	AK	
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.34	<4.04	<2.34	mg/Kg	1	2.34	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.74	mg/Kg	1	2.00	87	70 - 130

Sample: 404975 - FUSE-E-2'-09212015

Laboratory: Midland
Analysis: BTEX | Analytical Method: S 8021B | Prep Method: S 5035
QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK
Prep Batch: 105811 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00559	<0.0210	<0.00559	mg/Kg	1	0.00559	0.02	0.00533
Toluene	U	5	<0.00677	<0.0210	<0.00677	mg/Kg	1	0.00677	0.02	0.00645
Ethylbenzene	U	5	<0.0122	<0.0210	<0.0122	mg/Kg	1	0.0122	0.02	0.0116
Xylene	U	5	<0.00917	<0.0210	<0.00917	mg/Kg	1	0.00917	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

Sample: 404975 - FUSE-E-2'-09212015

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 125366 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106049 | Sample Preparation: | Prepared By: RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		3,4,6	**399**	**399**	<9.84	mg/Kg	2	9.84	25	4.69

Sample: 404975 - FUSE-E-2'-09212015

Laboratory: Midland

Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	125096	Date Analyzed:	2015-09-24	Analyzed By:	AM
Prep Batch:	105819	Sample Preparation:	2015-09-23	Prepared By:	AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	4.73	%	1	0

Sample: 404975 - FUSE-E-2'-09212015

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	J	1,2,3,4	**12.4**	<52.5	<5.48	mg/Kg	1	5.48	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	34.1	mg/Kg	1	25.0	136	48.9 - 172

Sample: 404975 - FUSE-E-2'-09212015

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	125132	Date Analyzed:	2015-09-25	Analyzed By:	AK
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.44	<4.20	<2.44	mg/Kg	1	2.44	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.57	mg/Kg	1	2.00	78	70 - 130

Sample: 404976 - FUSE-E-4'-09212015

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035

QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK
Prep Batch: 105811 | Sample Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00559	<0.0210	<0.00559	mg/Kg	1	0.00559	0.02	0.00533
Toluene	U	5	<0.00676	<0.0210	<0.00676	mg/Kg	1	0.00676	0.02	0.00645
Ethylbenzene	U	5	<0.0122	<0.0210	<0.0122	mg/Kg	1	0.0122	0.02	0.0116
Xylene	U	5	<0.00916	<0.0210	<0.00916	mg/Kg	1	0.00916	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.06	mg/Kg	1	2.00	103	70 - 130
4-Bromofluorobenzene (4-BFB)			1.92	mg/Kg	1	2.00	96	70 - 130

Sample: 404976 - FUSE-E-4'-09212015

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 125366 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106049 | Sample Preparation: | Prepared By: RL

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		3,4,6	**125**	**125**	<4.92	mg/Kg	1	4.92	25	4.69

Sample: 404976 - FUSE-E-4'-09212015

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2216-05 | Prep Method: N/A
QC Batch: 125096 | Date Analyzed: 2015-09-24 | Analyzed By: AM
Prep Batch: 105819 | Sample Preparation: 2015-09-23 | Prepared By: AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	4.62	%	1	0

Sample: 404976 - FUSE-E-4'-09212015

Laboratory: Lubbock
Analysis: TPH DRO | Analytical Method: S 8015 D | Prep Method: N/A
QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ
Prep Batch: 105814 | Sample Preparation: 2015-09-23 | Prepared By: HJ

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	J	1,2,3,4	**28.5**	<52.4	<5.47	mg/Kg	1	5.47	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	36.6	mg/Kg	1	25.0	146	48.9 - 172

Sample: 404976 - FUSE-E-4'-09212015

Laboratory: Midland
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 125132 Date Analyzed: 2015-09-25 Analyzed By: AK
Prep Batch: 105811 Sample Preparation: 2015-09-24 Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.43	<4.19	<2.43	mg/Kg	1	2.43	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.63	mg/Kg	1	2.00	82	70 - 130

Sample: 404977 - FUSE-BG-0.5'-09212015

Laboratory: Midland
Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
QC Batch: 125111 Date Analyzed: 2015-09-24 Analyzed By: AK
Prep Batch: 105811 Sample Preparation: 2015-09-24 Prepared By: AK

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	5	<0.00550	<0.0206	<0.00550	mg/Kg	1	0.00550	0.02	0.00533
Toluene	U	5	<0.00665	<0.0206	<0.00665	mg/Kg	1	0.00665	0.02	0.00645
Ethylbenzene	U	5	<0.0120	<0.0206	<0.0120	mg/Kg	1	0.0120	0.02	0.0116
Xylene	U	5	<0.00902	<0.0206	<0.00902	mg/Kg	1	0.00902	0.02	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			1.91	mg/Kg	1	2.00	96	70 - 130

Sample: 404977 - FUSE-BG-0.5'-09212015

Laboratory:	Lubbock					
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A	
QC Batch:	125366	Date Analyzed:	2015-10-05	Analyzed By:	RL	
Prep Batch:	106049	Sample Preparation:		Prepared By:	RL	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride	J	3,4,6	**13.3**	<25.8	<4.84	mg/Kg	1	4.84	25	4.69

Sample: 404977 - FUSE-BG-0.5'-09212015

Laboratory:	Midland					
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A	
QC Batch:	125096	Date Analyzed:	2015-09-24	Analyzed By:	AM	
Prep Batch:	105819	Sample Preparation:	2015-09-23	Prepared By:	AM	

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		5	3.08	%	1	0

Sample: 404977 - FUSE-BG-0.5'-09212015

Laboratory:	Lubbock					
Analysis:	TPH DRO	Analytical Method:	S 8015 D	Prep Method:	N/A	
QC Batch:	125089	Date Analyzed:	2015-09-24	Analyzed By:	HJ	
Prep Batch:	105814	Sample Preparation:	2015-09-23	Prepared By:	HJ	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.38	<51.6	<5.38	mg/Kg	1	5.38	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	J	3	35.6	mg/Kg	1	25.0	142	48.9 - 172

Sample: 404977 - FUSE-BG-0.5'-09212015

Laboratory:	Midland					
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035	
QC Batch:	125132	Date Analyzed:	2015-09-25	Analyzed By:	AK	
Prep Batch:	105811	Sample Preparation:	2015-09-24	Prepared By:	AK	

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	5	<2.39	<4.13	<2.39	mg/Kg	1	2.39	4	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	J		1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)	J		1.64	mg/Kg	1	2.00	82	70 - 130

Method Blanks

Method Blank (1)

QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ
Prep Batch: 105814 | QC Preparation: 2015-09-23 | Prepared By: HJ

Parameter	F	C	Result	Units	Reporting Limits
DRO		1,2,3,4	<5.22	mg/Kg	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	29.6	mg/Kg	1	25.0	118	48.9 - 172

Method Blank (1)

QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK
Prep Batch: 105811 | QC Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
Benzene		5	<0.00533	mg/Kg	0.00533
Toluene		5	<0.00645	mg/Kg	0.00645
Ethylbenzene		5	<0.0116	mg/Kg	0.0116
Xylene		5	<0.00874	mg/Kg	0.00874

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.69	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)			1.76	mg/Kg	1	2.00	88	70 - 130

Method Blank (1)

QC Batch: 125132 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105811 | QC Preparation: 2015-09-24 | Prepared By: AK

Parameter	F	C	Result	Units	Reporting Limits
GRO		5	<2.32	mg/Kg	2.32

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.65	mg/Kg	1	2.00	82	70 - 130
4-Bromofluorobenzene (4-BFB)			1.48	mg/Kg	1	2.00	74	70 - 130

Method Blank (1)

QC Batch: 125365 Date Analyzed: 2015-10-05 Analyzed By: RL
Prep Batch: 106048 QC Preparation: 2015-10-05 Prepared By: RL

Parameter	F	C	Result	Units	Reporting Limits
Chloride		3,4,6	<4.69	mg/Kg	4.69

Method Blank (1)

QC Batch: 125366 Date Analyzed: 2015-10-05 Analyzed By: RL
Prep Batch: 106049 QC Preparation: 2015-10-05 Prepared By: RL

Parameter	F	C	Result	Units	Reporting Limits
Chloride		3,4,6	<4.69	mg/Kg	4.69

Duplicates

Duplicate (1) Duplicated Sample: 404972

QC Batch: 125095 | Date Analyzed: 2015-09-24 | Analyzed By: AM
Prep Batch: 105818 | QC Preparation: 2015-09-23 | Prepared By: AM

Param	F	C	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture		5	13.4	12.2	%	1	5	20

Duplicate (1) Duplicated Sample: 404982

QC Batch: 125096 | Date Analyzed: 2015-09-24 | Analyzed By: AM
Prep Batch: 105819 | QC Preparation: 2015-09-23 | Prepared By: AM

Param	F	C	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture		5	12.4	12.4	%	1	0	20

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ
Prep Batch: 105814 | QC Preparation: 2015-09-23 | Prepared By: HJ

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	438	mg/Kg	1	500	<5.22	88	60.9 - 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		1,2,3,4	459	mg/Kg	1	500	<5.22	92	60.9 - 130	5	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane		3	29.4	33.0	mg/Kg	1	25.0	118	132	48.9 - 172

Laboratory Control Spike (LCS-1)

QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK
Prep Batch: 105811 | QC Preparation: 2015-09-24 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	2.11	mg/Kg	1	2.00	<0.00533	106	70 - 130
Toluene		5	2.10	mg/Kg	1	2.00	<0.00645	105	70 - 130
Ethylbenzene		5	2.07	mg/Kg	1	2.00	<0.0116	104	70 - 130
Xylene		5	6.03	mg/Kg	1	6.00	<0.00874	100	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
Benzene		5	2.06	mg/Kg	1	2.00	<0.00533	103	70 - 130	2	20
Toluene		5	2.04	mg/Kg	1	2.00	<0.00645	102	70 - 130	3	20
Ethylbenzene		5	2.00	mg/Kg	1	2.00	<0.0116	100	70 - 130	3	20
Xylene		5	5.97	mg/Kg	1	6.00	<0.00874	100	70 - 130	1	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			2.00	1.99	mg/Kg	1	2.00	100	100	70 - 130
4-Bromofluorobenzene (4-BFB)			2.02	2.08	mg/Kg	1	2.00	101	104	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 125132 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105811 | QC Preparation: 2015-09-24 | Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		[5]	19.4	mg/Kg	1	20.0	<2.32	97	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
GRO		[5]	20.8	mg/Kg	1	20.0	<2.32	104	70 - 130	7	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			1.92	1.97	mg/Kg	1	2.00	96	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.79	1.78	mg/Kg	1	2.00	90	89	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 125365 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106048 | QC Preparation: 2015-10-05 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		[3,4,6]	274	mg/Kg	1	250	<4.69	110	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]	274	mg/Kg	1	250	<4.69	110	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:	125366	Date Analyzed:	2015-10-05	Analyzed By:	RL
Prep Batch:	106049	QC Preparation:	2015-10-05	Prepared By:	RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	275	mg/Kg	1	250	<4.69	110	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	275	mg/Kg	1	250	<4.69	110	90 - 110	0	20

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

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 404963

QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ
Prep Batch: 105814 | QC Preparation: 2015-09-23 | Prepared By: HJ

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	386	mg/Kg	1	500	<5.22	77	47.9 - 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		1,2,3,4	406	mg/Kg	1	500	<5.22	81	47.9 - 130	5	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane		3	31.6	33.1	mg/Kg	1	25	126	132	48.9 - 172

Matrix Spike (MS-1) Spiked Sample: 404963

QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK
Prep Batch: 105811 | QC Preparation: 2015-09-24 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	1.59	mg/Kg	1	2.00	<0.00533	80	70 - 130
Toluene		5	1.75	mg/Kg	1	2.00	<0.00645	88	70 - 130
Ethylbenzene		5	1.76	mg/Kg	1	2.00	<0.0116	88	70 - 130
Xylene		5	5.37	mg/Kg	1	6.00	<0.00874	90	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
Benzene		5	1.62	mg/Kg	1	2.00	<0.00533	81	70 - 130	2	20
Toluene		5	1.76	mg/Kg	1	2.00	<0.00645	88	70 - 130	1	20
Ethylbenzene		5	1.85	mg/Kg	1	2.00	<0.0116	92	70 - 130	5	20
Xylene		5	5.52	mg/Kg	1	6.00	<0.00874	92	70 - 130	3	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			1.88	1.99	mg/Kg	1	2	94	100	70 - 130
4-Bromofluorobenzene (4-BFB)			1.97	1.98	mg/Kg	1	2	98	99	70 - 130

Matrix Spike (MS-1) Spiked Sample: 404963

QC Batch: 125132 | Date Analyzed: 2015-09-25 | Analyzed By: AK
Prep Batch: 105811 | QC Preparation: 2015-09-24 | Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Qs	5	11.5	mg/Kg	1	20.0	<2.32	58	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
GRO	Qs	5	11.6	mg/Kg	1	20.0	<2.32	58	70 - 130	1	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			1.82	1.76	mg/Kg	1	2	91	88	70 - 130
4-Bromofluorobenzene (4-BFB)			1.73	1.76	mg/Kg	1	2	86	88	70 - 130

Matrix Spike (MS-1) Spiked Sample: 404972

QC Batch: 125365 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106048 | QC Preparation: 2015-10-05 | Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	846	mg/Kg	5	250	572	110	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	Qs	3,4,6	715	mg/Kg	5	250	572	57	80 - 120	17	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: 404982

QC Batch: 125366 | Date Analyzed: 2015-10-05 | Analyzed By: RL
Prep Batch: 106049 | QC Preparation: 2015-10-05 | Prepared By: RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		3,4,6	290	mg/Kg	1	250	19	108	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	286	mg/Kg	1	250	19	107	80 - 120	1	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: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	430	86	80 - 120	2015-09-24

Standard (CCV-2)

QC Batch: 125089 | Date Analyzed: 2015-09-24 | Analyzed By: HJ

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	500	438	88	80 - 120	2015-09-24

Standard (CCV-1)

QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/kg	0.100	0.106	106	80 - 120	2015-09-24
Toluene		5	mg/kg	0.100	0.105	105	80 - 120	2015-09-24
Ethylbenzene		5	mg/kg	0.100	0.102	102	80 - 120	2015-09-24
Xylene		5	mg/kg	0.300	0.301	100	80 - 120	2015-09-24

Standard (CCV-2)

QC Batch: 125111 | Date Analyzed: 2015-09-24 | Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/kg	0.100	0.105	105	80 - 120	2015-09-24
Toluene		5	mg/kg	0.100	0.103	103	80 - 120	2015-09-24

continued ...

standard continued ...

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		5	mg/kg	0.100	0.0997	100	80 - 120	2015-09-24
Xylene		5	mg/kg	0.300	0.298	99	80 - 120	2015-09-24

Standard (CCV-3)

QC Batch: 125111 Date Analyzed: 2015-09-24 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/kg	0.100	0.102	102	80 - 120	2015-09-24
Toluene		5	mg/kg	0.100	0.0997	100	80 - 120	2015-09-24
Ethylbenzene		5	mg/kg	0.100	0.0972	97	80 - 120	2015-09-24
Xylene		5	mg/kg	0.300	0.286	95	80 - 120	2015-09-24

Standard (CCV-1)

QC Batch: 125132 Date Analyzed: 2015-09-25 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.936	94	80 - 120	2015-09-25

Standard (CCV-2)

QC Batch: 125132 Date Analyzed: 2015-09-25 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.841	84	80 - 120	2015-09-25

Standard (CCV-3)

QC Batch: 125132 Date Analyzed: 2015-09-25 Analyzed By: AK

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		5	mg/Kg	1.00	0.820	82	80 - 120	2015-09-25

Standard (CCV-1)

QC Batch: 125365 Date Analyzed: 2015-10-05 Analyzed By: RL

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	27.1	108	90 - 110	2015-10-05

Standard (CCV-2)

QC Batch: 125365 Date Analyzed: 2015-10-05 Analyzed By: RL

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	27.4	110	90 - 110	2015-10-05

Standard (CCV-1)

QC Batch: 125366 Date Analyzed: 2015-10-05 Analyzed By: RL

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	27.4	110	90 - 110	2015-10-05

Standard (CCV-2)

QC Batch: 125366 Date Analyzed: 2015-10-05 Analyzed By: RL

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		3,4,6	mg/Kg	25.0	27.4	110	90 - 110	2015-10-05

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike Amount	Pass
BTEX	S 8021B	soil	BTEX-2	Benzene	0.0120	Pass
BTEX	S 8021B	soil	BTEX-2	Toluene	0.0120	Pass
BTEX	S 8021B	soil	BTEX-2	Ethylbenzene	0.0120	Pass
BTEX	S 8021B	soil	BTEX-2	Xylene	0.0120	Pass
Chloride (IC)	E 300.0	soil	Dionex IC	Chloride	10.0	Pass
TPH DRO	S 8015 D	soil	TPH-2	DRO	10.4	Pass
TPH GRO	S 8015 D	soil	BTEX-2	GRO	5.00	Pass

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	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-15-11	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2014-018	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.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

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

LAB Order ID # 1609227

Page 1 of 2

TraceAnalysis, Inc.

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Tel (915) 585-3443
Fax (915) 585-4944

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

Company Name: CH2M HILL	**Phone #:** 972 663 2287
Address: 306 W. WALL ST. SUITE 1107 MIDLAND TX 79701	**Fax #:**
Contact Person: JENNIFER DUSSOR	**E-mail:** JENNIFER.DUSSOR@CH2M.COM
Invoice to: DIRECT BILL EOG RE: ZANE KURTZ	
Project #:	**Project Name:** SHORT FUSE FED #1
Project Location: (include state) LEA COUNTY NEW MEXICO	**Sampler Signature:**

ANALYSIS REQUEST

(Circle or Specify Method No.)

GRO/DRO

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
404963	FUSE-B-2'-09212015	2	4OZ		✓							✓		9/21	1214
404964	FUSE-B-4'-09212015														1218
404965	FUSE-B-6'-09212015														1222
404966	FUSE-B-8'-09212015														1226
404967	FUSE-B-10'-09212015														1230

MTBE 8021B / 602 / 8260B / 624	BTEX 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005 / DRO / TVHC	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	Pesticides 8081A / 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	MOISTURE CONTENT	Turn Around Time if different from standard	Hold
	✓	✓																✓	✓			

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Warren Mavra	CH2M	9/22	1455	Kelly	TA	9-22-15	14:5	INST 0.4 °C OBS 0.4 °C COR 0.3 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ °C OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST ____ °C OBS ____ °C COR ____ °C

LAB USE ONLY

Intact Y / N

Headspace Y / N /NA

Log-in Review

Carrier # Courier In

REMARKS:

ANALYZE FOR MOISTURE CONTENT

☑ Dry Weight Basis Required

☐ TRRP Report Required

☐ Check If Special Reporting Limits Are Needed

8015 GRO/DRO

Submittal of samples constitutes agreement to Terms and Conditions

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LAB Order ID # 15092227

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Ave, Ste 9
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BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name: CH2M HILL
Phone #: 972 663 2287
Address: 306 W. WALL ST. SUITE 1107 MIDLAND TX 79701
Fax #:
Contact Person: JENNIFER DUSSOR
E-mail: JENNIFER.DUSSOR@CH2M
Invoice to: DIRECT BILL EOG RE: ZANE KURTZ
Project #:
Project Name: SHORT FUSE FED #1
Project Location: (include state) LEA COUNTY NEW MEXICO
Sampler Signature:

ANALYSIS REQUEST
(Circle or Specify Method No.)

- MTBE 8021B / 602 / 8260B / 624
- BTEX 8021B / 602 / 8260B / 624
- TPH 418.1 / TX1005 / DRO / TVHC GRO/DRO
- PAH 8270C / 625
- Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7
- TCLP Metals Ag As Ba Cd Cr Pb Se Hg
- TCLP Volatiles
- TCLP Semi Volatiles
- TCLP Pesticides
- RCI
- GC/MS Vol. 8260B / 624
- GC/MS Semi. Vol. 8270C/625
- PCB's 8082 / 608
- Pesticides 8081A / 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
- MOISTURE CONTENT
- Turn Around Time if different from standard
- Hold

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	BTEX 8021B	TPH 418.1 / TX1005 / DRO / TVHC	CHLORIDES	MOISTURE CONTENT
404968	FUSE-C-2'-09212015	2	4OZ		✓							✓		9/21	1244	✓	✓	✓	✓
404969	FUSE-C-4'-09212015														1248				
404970	FUSE-C-6'-09212015														1252				
404971	FUSE-C-8'-09212015														1256				
404972	FUSE-C-10'-09212015														1300				
404973	FUSE-D-2'-09212015														1314				
404974	FUSE-D-4'-09212015														1318				
404975	FUSE-E-2'-09212015														1330				
404976	FUSE-E-4'-09212015														1334				
404977	FUSE-BG-0.5'-09212015														1340				

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Warren Maurer	CH2M	9/22	1455	[signature]	TA	9-22-15	14:55	INST IR; OBS 0.4 °C; COR 0.2 °C
								INST ____; OBS ____ °C; COR ____ °C
								INST ____; OBS ____ °C; COR ____ °C

LAB USE ONLY
Intact Y / N
Headspace Y / N /NA
Log-in Review
Carrier # courier

REMARKS:
ANALYZE FOR MOISTURE CONTENT
☑ Dry Weight Basis Required ~~TX 86~~ 8015 DRO GRO
☐ TRRP Report Required
☐ Check If Special Reporting Limits Are Needed

LAB Order ID # 1509222-7

TraceAnalysis, Inc.

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Tel (972) 242-7750

Company Name: CH2M HILL	Phone #: 972 663 2287
Address: 306 W. WALL ST. SUITE 1107 MIDLAND TX 79701	Fax #:
Contact Person: JENNIFER DUSSOR	E-mail: JENNIFER.DUSSOR@CH2M.COM
Invoice to: DIRECT BILL EOG RE: ZANE KURTZ	
Project #:	Project Name: SHORT FUSE FED #1
Project Location: (include state) LEA COUNTY NEW MEXICO	Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

Analyses requested (checked): BTEX 8021B / 602 / 8260B / 624 (circled); TPH 418.1 / TX1005 / DRO / TVHC (circled, handwritten "GRO/DRO"); CHLORIDES; MOISTURE CONTENT

Other listed analyses: MTBE 8021B / 602 / 8260B / 624; PAH 8270C / 625; Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7; TCLP Metals Ag As Ba Cd Cr Pb Se Hg; TCLP Volatiles; TCLP Semi Volatiles; TCLP Pesticides; RCI; GC/MS Vol. 8260B / 624; GC/MS Semi. Vol. 8270C/625; PCB's 8082 / 608; Pesticides 8081A / 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; Turn Around Time if different from standard; Hold

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	Matrix	Preservative	Date	Time	BTEX	TPH (GRO/DRO)	CHLORIDES	MOISTURE CONTENT
404963	FUSE-B-2'-09212015	2	4OZ	SOIL ✓	ICE ✓	9/21	1214	✓	✓	✓	✓
404964	FUSE-B-4'-09212015	↓	↓	↓	↓	↓	1218	↓	↓	↓	↓
404965	FUSE-B-6'-09212015	↓	↓	↓	↓	↓	1222	↓	↓	↓	↓
404966	FUSE-B-8'-09212015	↓	↓	↓	↓	↓	1226	↓	↓	↓	↓
404967	FUSE-B-10'-09212015	↓	↓	↓	↓	↓	1230	↓	↓	↓	↓

Relinquished by	Company	Date	Time	Received by	Company	Date	Time	Temp
Warren Mauer	CH2M	9/22	1455	N Cutely	TA	9-22-15	14:55	INST TR; OBS 0.4 °C; COR 0.3 °C
								INST; OBS °C; COR °C
				Brenda Ward	TA LUBBOCK	9/23/15	9:15	INST TR-3; OBS 4.4 °C; COR 4.4 °C

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

Carrier # carry in LS 25938934

REMARKS:
ANALYZE FOR MOISTURE CONTENT
☑ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check If Special Reporting Limits Are Needed
8015 GRO/DRO

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Project Location: (include state) LEA COUNTY NEW MEXICO	**Sampler Signature:**

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
404968	FUSE-C-2'-09212015	2	4OZ		✓							✓		9/21	1244
404969	FUSE-C-4'-09212015														1248
404970	FUSE-C-6'-09212015														1252
404971	FUSE-C-8'-09212015														1256
404972	FUSE-C-10'-09212015														1300
404973	FUSE-D-2'-09212015														1314
404974	FUSE-D-4'-09212015														1318
404975	FUSE-E-2'-09212015														1330
404976	FUSE-E-4'-09212015														1334
404977	FUSE-BG-0.5'-09212015	↓	↓		↓							↓		↓	1340

ANALYSIS REQUEST (Circle or Specify Method No.)	
MTBE 8021B / 602 / 8260B / 624	✓
BTEX 8021B / 602 / 8260B / 624	✓
TPH 418.1 / TX1005 / DRO / TVHC (GRO/DRO)	✓
PAH 8270C / 625	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B / 624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082 / 608	
Pesticides 8081A / 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	✓
MOISTURE CONTENT	✓
Turn Around Time if different from standard	
Hold	

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Warren Mawer	CH2M	9/22	1455	[illegible]	TA	9-22-15	14:55	INST FS OBS 0.4 °C COR 0.3 °C
								INST ____ OBS ____ °C COR ____ °C
				Brenda Ward	TA Lubbock	9/23/15	9:15	INST 12.3 OBS 4.4 °C COR 4.6 °C

LAB USE ONLY

Intact Y / N

Headspace Y / N /NA

Log-in Review

Carrier # CCUPS 1Z 25 938 934

REMARKS:

ANALYZE FOR MOISTURE CONTENT

☑ Dry Weight Basis Required ~~TX 8015~~ DRO

☐ TRRP Report Required

☐ Check If Special Reporting Limits Are Needed GRO

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