NMOCD
APPROVED

REVIEWED
By Kristen Lynch at 11:47 am, Oct 21, 2016

October 17, 2016 Reference No. 088210-19

Ms. Kristen Lynch
New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240

Ms. Shelly Tucker
United States Bureau of Land Management
620 E. Greene St
Carlsbad, NM 88220

Dear Ms. Lynch and Ms. Tucker:

Re: Closure Request
Short Fuse Federal No. 1 (API #30-025-29897)
1RP-3832-0
EOG Resources, Inc.
Site Location: Unit H, Sec. 11, T 18-S, R 32-E
(Lat 32.7636°, Long -103.7306°)
Lea County, New Mexico

GHD Services, Inc. (GHD), on behalf of EOG Resources (EOG) is requesting that no further action status be granted for the Short Fuse Federal No. 1 (hereafter referred to as the "Site").

In an Assessment Report dated July 18, 2016 (attached) GHD recommended the following scope items be completed following delineation of the soil impacts in order to achieve no further action;

- Placement of a 20 mil polyethylene liner in the bottom of the excavation at a depth of 4 ft bgs at the location indicated on Figure 2.
- Backfilling of the excavation with clean fill material and wheel compacting to grade, once approval of delineation has been confirmed.
- Fertilizing and reseeding of the disturbed area with a BLM approved seed mix.

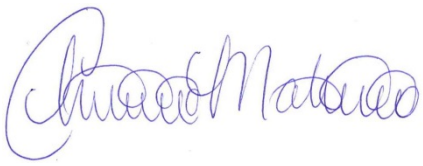
The work scope was approved by Mr. Jamie Keyes with the New Mexico Oil Conservation Division on August 17, 2016. The United States Bureau of Land Management approved the report on August 26, 2016. As of the date of this letter, the above scope items have been completed and are documented in the attached completion photos and final C-141 for the Site; therefore, No Further Action is being requested.

GHD Services Inc.
6121 Indian School Road NE Suite 200 Albuquerque New Mexico 87110 USA
T 505 884 0672 **F** 505 884 4932 **W** www.ghd.com

Your timely response to this requested is greatly appreciated. Should you have any questions, or require additional information regarding this submittal, please feel free to contact myself or Bernie Bockisch at (505) 884-0672 or Bernard.Bockisch@ghd.com.

Sincerely,

GHD



Christine Mathews
Project Scientist/Project Coordinator

Bernard Bockisch
Senior Project Manager

CM/mc/03

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.*
Initial delineation efforts were completed by CH2M Hill achieving horizontal delineation of impacts. Further sampling, excavation and soil boring activities were completed by GHD to achieve vertical delineation of soil impacts. Impacted soil in the area of the release was excavated to an approximate depth of four feet below ground surface. Impacted soil was disposed of at an approved landfill. A 20 mil polyethylene liner was placed in the bottom of the excavation. The lined area was backfilled with clean soil and revegetated with BLM seed mix.

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: Zane Kurtz	OIL CONSERVATION DIVISION
Printed Name: Zane Kurtz, EOG Resources	Approved by Environmental Specialist: Kristen Lynch
Title: Sr. Environmental Rep.	Approval Date: 10/21/2016 Expiration Date: N/A
E-mail Address: zane_kurtz@eogresources.com	Conditions of Approval: N/A Attached ☐
Date: 10-10-2016 Phone: 432-425-2023	

* Attach Additional Sheets If Necessary

Photo 1 - Site location

Photo 2 - Liner placement

Site Photographs

Photo 3 - Backfilled excavation, wheel compacted, re-seeded

Photo 4 - Backfilled excavation, wheel compacted, re-seeded

July 18, 2016 Reference No. 088210-19

Mr. Zane Kurtz
Sr. Safety and Environmental Representative
5509 Champions Dr.
Midland, TX 79706
VIA E-Mail: zane_kurtz@eogresources.com

Dear Mr. Kurtz:

Re: Assessment Summary Report
Short Fuse Federal No. 1 (API #30-025-29897)
1RP-3832-0
EOG Resources, Inc.
Site Location: Unit H, Sec. 11, T 18-S, R 32-E
(Lat 32.7636°, Long -103.7306°)
Lea County, New Mexico

On behalf of EOG Resources Inc. (EOG), GHD Services, Inc. (GHD, formerly Conestoga-Rovers & Associates) is pleased to present this report for the above referenced site. Assessment activities were performed at the Short Fuse Federal No. 1 (hereafter referred to as the "Site"), from October 06, 2015 to June 29, 2016. The Site is located within Unit A, Section 36, Township 24 South, Range 33 East, in Lea County, New Mexico (Figure 1).

The Site is an active tank battery located approximately 35 miles west-northwest of Hobbs, New Mexico. The release occurred in an adjacent pasture to the south of the well pad. According to EOG personnel, a release of approximately five barrels (bbls) of produced water with some oil was released when an elbow on a heater-treater failed. The release occurred on August 16, 2015. During the clean-up of the release, an historical release was discovered that extended into the pasture. A C-141 Form was submitted to the New Mexico Oil Conservation Division (NMOCD) and remediation permit (RP) number 1RP-3832-0 was assigned.

During the clean-up of the release, United States Bureau of Land Management (BLM) personnel were present on Site and observed the activities. A Notice of Written Order was submitted by the BLM for the release dated August 20, 2015. The BLM provided an archeological clearance of the area in an email dated August 31, 2015.

1. Introduction

During the clean-up of the release, an historical release was discovered that extended into the pasture to the south of the Site. A C-141 Form was submitted to the New Mexico Oil Conservation Division (NMOCD) and remediation permit (RP) number 1RP-3832-0 was assigned. Approximately 100 cubic

yards (yd3) of impacted soil was removed and disposed of at the Lea Land LLC, east of Carlsbad, New Mexico (Lea Land).

During the clean-up of the release, United States BLM personnel observed the work being performed and issued a Notice of Written Order. The Notice of Written order was submitted by the BLM for the release dated August 20, 2015. The BLM provided an archeological clearance of the area in an email dated August 31, 2015.

There are relatively few groundwater wells in the area of the Site with which to obtain a depth to groundwater. Based on information available from the NMOCD GIS Oil and Gas Map, the depth to groundwater in well L-06131 located approximately 2.7 miles east of the Site is 100 feet (ft) below ground surface (bgs). The New Mexico Tech Pit Portal site indicates a well at a depth of 65 ft bgs located approximately 4,000 feet to the northwest of the Site. Based on this, the depth to groundwater appears to be between 50 and 100 ft bgs.

There do not appear to be any well head protection areas and no surface water bodies within 200 to 1000 ft of the Site. Therefore, the preliminary total ranking score for the Site is 10 (see table below).

Based on this score, the applicable NMOCD Site-specific Recommended Remediation Action Limits (RRALs) are 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total benzene, toluene, ethylbenzene, and xylenes (BTEX), 1000 mg/kg for total petroleum hydrocarbons (TPH), and 250 mg/kg for chlorides.

New Mexico Oil Conservation Division Site Assessment	
Ranking Criteria	Score
Depth to Ground Water (50-99 ft bgs)	10
Wellhead Protection Area (> 1000 ft from water source, > 200 ft from domestic source)	0
Distance to Surface Body Water (200-1000 ft)	0
Ranking Criteria Total Score	**10***
*Because the ranking criteria total score is 10, NMOCD established RRALs are 10 mg/kg for benzene, 50 mg/kg for total BTEX, 1,000 mg/kg for TPH[1], and 250 mg/kg for chlorides.	

1. NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993

2. Assessment Activities

Site assessment activities were initially performed by CH2M Hill of Dallas, Texas. Soil sampling was performed on September 21, 2015 and November 24, 2015 (Figure 2). Excavation activities were performed by SDR Enterprises, LLC of Hobbs, New Mexico. Soil samples were analyzed by TraceAnalysis, Inc. (TraceAnalysis) of Lubbock, Texas.

The analytical data obtained from the soil samples collected by CH2M Hill indicated that the horizontal extent of petroleum hydrocarbon and chloride concentrations had been delineated to below RRALs. However, the vertical extent of chloride concentrations along the north wall and excavation floor in an area denoted as “Location C” exceeded the Site RRAL (Figure 2).

Further soil sampling was performed by GHD on February 29, 2016 to assess the vertical extent of chloride concentrations in the soil along the north wall of “Location C”. Two additional soil samples were collected using a hand auger at depths of 11 ft bgs and 13.5 ft bgs. The samples were submitted to Xenco Laboratories of Odessa, Texas for analysis of chloride by EPA Method 300.

Additional soil samples were also collected to confirm that the horizontal extent of COCs had been assessed. Soil samples were collected at 4 ft bgs in six locations within the areas of concern using a hand auger. The samples were submitted to Xenco Laboratories for analysis of chloride by EPA Method 300.

Laboratory analytical results from this event indicate that chloride concentrations in the samples that were submitted were below the RRAL for chloride with the exception of the sample ending in SP-07 with a concentration of 350 mg/kg. Sample SP-07 was collected from the northwest corner of “Location C” (Table 1).

An additional soil sample was collected by GHD from “Location C” after excavating to a depth of 12 feet bgs with a backhoe on May 20, 2016. The sample was also analyzed for chloride. The results of this sample indicated that the chloride concentration was above the site RRAL for chloride with a concentration of 340 mg/kg (Table 1).

In order to further assess the vertical extent of chloride impacts in the floor area of “Location C” near CH2M Hills sample collected in November of 2015, GHD collected a sample from 20 feet bgs on June 16, 2016. The sample was analyzed for chloride and returned a result with a chloride concentration of 500 mg/kg, exceeding the site RRAL (Table 1).

In an attempt to complete vertical assessment of chloride impacts in the in the area of the excavation floor a soil boring was advanced by EnviroDrill, Inc. of Albuquerque, NM on June 29, 2016. Soil samples were collected by GHD from 25 feet bgs, 30 feet bgs, and 35 feet bgs and analyzed for chloride (See Table 1). Laboratory results from this event indicate that chloride concentrations were below the Site RRAL for chloride (see Appendix A).

Based on analytical results from soil assessment performed by CH2M Hill and GHD, it appears that the vertical and horizontal extent of hydrocarbons and chloride have been assessed at the Site.

During the assessment activities, a total of approximately 680 tons (approximately 1020 cubic yards) of impacted soil were excavated and transported to Lea Land for landfill disposal. Waste manifests are included as Appendix B.

3. Summary and Recommendations

Based on the assessment activities, the horizontal and vertical extent of petroleum hydrocarbon and chloride concentrations appear to have been assessed to within the NMOCD RRALs. GHD recommends the following:

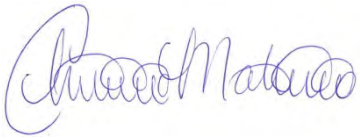
- Placement of a 20 mil polyethylene liner in the bottom of the excavation at a depth of 4 ft bgs,
- Backfilling of the excavation with clean fill material and wheel compacting to grade, and

- Fertilizing and reseeding of the disturbed area with a BLM-approved seed mix.

Following completion of the above activities EOG will request that no further action be required for the Site. Should you have any questions, or require additional information regarding this submittal, please feel free to contact myself or Bernie Bockisch at (505) 884-0672 or Bernard.Bockisch@ghd.com.

Sincerely,

GHD

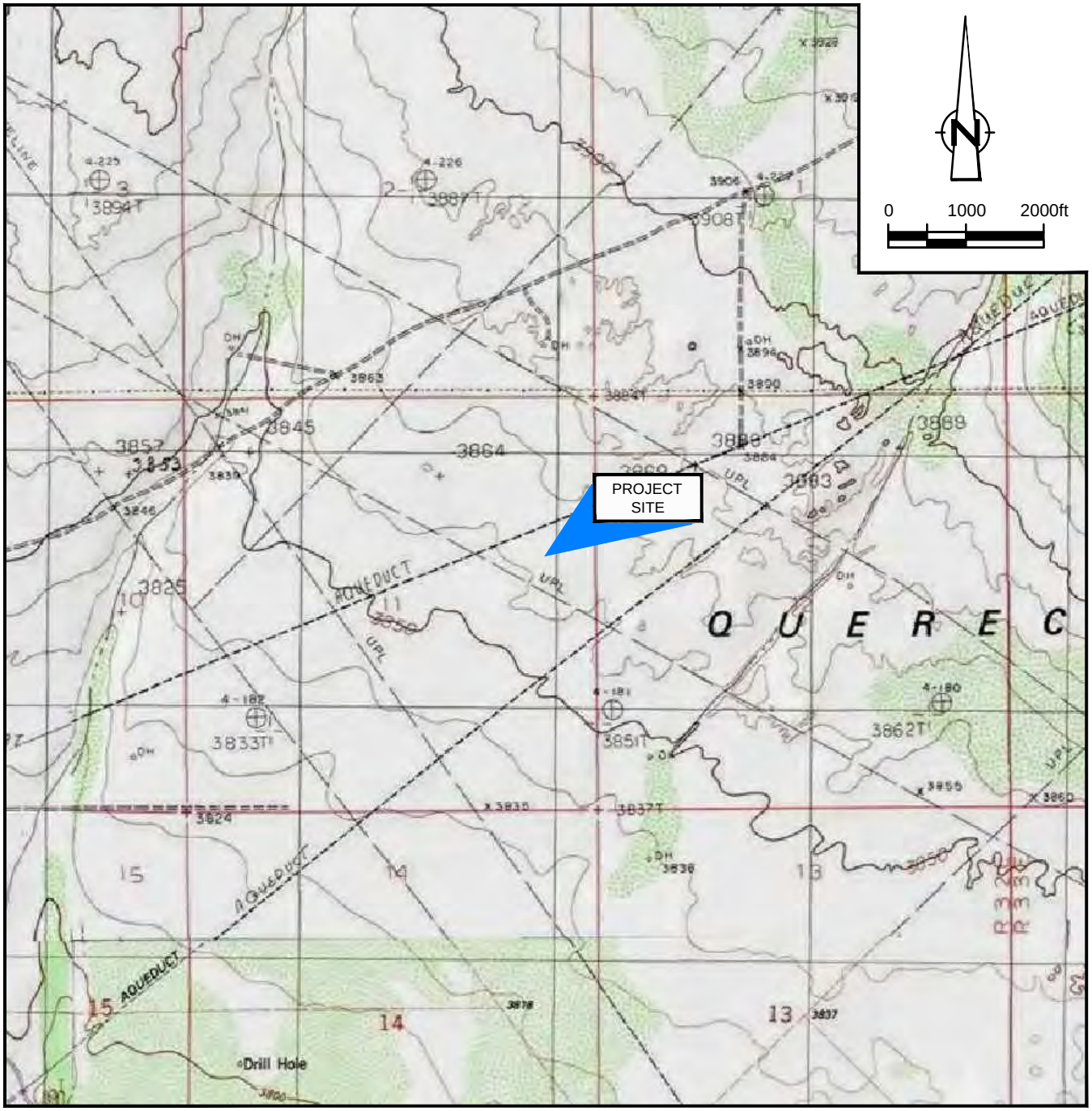


Bernard Bockisch
Senior Project Manager

Christine Mathews,
Staff Scientist

BB/mc/02

Figures



SOURCE: USGS 7.5 MINUTE QUAD
"DOG LAKE, LAGUNA GATUNA NW, GREENWOOD LAKE, AND MALJAMAR, NEW MEXICO"

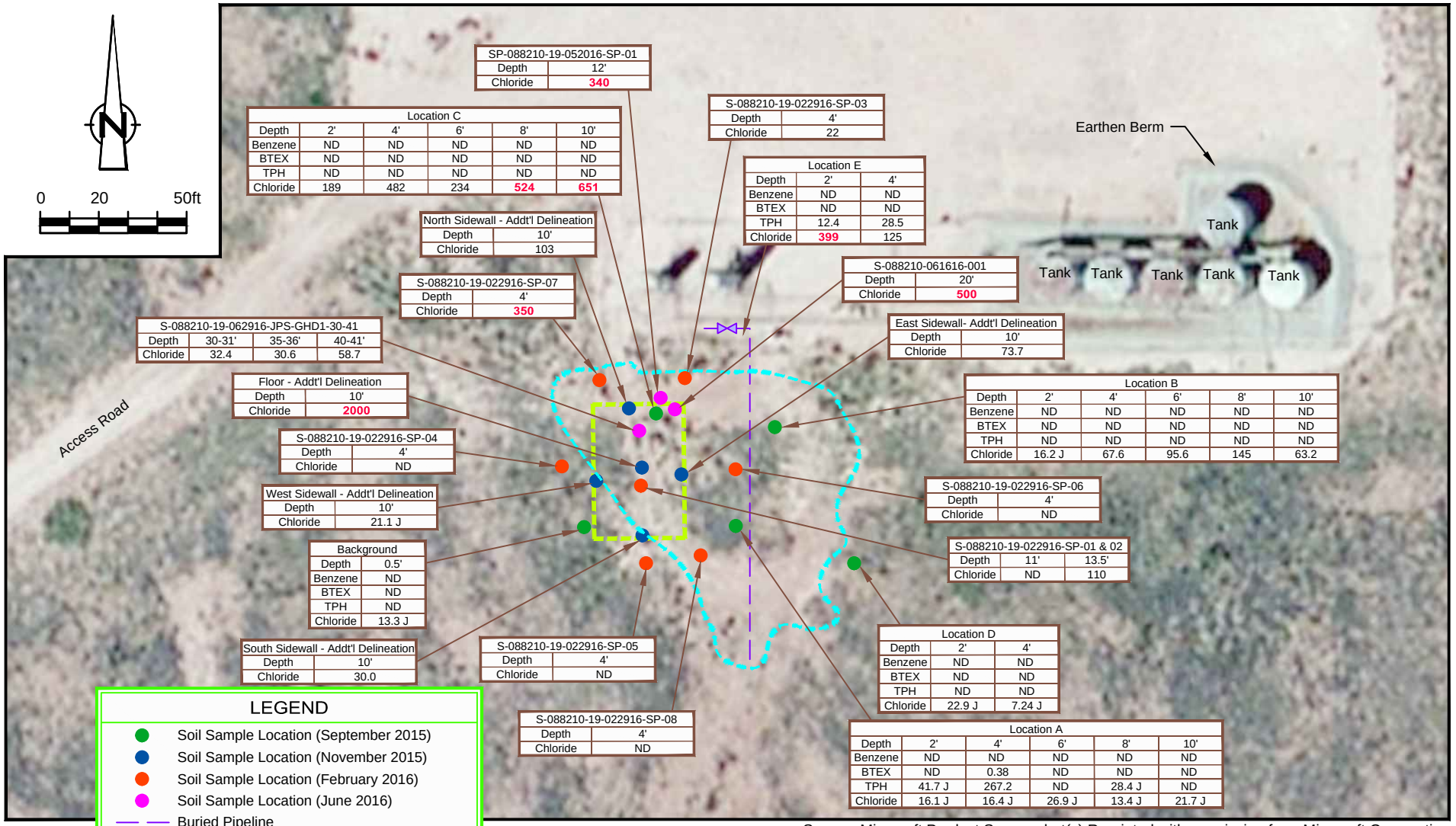
LAT/LONG: 32.7636ÁNORTH, 103.7306ÁWEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

Figure 1

SITE LOCATION MAP
SHORT FUSE FED #1 REMEDIATION
LEA COUNTY, NEW MEXICO
EOG Resources

GHD

088210-19(000)GN-DL001 APR 11/2016



Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation

NOTES:

1. All units in milligrams/kilogram.
2. Concentrations in red indicates it is above the recommended remediation action limit.
3. Data from September and November 2015 were collected by CH2M Hill.

Figure 2

SITE DETAIL MAP
SHORT FUSE FED #1 REMEDIATION
LEA COUNTY, NEW MEXICO
EOG Resources

Tables

Table 1

Short Fuse State No. 1 Analytical Data

Sample ID	Depth (ft. bgs)	Date	Benzene	Toluene	Ethylbenzene	Xylenes	TPH (GRO)	TPH (DRO)	TPH	Chloride
Recommended Remediation Action Limits			**10**		**Total BTEX: 50**				**1000**	**500**
Background										
FUSE-BG-0.5'-09212015(c)	0.5	9/21/2015	<0.00550	<0.00665	<0.0120	<0.00902	<2.39	<5.38	<7.77	13.3 J
Location A										
FUSE-A-2'-09212015	2	9/21/2015	<0.00566	<0.00685	<0.0123	<0.00928	<2.46	41.7 J	41.7 J	16.1 J
FUSE-A-4'-09212015	4	9/21/2015	<0.00604	<0.00731	0.0619	0.317	13.2	254	267.2	16.4 J
FUSE-A-6'-09212015	6	9/21/2015	<0.00626	<0.00757	<0.0136	<0.0102	<2.72	<6.13	<8.85	26.9 J
FUSE-A-8'-09212015	8	9/21/2015	<0.00610	<0.00739	<0.0133	<0.0100	<2.66	28.4 J	28.4 J	13.4 J
FUSE-A-10'-09212015	10	9/21/2015	<0.00608	<0.00736	<0.0132	<0.00998	<2.65	<5.96	<8.61	21.7 J
Location B										
FUSE-B-2'-09212015	2	9/21/2015	<0.00553	<0.00669	<0.0120	<0.00906	<2.40	<5.41	<7.81	16.2 J
FUSE-B-4'-09212015	4	9/21/2015	<0.00578	<0.00700	<0.0126	<0.00948	<2.52	<5.66	<8.18	67.6
FUSE-B-6'-09212015	6	9/21/2015	<0.00616	<0.00746	<0.0134	<0.0101	<2.68	<6.03	<8.71	95.6
FUSE-B-8'-09212015	8	9/21/2015	<0.00641	<0.00775	<0.0139	<0.0105	<2.79	<6.27	<9.06	145
FUSE-B-10'-09212015	10	9/21/2015	<0.00598	<0.00723	<0.0130	<0.00980	<2.60	<5.85	<8.45	63.2
Location C										
FUSE-C-2'-09212015	2	9/21/2015	<0.00555	<0.00671	<0.0121	<0.00910	<2.41	<5.43	<7.84	189
FUSE-C-4'-09212015	4	9/21/2015	<0.00648	<0.00785	<0.0141	<0.0106	<2.82	<6.35	<9.17	482
FUSE-C-6'-09212015	6	9/21/2015	<0.00566	<0.00685	<0.0123	<0.00929	<2.46	<5.55	<8.01	234
FUSE-C-8'-09212015	8	9/21/2015	<0.00601	<0.00727	<0.0131	<0.00985	<2.62	<5.88	<8.50	**524**
FUSE-C-10'-09212015	10	9/21/2015	<0.00607	<0.00735	<0.0132	<0.00995	<2.64	<5.94	<8.58	**651**
Location D										
FUSE-D-2'-09212015	2	9/21/2015	<0.00542	<0.00656	<0.0118	<0.00889	<2.36	<5.31	<7.67	22.9 J
FUSE-D-4'-09212015	4	9/21/2015	<0.00538	<0.00652	<0.0117	<0.00883	<2.34	<5.27	<7.61	7.24 J
Location E										
FUSE-E-2'-09212015	2	9/21/2015	<0.00559	<0.00677	<0.0122	<0.00917	<2.44	12.4 J	12.4 J	399
FUSE-E-4'-09212015	4	9/21/2015	<0.00559	<0.00676	<0.0122	<0.00916	<2.34	28.5 J	28.5 J	125
Fuse-W-10-11242015	10	11/24/2015	NA	NA	NA	NA	NA	NA	NA	21.1 J
Fuse-N-10-11242015	10	11/24/2015	NA	NA	NA	NA	NA	NA	NA	103
Fuse-E-10-11242015	10	11/24/2015	NA	NA	NA	NA	NA	NA	NA	73.7
Fuse-FL-10-11252015	10	11/25/2015	NA	NA	NA	NA	NA	NA	NA	**2000**
Fuse-S-10-11252015	10	11/25/2015	NA	NA	NA	NA	NA	NA	NA	30
GHD Sample Collection										
S-088210-022916-SP-01	11	2/29/2016	NA	NA	NA	NA	NA	NA	NA	<1.5
S-088210-022916-SP-02	13.5	2/29/2016	NA	NA	NA	NA	NA	NA	NA	110
S-088210-022916-SP-03	4	2/29/2016	NA	NA	NA	NA	NA	NA	NA	22
S-088210-022916-SP-04	4	2/29/2016	NA	NA	NA	NA	NA	NA	NA	<7.5
S-088210-022916-SP-05	4	2/29/2016	NA	NA	NA	NA	NA	NA	NA	<7.5
S-088210-022916-SP-06	4	2/29/2016	NA	NA	NA	NA	NA	NA	NA	<7.5
S-088210-022916-SP-07	4	2/29/2016	NA	NA	NA	NA	NA	NA	NA	350
S-088210-022916-SP-08	4	2/29/2016	NA	NA	NA	NA	NA	NA	NA	<7.5
S-088210-19-052016-SP-01	12	5/20/2016	NA	NA	NA	NA	NA	NA	NA	**350**
S-088210-19-061616-SP-01	20	6/16/2016	NA	NA	NA	NA	NA	NA	NA	**500**
S-088210-062916-JPS-GHD1-30-31	30	6/29/2016	NA	NA	NA	NA	NA	NA	NA	32.45
S-088210-062916-JPS-GHD1-35-36	35	6/29/2016	NA	NA	NA	NA	NA	NA	NA	30.6
S-088210-062916-JPS-GHD1-40-41	40	6/29/2016	NA	NA	NA	NA	NA	NA	NA	58.7

Notes:

All samples are in milligrams per kilogram
Bolded numbers are above the RRAL
All samples are in milligrams per kilogram
J = Estimated concentration

Appendices

Appendix A
Analytical Data

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: 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.

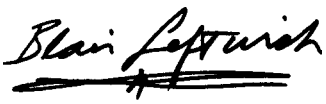
TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes

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

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

Analysis	
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 # Carry 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

ORIGINAL COPY

LAB Order ID # 15092227

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Ave, Ste 9
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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

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 listed: 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: HCL	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	BTEX 8021B	TPH GRO/DRO	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 E5, 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

☐ TRRP Report Required

☐ Check If Special Reporting Limits Are Needed

~~TX 80~~ 8015 DRO GRO

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LAB Order ID # 1509222

TraceAnalysis, Inc.

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BioAquatic Testing
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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
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

LAB #	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
404963		✓	✓																✓	✓		
404964		↓	↓																↓	↓		
404965		↓	↓																↓	↓		
404966		↓	↓																↓	↓		
404967		↓	↓																↓	↓		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Warren Maurer	CH2M	9/22	1455	N Daily	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 4.6 °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

LAB Order ID # 150922227

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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.)

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	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	14:15
				Brenda Ward	TA Lubbock	9/23/15	9:15

INST 1.5 / OBS 0.4 °C / COR 0.3 °C

INST ____ / OBS ____ °C / COR ____ °C

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 # Courier in 25 25 938934

REMARKS:

ANALYZE FOR MOISTURE CONTENT

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

☐ TRRP Report Required

☐ Check If Special Reporting Limits Are Needed

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

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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

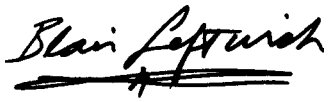
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

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	RL Result	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.

email: lab@traceanalysis.com

6701 Aberdeen Ave, Ste 9
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1 (800) 378-1296

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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

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
																			✓	✓		
	✓	✓																				

8015 GRO/DRO

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

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

- [x] 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 # 15092228

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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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

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

8015 GRO/DRO

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Warren Maurer	CH2M	9/22	1455	Valley	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-in 25 25 938 936

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!

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
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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: December 21, 2015

Work Order: 15112524

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
409116	Fuse-W-10-11242015	soil	2015-11-24	14:40	2015-11-25
409117	Fuse-N-10-11242015	soil	2015-11-24	15:20	2015-11-25
409118	Fuse-E-10-11242015	soil	2015-11-24	15:30	2015-11-25
409119	Fuse-FL-10-11242015	soil	2015-11-24	11:40	2015-11-25
409120	Fuse-S-10-11242015	soil	2015-11-24	11:50	2015-11-25

Notes

- **Work Order 15112524:** NMOCD. Dry weight basis required.

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 2015-11-25 and assigned to work order 15112524. Samples for work order 15112524 were received intact at a temperature of 23.3 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (IC)	E 300.0	107354	2015-12-09 at 11:25	126856	2015-12-09 at 12:19
Moisture Content	ASTM D 2216-05	107186	2015-11-27 at 12:25	126661	2015-11-30 at 10:42

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 15112524 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: 409116 - Fuse-W-10-11242015

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	126856	Date Analyzed:	2015-12-09	Analyzed By:	RL
Prep Batch:	107354	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	B,Jb	1,2,4	**21.1**	<29.2	14.5	mg/Kg	1	9.74	25	8.34

Sample: 409116 - Fuse-W-10-11242015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	126661	Date Analyzed:	2015-11-30	Analyzed By:	AM
Prep Batch:	107186	Sample Preparation:	2015-11-27	Prepared By:	AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		3	14.4	%	1	0

Sample: 409117 - Fuse-N-10-11242015

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	126856	Date Analyzed:	2015-12-09	Analyzed By:	RL
Prep Batch:	107354	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	B	1,2,4	**103**	**103**	14.1	mg/Kg	1	9.48	25	8.34

Sample: 409117 - Fuse-N-10-11242015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A

QC Batch: 126661 | Date Analyzed: 2015-11-30 | Analyzed By: AM
Prep Batch: 107186 | Sample Preparation: 2015-11-27 | Prepared By: AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		3	12.0	%	1	0

Sample: 409118 - Fuse-E-10-11242015

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 126856 | Date Analyzed: 2015-12-09 | Analyzed By: RL
Prep Batch: 107354 | 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	B	1,2,4	**73.7**	**73.7**	14.6	mg/Kg	1	9.82	25	8.34

Sample: 409118 - Fuse-E-10-11242015

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2216-05 | Prep Method: N/A
QC Batch: 126661 | Date Analyzed: 2015-11-30 | Analyzed By: AM
Prep Batch: 107186 | Sample Preparation: 2015-11-27 | Prepared By: AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		3	15.1	%	1	0

Sample: 409119 - Fuse-FL-10-11242015

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 126856 | Date Analyzed: 2015-12-09 | Analyzed By: RL
Prep Batch: 107354 | 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	B	1,2,4	**2000**	**2000**	69.4	mg/Kg	5	46.7	25	8.34

Sample: 409119 - Fuse-FL-10-11242015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	126661	Date Analyzed:	2015-11-30	Analyzed By:	AM
Prep Batch:	107186	Sample Preparation:	2015-11-27	Prepared By:	AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		3	10.7	%	1	0

Sample: 409120 - Fuse-S-10-11242015

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	126856	Date Analyzed:	2015-12-09	Analyzed By:	RL
Prep Batch:	107354	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	B	1,2,4	**30.0**	**30.0**	13.8	mg/Kg	1	9.31	25	8.34

Sample: 409120 - Fuse-S-10-11242015

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2216-05	Prep Method:	N/A
QC Batch:	126661	Date Analyzed:	2015-11-30	Analyzed By:	AM
Prep Batch:	107186	Sample Preparation:	2015-11-27	Prepared By:	AM

Parameter	F	C	RL Result	Units	Dilution	RL
Moisture		3	10.4	%	1	0

Method Blanks

Method Blank (1)

QC Batch:	126856	Date Analyzed:	2015-12-09	Analyzed By:	RL
Prep Batch:	107354	QC Preparation:	2015-12-09	Prepared By:	RL

Parameter	F	C	Result	Units	Reporting Limits
Chloride	B	1,2,4	12.4	mg/Kg	8.34

Duplicates

Duplicate (1) Duplicated Sample: 409120

QC Batch:	126661	Date Analyzed:	2015-11-30	Analyzed By:	AM
Prep Batch:	107186	QC Preparation:	2015-11-27	Prepared By:	AM

Param	F	C	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture		3	10.8	10.4	%	1	4	20

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 126856 | Date Analyzed: 2015-12-09 | Analyzed By: RL
Prep Batch: 107354 | QC Preparation: 2015-12-09 | Prepared By: RL

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	261	mg/Kg	1	250	12.4	99	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		1,2,4	262	mg/Kg	1	250	12.4	100	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: 409120

QC Batch:	126856	Date Analyzed:	2015-12-09	Analyzed By:	RL
Prep Batch:	107354	QC Preparation:	2015-12-09	Prepared By:	RL

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride		1,2,4	279	mg/Kg	1	250	26.9	101	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		1,2,4	277	mg/Kg	1	250	26.9	100	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: 126856 | Date Analyzed: 2015-12-09 | Analyzed By: RL

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	26.7	107	90 - 110	2015-12-09

Standard (CCV-2)

QC Batch: 126856 | Date Analyzed: 2015-12-09 | Analyzed By: RL

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		1,2,4	mg/Kg	25.0	26.1	104	90 - 110	2015-12-09

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike Amount	Pass
Chloride (IC)	E 300.0	soil	Dionex IC	Chloride	12.5	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	LELAP	LELAP-02003	Lubbock
2	NELAP	T104704219-15-11	Lubbock
3	NELAP	T104704392-14-8	Midland
4		2015-066	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 # 15112524

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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

5002 Basin Street, Suite A1
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Tel (432) 689-6301
Fax (432) 689-6313

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

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

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

Company Name: CH2M HILL
Phone #:
Address: (Street, City, Zip) 12750 Merit Drive, Suite 1100 Dallas TX 75251
Fax #:
Contact Person: Jennifer Dusson
E-mail: Jennifer.Dusson@CH2M.com
Invoice to: (If different from above) Direct Bill EOG RE: Zane Kuntz
Project #: $
Project Name: Short Fuse Fed #1
Project Location (including state):
Sampler Signature: RAWM

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
409116	Fuse-W-10-11242015	1	4oz		X								X	11/24	1440
409117	Fuse-N-10-11242015													11/24	1520
409118	Fuse-E-10-11242015													11/24	1530
409119	Fuse-FL-10-11252015													11/25	1140
409120	Fuse-S-10-11252015													11/25	1150

MTBE 8021 / 602 / 8260 / 624
BTEX 8021 / 602 / 8260 / 624
TPH 418.1 / TX1005 / TX1005 Ext(C35)
TPH 8015 GRO / DRO / TVHC
PAH 8270 / 625
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7
TCLP Metals Ag As Ba Cd Cr Pb Se Hg
TCLP Volatiles
TCLP Semi Volatiles
TCLP Pesticides
RCI
GC/MS Vol. 8260 / 624
GC/MS Semi. Vol. 8270 / 625
PCB's 8082 / 608
Pesticides 8081 / 608
BOD, TSS, pH
Moisture Content
Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity
Na, Ca, Mg, K, TDS, EC
X Chlorides EPA 300
X Moisture
Turn Around Time if different from standard
Hold

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
RAWM	CH2M	11/25/15	1605	[illegible]	TA	11-25-15	16:05	INST 23.3 °C, OBS 23.3 °C, COR 23.2 °C
[illegible]	TA	11-25-15	16:25	Received by:	Company:	Date:	Time:	INST ____ °C, OBS ____ °C, COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	INST 1.3 °C, OBS 2.1 °C, COR 3.1 °C
				[illegible]	TA	11/1/15	09:30	

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

REMARKS:
NMOCD

- [X] Dry Weight Basis Required
- [ ] TRRP Report Required
- [ ] Check If Special Reporting Limits Are Needed

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

ORIGINAL COPY

Carrier # Carry in FS: ET172464

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 11, 2016

Bernie Bockish
GHD
6121 Indian School Road, NE #200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX

RE: Short Fuse Fed #1 OrderNo.: 1603189

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 8 sample(s) on 3/3/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Short Fuse Fed #1

Lab Order: 1603189

Lab ID: 1603189-001 **Collection Date:** 2/29/2016 11:55:00 AM
Client Sample ID: S-088210-19-022916-SP-01 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	1.5		mg/Kg	1	3/8/2016 7:10:29 PM	24147

Lab ID: 1603189-002 **Collection Date:** 2/29/2016 12:20:00 PM
Client Sample ID: S-088210-19-022916-SP-02 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	110	30		mg/Kg	20	3/8/2016 8:12:32 PM	24147

Lab ID: 1603189-003 **Collection Date:** 2/29/2016 12:45:00 PM
Client Sample ID: S-088210-19-022916-SP-03 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	22	7.5		mg/Kg	5	3/8/2016 8:49:47 PM	24147

Lab ID: 1603189-004 **Collection Date:** 2/29/2016 1:00:00 PM
Client Sample ID: S-088210-19-022916-SP-04 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	7.5		mg/Kg	1	3/8/2016 9:14:36 PM	24147

Lab ID: 1603189-005 **Collection Date:** 2/29/2016 1:10:00 PM
Client Sample ID: S-088210-19-022916-SP-05 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	7.5		mg/Kg	5	3/8/2016 9:39:25 PM	24147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Short Fuse Fed #1

Lab Order: 1603189

Lab ID: 1603189-006 **Collection Date:** 2/29/2016 1:20:00 PM
Client Sample ID: S-088210-19-022916-SP-06 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	7.5		mg/Kg	5	3/8/2016 10:04:15 PM	24147

Lab ID: 1603189-007 **Collection Date:** 2/29/2016 1:30:00 PM
Client Sample ID: S-088210-19-022916-SP-07 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	350	30		mg/Kg	20	3/8/2016 10:41:29 PM	24147

Lab ID: 1603189-008 **Collection Date:** 2/29/2016 1:40:00 PM
Client Sample ID: S-088210-19-022916-SP-08 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	7.5		mg/Kg	5	3/8/2016 11:18:43 PM	24147

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1603189**

11-Mar-16

Client: GHD

Project: Short Fuse Fed #1

Sample ID	**MB-24147**	SampType: **MBLK**		TestCode: **EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID: **24147**		RunNo: **32667**					
Prep Date:	**3/8/2016**	Analysis Date: **3/8/2016**		SeqNo: **999625**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-24147**	SampType: **LCS**		TestCode: **EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID: **24147**		RunNo: **32667**					
Prep Date:	**3/8/2016**	Analysis Date: **3/8/2016**		SeqNo: **999626**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	90	110			

Sample ID	**1603189-001AMS**	SampType: **MS**		TestCode: **EPA Method 300.0: Anions**					
Client ID:	**S-088210-19-022916**	Batch ID: **24147**		RunNo: **32667**					
Prep Date:	**3/8/2016**	Analysis Date: **3/8/2016**		SeqNo: **999628**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0.8910	89.2	64.2	131			

Sample ID	**1603189-001AMSD**	SampType: **MSD**		TestCode: **EPA Method 300.0: Anions**					
Client ID:	**S-088210-19-022916**	Batch ID: **24147**		RunNo: **32667**					
Prep Date:	**3/8/2016**	Analysis Date: **3/8/2016**		SeqNo: **999629**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0.8910	89.3	64.2	131	0.0916	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1603189 | RcptNo: 1

Received by/date: MC 03/03/16

Logged By: Ashley Gallegos 3/3/2016 9:50:00 AM

Completed By: Ashley Gallegos 3/3/2016 1:46:30 PM

Reviewed By: IO 03/03/16

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

ent: GHD - Albuquerque

iling Address: 6121 Indian School Rd NE Ste 200

uquerque, NM, 87110

one #: 505-884-0672

ail or Fax#: Bernard.Bockisch@ghd.com

/QC Package:

Standard ☐ Level 4 (Full Validation)

creditation

NELAP ☐ Other

EDD (Type)

Turn-Around Time:

☑ Standard ☐ Rush

Project Name: Short Fuse Fed #1

Project #: 088210/19

Project Manager: Bernard Bockisch

505-280-0572

Sampler: Steve Perez

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.4 - 1.0 = 1.4°C

Analysis Request

ate	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1603189	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides 300.0				Air Bubbles (Y or N)
1-16	1155	Soil	S-088210-19-022916-SP-01	4oz glass-1	Ice	-001												X				
	1220		S-088210-19-022916-SP-02			-002												X				
	1245		S-088210-19-022916-SP-03			-003												X				
	1300		S-088210-19-022916-SP-04			-004												X				
	1310		S-088210-19-022916-SP-05			-005												X				
	1320		S-088210-19-022916-SP-06			-006												X				
	1330		S-088210-19-022916-SP-07			-007												X				
	1340		S-088210-19-022916-SP-08			-008												X				

e:	Time:	Relinquished by:	Received by:	Date	Time
16	0820	Steve Perez		3/2/16	0820
e:	Time:	Relinquished by:	Received by:	Date	Time
				03/03/16	0950

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 01, 2016

Bernie Bockish
GHD
6121 Indian School Road, NE #200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX

RE: Short Fuse Fed 1 OrderNo.: 1605B43

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/24/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1605B43**
Date Reported: **6/1/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Short Fuse Fed 1
Lab Order: 1605B43

Lab ID: 1605B43-001
Collection Date: 5/20/2016 12:32:00 PM
Client Sample ID: S-088210-19-052016-SP-01
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	340	30		mg/Kg	20	6/1/2016 12:45:41 AM	25584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1605B43**

01-Jun-16

Client: GHD

Project: Short Fuse Fed 1

Sample ID	**MB-25584**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**25584**	RunNo:	**34591**					
Prep Date:	**5/31/2016**	Analysis Date:	**5/31/2016**	SeqNo:	**1066763**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-25584**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**25584**	RunNo:	**34591**					
Prep Date:	**5/31/2016**	Analysis Date:	**5/31/2016**	SeqNo:	**1066764**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1605B43 | RcptNo: 1

Received by/date: 05/24/16

Logged By: Lindsay Mangin 5/24/2016 9:40:00 AM

Completed By: Lindsay Mangin 5/25/2016 9:58:49 AM

Reviewed By: IO 05/25/16

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: GHD - Albuquerque

Mailing Address: 6121 Indian School Rd NE

Suite 200, Albuquerque, NM, 87110

Phone #: 505-884-0672

Email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package: Standard ☐ Level 4 (Full Validation)

Accreditation: NELAP ☐ Other

EDD (Type)

Turn-Around Time: ☑ Standard ☐ Rush

Project Name: ~~North Loam~~ SP Short Fuse Fed #1

Project #: 088210/19

Project Manager: Bernard Bockisch 505-280-0572

Sampler: Steve Perez

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.6 -1.0CF= 2.6

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1605B43
~~5/16~~	~~1255~~ SP					
5/16	1232	Soil	S-088210-19-052065P-01	4oz glass-1	ICE	-001

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
										~~X~~ SP	Chloride 300.0				
										X					

Date	Time	Relinquished by:	Received by:	Date	Time
5/13/16	0931	Steven Perez		5/23/16	0931
5/16	1900			05/24/16	0940

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 22, 2016

Bernie Bockish
GHD
6121 Indian School Road, NE #200
Albuquerque, NM 87110
TEL: (505) 884-0672
FAX

RE: Short Fuse Fed 1 OrderNo.: 1606A47

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/17/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1606A47**
Date Reported: **6/22/2016**

CLIENT: GHD
Client Sample ID: S-088210-19-061616-SP-01
Project: Short Fuse Fed 1
Collection Date: 6/16/2016 1:10:00 PM
Lab ID: 1606A47-001
Matrix: SOIL
Received Date: 6/17/2016 9:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	500	30		mg/Kg	20	6/22/2016 6:11:48 AM	25980

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1606A47**

22-Jun-16

Client: GHD

Project: Short Fuse Fed 1

Sample ID	**MB-25980**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**25980**	RunNo:	**35049**					
Prep Date:	**6/21/2016**	Analysis Date:	**6/22/2016**	SeqNo:	**1085079**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-25980**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**25980**	RunNo:	**35049**					
Prep Date:	**6/21/2016**	Analysis Date:	**6/22/2016**	SeqNo:	**1085080**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **GHD** Work Order Number: **1606A47** RcptNo: **1**

Received by/date: 06/17/16

Logged By: **Lindsay Mangin** **6/17/2016 9:40:00 AM**

Completed By: **Lindsay Mangin** **6/20/2016 5:52:36 AM**

Reviewed By: 06/20/16

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			

Chain-of-Custody Record

Client: GAD - Albuquerque

Mailing Address: 6121 Indian School Rd NE Ste 200, Albuquerque, NM 87110

Phone #: 505-884-0672

Email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package: Standard ☐ Level 4 (Full Validation)

Accreditation: NELAP ☐ Other

EDD (Type)

Turn-Around Time: ☑ Standard ☐ Rush

Project Name: Short fuse fed #1

Project #: 088210/19

Project Manager: Bernard Bockisch 505-280-0572

Sampler: Steve Perez

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1606A477	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300.0				Air Bubbles (Y or N)
6/16	1310	Soil	S-088210-19-061616-SP-01	4oz glass-1	ICE	-001												X				

Date	Time	Relinquished by:	Received by:	Date	Time
6/16	1430	Steven Perez		6/16/16	1430
6/16	1900		Jessica Cruz	06/17/16	0940

Remarks: * Sample dropped off 06/20/16

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Analytical Report 532696

for

GHD Services, INC- Midland

Project Manager: Bernie Bockisch

Short Fuse-Federal #1

088210-19

11-JUL-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

11-JUL-16

Project Manager: **Bernie Bockisch**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: XENCO Report No(s): **532696**
Short Fuse-Federal #1
Project Address: Lea County, NM

Bernie Bockisch:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 532696. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 532696 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 532696

GHD Services, INC- Midland, Midland, TX

Short Fuse-Federal #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-088210-19-062916-JPS-GHD1 30-31'	S	06-29-16 16:08	30 - 31 ft	532696-001
S-088210-19-062916-JPS-GHD1 35-36'	S	06-29-16 16:16	35 - 36 ft	532696-002
S-088210-19-062916-JPS-GHD1 40-41'	S	06-29-16 16:25	40 - 41 ft	532696-003

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 532696

GHD Services, INC- Midland, Midland, TX

Short Fuse-Federal #1

Sample Id:	**S-088210-19-062916-JPS-GHD1 30-31'**	Matrix:	Soil	Date Received:	06.30.16 15.19
Lab Sample Id:	532696-001	Date Collected:	06.29.16 16.08	Sample Depth:	30 - 31 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	6.44
Analyst:	MNR	Date Prep:	07.07.16 18.30	Basis:	Dry Weight
Seq Number:	997751				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.4**	10.7	mg/kg	07.07.16 23.52		1

Certificate of Analytical Results 532696

GHD Services, INC- Midland, Midland, TX

Short Fuse-Federal #1

Sample Id:	**S-088210-19-062916-JPS-GHD1 35-36'**	Matrix:	Soil	Date Received:	06.30.16 15.19
Lab Sample Id:	532696-002	Date Collected:	06.29.16 16.16	Sample Depth:	35 - 36 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	4.64
Analyst:	MNR	Date Prep:	07.07.16 18.30	Basis:	Dry Weight
Seq Number:	997751				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.6**	10.5	mg/kg	07.07.16 23.59		1

Certificate of Analytical Results 532696

GHD Services, INC- Midland, Midland, TX

Short Fuse-Federal #1

Sample Id:	**S-088210-19-062916-JPS-GHD1 40-41'**	Matrix:	Soil	Date Received:	06.30.16 15.19
Lab Sample Id:	532696-003	Date Collected:	06.29.16 16.25	Sample Depth:	40 - 41 ft
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNR			% Moisture:	7.27
Analyst:	MNR	Date Prep:	07.07.16 18.30	Basis:	Dry Weight
Seq Number:	997751				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**58.7**	10.8	mg/kg	07.08.16 00.07		1

QC Summary 532696

GHD Services, INC- Midland

Short Fuse-Federal #1

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 997751 Matrix: Solid Date Prep: 07.07.16
MB Sample Id: 710742-1-BLK LCS Sample Id: 710742-1-BKS LCSD Sample Id: 710742-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	236	94	247	99	90-110	5	20	mg/kg	07.07.16 22:26	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 997751 Matrix: Soil Date Prep: 07.07.16
Parent Sample Id: 532686-001 MD Sample Id: 532686-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	<10.0	0	20	mg/kg	07.08.16 19:13	U

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 997751 Matrix: Soil Date Prep: 07.07.16
Parent Sample Id: 532697-003 MD Sample Id: 532697-003 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	<10.0	0	20	mg/kg	07.08.16 00:38	U

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 997751 Matrix: Soil Date Prep: 07.07.16
Parent Sample Id: 532686-001 MS Sample Id: 532686-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	<10.0	250	224	90	80-120	mg/kg	07.08.16 19:21	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 997751 Matrix: Soil Date Prep: 07.07.16
Parent Sample Id: 532697-003 MS Sample Id: 532697-003 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	<10.0	250	223	89	80-120	mg/kg	07.08.16 00:46	

Analytical Method: **Percent Moisture**
Seq Number: 997692 Matrix: Solid
MB Sample Id: 997692-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Percent Moisture	ND	%	07.06.16 18:00	

QC Summary 532696

GHD Services, INC- Midland

Short Fuse-Federal #1

Analytical Method: **Percent Moisture**

Seq Number: 997692 Matrix: Soil

Parent Sample Id: 532694-001 MD Sample Id: 532694-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Percent Moisture	15.7	15.1	4	20	%	07.06.16 18:00	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200) | Odessa, Texas (432-563-1800) | Lakeland, Florida (863-646-8526)

Dallas, Texas (214-902-0300) | Norcross, Georgia (770-449-8800) | Tampa, Florida (813-620-2000)

Service Center - San Antonio, Texas (210-509-3334) | www.xenco.com

Xenco Quote # | Xenco Job # 532696

Client / Reporting Information

Company Name / Branch: GHD Services Inc.

Company Address: 6121 Indian School Rd. NE Albuquerque, NM 87110 Ste 200

Email: bernard.bockisch@ghd.com | Phone No:

Project Contact: Bernie Bockisch

Samplers's Name: John Schnable

Project Information

Project Name/Number: 08210-19

Project Location: Short Fuse-Federal #1 Lea County, NM

Invoice To: Traci_Beard@eogresources.com; Jane_kurtz@eogresources.com

PO Number: None

Analytical Information

EA3200 Chloride % Moisture

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	S-088210-19-062916-JPS														
2	-GHDI 30'-31'	30-31	6-29-16	16:08	S	1								1	
3	S-088210-A-062916-JPS														
4	-GHDI 35'-36'	35-36	6-29-16	16:16	S	1								1	
5	S-088210-19-062916-JPS														
6	-GHDI 40'-41'	40-41	06-29-16	16:25	S	1								1	
7															
8															
9															
10															

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [x] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished By Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	John Schnable	6-30-16 15:19	Mazn			
2						
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice
						X

Temp: 4.6 °C IR ID:R-8
CoC/F:0
Corrected Temp: 4.8°C

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previously negotiated under a fully executed client contract.

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 06/30/2016 03:19:00 PM

Work Order #: 532696

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.8
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron
Mary Negron
Date: 07/01/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 07/01/2016

Appendix B
Waste Manifests

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

Watson #104

NON-HAZARDOUS WASTE MANIFEST NO 108074 | 1. PAGE ___ OF ___ | 2. TRAILER NO.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE
E.O.G. RESOURSES	5509 Champion Dr.			4/82015
PHONE NO.	CITY	STATE	ZIP	6. TNRCC I.D. NO.
(432) 686-3705	Midland	TX.	79706	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT : 20,940 19,740 19820					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FED # 1 TOTAL 60,500	

GENERATOR

14. IN CASE OF EMERGENCY OR SPILL, CONTACT		
NAME	PHONE NO	24-HOUR EMERGENCY NO.
KIN SLAUGHTER	575-887-4048	

GENERATOR

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: WATSON CONSTRUCTION	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: ZANE KURTZ	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (432) 425-2023	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME X ISABEL SEGOVIA	PRINTED/TYPED NAME
SIGNATURE X Isabel Segovia DATE 4/82015	SIGNATURE DATE

DISPOSAL FACILITY

	ADDRESS:	PHONE:
Lea Land, LLC	Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	575-887-4048

PERMIT NO.	20. COMMENTS
WM-01-035 - New Mexico	

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
Santos Manzor.	—	4/82015	9:00

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

WATSON

NON-HAZARDOUS WASTE MANIFEST NO 108121 | 1. PAGE ___ OF ___ | 2. TRAILER NO# 104

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE
E.O.G. RESOURSES	5509 Champion Dr.			4/10/2015
PHONE NO.	CITY	STATE	ZIP	6. TNRCC I.D. NO.
(432) 686-3705	Midland	TX.	79706	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	8. CONTAINERS Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT : 22260 20DAD					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FED # 1 TOTAL @ 42300	

GENERATOR

14. IN CASE OF EMERGENCY OR SPILL, CONTACT		
NAME	PHONE NO	24-HOUR EMERGENCY NO.
KIN SLAUGHTER	575-887-4048	

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: WATSON CONSTRUCTION	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: ZANE KURTZ	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (432) 425-2023	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Rafael Segura	PRINTED/TYPED NAME
SIGNATURE Rafael Segura DATE 4/10/2015	SIGNATURE DATE

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048

PERMIT NO.	20. COMMENTS
WM-01-035 - New Mexico	

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
		4/10/2015	915

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

LSDR

NON-HAZARDOUS WASTE MANIFEST NO 108122 | 1. PAGE ___ OF ___ | 2. TRAILER NO #006

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE
E.O.G. RESOURSES	5509 Champion Dr.			4/10/2015
PHONE NO.	CITY	STATE	ZIP	6. TNRCC I.D. NO.
(432) 686-3705	Midland	TX.	79706	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT 44820 42100 37180					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FED # 1 TOTAL = 124,100	

14. **IN CASE OF EMERGENCY OR SPILL, CONTACT**

NAME	PHONE NO	24-HOUR EMERGENCY NO.
KIN SLAUGHTER	575-887-4048	

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: WATSON CONSTRUCTION	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: ZANE KURTZ	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (432) 425-2023	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME RAY CHAPMAN	PRINTED/TYPED NAME
SIGNATURE Ray Chapman DATE 4/10/2015	SIGNATURE DATE

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048
PERMIT NO. WM-01-035 - New Mexico	20. COMMENTS	

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
		4/10/2015	1030

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257 Watson

NON-HAZARDOUS WASTE MANIFEST NO 108156 | 1. PAGE ___ OF ___ | 2. TRAILER NO. # 104

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE
E.O.G. RESOURSES	5509 Champion Dr.			4/14/2015
PHONE NO.	CITY	STATE	ZIP	6. TNRCC I.D. NO.
(432) 686-3705	Midland	TX.	79706	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	8. CONTAINERS Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT : 27,180 26,180					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FED # 1 TOTAL 53,360	

14. IN CASE OF EMERGENCY OR SPILL, CONTACT		
NAME	PHONE NO	24-HOUR EMERGENCY NO.
KIN SLAUGHTER	575-887-4048	

15. GENERATOR'S CERTIFICATION: I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: WATSON CONSTRUCTION	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: ZANE KURTZ	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (432) 425-2023	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Isabel Segovia	PRINTED/TYPED NAME
SIGNATURE Isabel Segovia DATE 4/14/2015	SIGNATURE DATE

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048
PERMIT NO. WM-01-035 - New Mexico	20. COMMENTS	

21. DISPOSAL FACILITY'S CERTIFICATION: I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
	—	4/14/2015	10:00

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

S DR

NON-HAZARDOUS WASTE MANIFEST NO 108163 | 1. PAGE ___ OF ___ | 2. TRAILER NO. #006

GENERATOR

3. COMPANY NAME	4. ADDRESS	5. PICK-UP DATE
E.O.G. RESOURSES	5509 Champion Dr.	4/14/2015
PHONE NO. (432) 686-3705	CITY Midland STATE TX. ZIP 79708	6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT : 44.20					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FED # 1	

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME	PHONE NO	24-HOUR EMERGENCY NO.
KIN SLAUGHTER	575-887-4048	

15. GENERATOR'S CERTIFICATION: I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: WATSON CONSTRUCTION	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: ZANE KURTZ	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (432) 425-2023	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME RAY CHAPMAN	PRINTED/TYPED NAME
SIGNATURE Ray Chapman DATE 4/14/2015	SIGNATURE DATE

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048
PERMIT NO. WM-01-035 - New Mexico	20. COMMENTS	

21. DISPOSAL FACILITY'S CERTIFICATION: I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
		4/14/2015	1257

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257 SDR

NON-HAZARDOUS WASTE MANIFEST NO 110355 | 1. PAGE ___ OF ___ | 2. TRAILER NO. ~~1~~ 006

GENERATOR

3. COMPANY NAME	4. ADDRESS	5. PICK-UP DATE
E.O.G Resources PHONE NO. (432) 686-3705	5509 Champion Dr CITY STATE ZIP Midland TX 79706	8/21/2015 6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	8. CONTAINERS Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b. 38140					
c.					
d. WT : 40040 38060!					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FEDERAL #1 T-116240	

TO

14. IN CASE OF EMERGENCY OR SPILL, CONTACT		
NAME	PHONE NO 575-887-4048	24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE
CO. MAN: ZANE KURTZ		

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: SDR ENTERPRSES LLC	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: SHANNON	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575) 441-7330	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME x Carl Rowe/Ace	PRINTED/TYPED NAME
SIGNATURE x CRL DATE 8/21/2015	SIGNATURE DATE

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048

PERMIT NO.	20. COMMENTS
WM-01-035 - New Mexico	

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
Tammy Hanino		8/21/2015	9:05

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257 SDR

NON-HAZARDOUS WASTE MANIFEST NO 110356 | 1. PAGE ___ OF ___ | 2. TRAILER NO. #002.

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE
E.O.G Resources	5509 Champion Dr.			8/21/2015
PHONE NO.	CITY	STATE	ZIP	6. TNRCC I.D. NO.
(432) 686-3705	Midland	TX.	79706	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	8. CONTAINERS Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT : 23940.					

12. COMMENTS OR SPECIAL INSTRUCTIONS: SHORT FUSE FEDERAL #1

13. WASTE PROFILE NO.

14. **IN CASE OF EMERGENCY OR SPILL, CONTACT**

NAME | PHONE NO 575-887-4048 | 24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME: CO. MAN: ZANE KURTZ | SIGNATURE | DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: SDR ENTERPRSES LLC	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: SHANNON	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575) 441-7330	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME *James Dubin	PRINTED/TYPED NAME
SIGNATURE *James Dub DATE 8/21/2015	SIGNATURE DATE

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048

PERMIT NO. WM-01-035 - New Mexico | 20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
		8/21/2015	9:30.

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST NO 110318 | 1. PAGE ___ OF ___ | 2. TRAILER NO. #007

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE
E.O.G Resources	5509 Champion Dr.			8/20/2015
PHONE NO.	CITY	STATE	ZIP	6. TNRCC I.D. NO.
(432) 686-3705	Midland	TX.	79706	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated. Non Hazardous Waste	1	CM		Y	
b. 23820					
c.					
d. WT : 20.640 . 25.000					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FEDERAL #1 T-19460	

14. IN CASE OF EMERGENCY OR SPILL, CONTACT

NAME | PHONE NO. 575-887-4048 | 24-HOUR EMERGENCY NO.

15. GENERATOR'S CERTIFICATION: I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE
CO. MAN: ZANE KURTZ		

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: SDR ENTERPRSES LLC	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: SHANNON	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575) 441-7330	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME [signature]	PRINTED/TYPED NAME
SIGNATURE [signature] DATE 8/20/2015	SIGNATURE DATE

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048
PERMIT NO. WM-01-035 - New Mexico	20. COMMENTS	

21. DISPOSAL FACILITY'S CERTIFICATION: I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
[signature]	—	8/20/2015	10:10

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST NO 112320 | 1. PAGE ___ OF ___ | 2. TRAILER NO. #006

GENERATOR

3. COMPANY NAME	4. ADDRESS	5. PICK-UP DATE
E.O.G Resources	5509 Champion Dr.	11/25/2015
PHONE NO. (432) 686-3705	CITY Midland STATE TX. ZIP 79706	6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT: 40,940 ② 41,920 ③ 43,840					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FED # 1 T@ 126,700	

TREATOR

14. **IN CASE OF EMERGENCY OR SPILL, CONTACT**

NAME	PHONE NO	24-HOUR EMERGENCY NO.
KIN SLAUGHTER	575-887-4048	

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: SDR ENTERPRISE LLC	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: SHANNON	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575) 441-7330	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Carl Rowlee	PRINTED/TYPED NAME
SIGNATURE Carl Rowlee DATE 11/25/2015	SIGNATURE DATE

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048

PERMIT NO.	20. COMMENTS
WM-01-035 - New Mexico	

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
Anton Gonzalez		11/25/2015	11:00

GENERATOR: COPIES 1 & 6 DISPOSAL SITE: COPIES 2 & 3 TRANSPORTERS: COPIES 4 & 5

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST NO 112418 | 1. PAGE ___ OF ___ | 2. TRAILER NO. 7006

GENERATOR

3. COMPANY NAME	4. ADDRESS	5. PICK-UP DATE
E.O.G Resources	5509 Champion Dr.	12/3/2015
PHONE NO. (432) 686-3705	CITY Midland STATE TX. ZIP 79706	6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT 42,080 @ 39,380 @ 39,740					

12. COMMENTS OR SPECIAL INSTRUCTIONS: SHORT FUSE FED # 1 T@ 121,200

13. WASTE PROFILE NO.

14. **IN CASE OF EMERGENCY OR SPILL, CONTACT**

NAME: KIN SLAUGHTER | PHONE NO: 575-987-4048 | 24-HOUR EMERGENCY NO.

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME | SIGNATURE | DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: SDR ENTERPRISE LLC	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: SHANNON	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575) 441-7330	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME [illegible]	PRINTED/TYPED NAME
SIGNATURE [signature] DATE 12/3/2015	SIGNATURE DATE

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048

PERMIT NO. WM-01-035 - New Mexico | 20. COMMENTS

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
Santos Gonzalez	—	12/3/2015	9:45

GENERATOR: COPIES 1 & 6 | DISPOSAL SITE: COPIES 2 & 3 | TRANSPORTERS: COPIES 4 & 5

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

SDR

NON-HAZARDOUS WASTE MANIFEST NO 112439 | 1. PAGE ___ OF ___ | 2. TRAILER NO. #006

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE
E.O.G Resources	6509 Champion Dr.			12/4/2015
PHONE NO. (432) 686-3705	CITY Midland	STATE TX.	ZIP 79706	6. TNRCC I.D. NO.

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT 40,140 ② 39,940 ③ 43,860					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FED # 1 T@ 123,940	

14. **IN CASE OF EMERGENCY OR SPILL, CONTACT**

NAME	PHONE NO	24-HOUR EMERGENCY NO.
KIN SLAUGHTER	575-887-4048	

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: SDR ENTERPRISE LLC	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: SHANNON	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575) 441-7330	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Carl Boehne	PRINTED/TYPED NAME
SIGNATURE Carl Boehne DATE 12/4/2015	SIGNATURE DATE

DISPOSAL FACILITY

	ADDRESS:	PHONE:
Lea Land, LLC	Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	575-887-4048

PERMIT NO.	20. COMMENTS
WM-01-035 - New Mexico	

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
Santos Gonzalez		12/4/2015	9:05

GENERATOR: COPIES 1 & 6 DISPOSAL SITE: COPIES 2 & 3 TRANSPORTERS: COPIES 4 & 5

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

Carranza

NON-HAZARDOUS WASTE MANIFEST NO 112462 | 1. PAGE ___ OF ___ | 2. TRAILER NO. #27

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE
E.O.G Resources	6509 Champion Dr.			12/7/2015
PHONE NO.	CITY	STATE	ZIP	6. TNRCC I.D. NO.
(432) 686-3705	Midland	TX.	79706	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT 35,280 ② 41,080 ③ 41,900					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FED # 1 T@ 118,260	

GENERATOR

14. IN CASE OF EMERGENCY OR SPILL, CONTACT		
NAME	PHONE NO	24-HOUR EMERGENCY NO.
KIN SLAUGHTER	575-887-4048	

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: SDR ENTERPRISE LLC	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: SHANNON	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575) 441-7330	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME: Luis Carranza	PRINTED/TYPED NAME:
SIGNATURE: Luis Carranza DATE: 12/7/2015	SIGNATURE: DATE:

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048

PERMIT NO.	20. COMMENTS
WM-01-035 - New Mexico	

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
Santos Gonzalez		12/7/2015	9:00

GENERATOR: COPIES 1 & 6 DISPOSAL SITE: COPIES 2 & 3 TRANSPORTERS: COPIES 4 & 5

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257 Carranza

NON-HAZARDOUS WASTE MANIFEST NO 112484 | 1. PAGE ___ OF ___ | 2. TRAILER NO. # 27

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE
E.O.G Resources	5509 Champion Dr.			12/8/2015
PHONE NO.	CITY	STATE	ZIP	6. TNRCC I.D. NO.
(432) 686-3705	Midland	TX.	79706	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT : 44,140 @ 42,740 @ 43,120					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FED # 1 T@ 130,000	

14. IN CASE OF EMERGENCY OR SPILL, CONTACT		
NAME	PHONE NO	24-HOUR EMERGENCY NO.
KIN SLAUGHTER	575-887-4048	

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: SDR ENTERPRISE LLC	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: SHANNON	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575) 441-7330	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Curtis Carranza	PRINTED/TYPED NAME
SIGNATURE Curtis Carranza DATE 12/8/2015	SIGNATURE DATE

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048

PERMIT NO.	20. COMMENTS
WM-01-035 - New Mexico	

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
Santos Gonzalez	—	12/8/2015	9:00

GENERATOR: COPIES 1 & 6 DISPOSAL SITE: COPIES 2 & 3 TRANSPORTERS: COPIES 4 & 5

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257

Carranza

NON-HAZARDOUS WASTE MANIFEST NO 112508 | 1. PAGE ___ OF ___ | 2. TRAILER NO. #27

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE
E.O.G Resources	5509 Champion Dr.			12/9/2015
PHONE NO.	CITY	STATE	ZIP	6. TNRCC I.D. NO.
(432) 686-3705	Midland	TX.	79706	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT 36,920 @ 42,360 @ 35,520					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FED # 1 T@ 114,800	

TRANSPORTER

14. **IN CASE OF EMERGENCY OR SPILL, CONTACT**

NAME	PHONE NO	24-HOUR EMERGENCY NO.
KIN SLAUGHTER	575-887-4048	

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: SDR ENTERPRISE LLC	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: SHANNON	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575) 441-7330	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME Chris Carranza	PRINTED/TYPED NAME
SIGNATURE Chris Carranza DATE 12/9/2015	SIGNATURE DATE

DISPOSAL FACILITY

	ADDRESS:	PHONE:
Lea Land, LLC	Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	575-887-4048

PERMIT NO.	20. COMMENTS
WM-01-035 - New Mexico	

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
Nestor Gonzalez		12/9/2015	9:05

GENERATOR: COPIES 1 & 6 DISPOSAL SITE: COPIES 2 & 3 TRANSPORTERS: COPIES 4 & 5

LEA LAND DISPOSAL SITE NEW MEXICO

MILE MARKER #64 US HWY 62/180 • 30 MILES EAST OF CARLSBAD, NM • PHONE (575) 887-4048

LEA LAND, LLC

1300 WEST MAIN STREET • OKLAHOMA CITY, OK 73106 • PHONE (405) 236-4257 Triple M

NON-HAZARDOUS WASTE MANIFEST NO 112509 | 1. PAGE __ OF __ | 2. TRAILER NO. # 150

GENERATOR

3. COMPANY NAME	4. ADDRESS			5. PICK-UP DATE
E.O.G Resources	6600 Champion Dr.			12/9/2015
PHONE NO.	CITY	STATE	ZIP	6. TNRCC I.D. NO.
(432) 688-3705	Midland	TX.	79706	

7. NAME OR DESCRIPTION OF WASTE SHIPPED:	8. CONTAINERS No.	Type	9. TOTAL QUANTITY	10. UNIT Wt/Vol.	11. TEXAS WASTE ID #
a. Non-Regulated, Non Hazardous Waste	1	CM		Y	
b.					
c.					
d. WT : 45,280 @ 44,640					

12. COMMENTS OR SPECIAL INSTRUCTIONS:	13. WASTE PROFILE NO.
SHORT FUSE FED # 1 TOTAL @ 89,920	

GENERATOR

14. IN CASE OF EMERGENCY OR SPILL, CONTACT		
NAME	PHONE NO	24-HOUR EMERGENCY NO.
KIN SLAUGHTER	575-887-4048	

GENERATOR

15. **GENERATOR'S CERTIFICATION:** I Hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations, and are the same materials previously approved by LEA LAND, LLC

PRINTED/TYPED NAME	SIGNATURE	DATE

TRANSPORTERS

16. TRANSPORTER (1)	17. TRANSPORTER (2)
NAME: SDR ENTERPRISE LLC	NAME:
TEXAS I.D. NO.	TEXAS I.D. NO.
IN CASE OF EMERGENCY CONTACT: SHANNON	IN CASE OF EMERGENCY CONTACT:
EMERGENCY PHONE: (575) 441-7330	EMERGENCY PHONE:
18. **TRANSPORTER (1):** Acknowledgment of receipt of material	19. **TRANSPORTER (2):** Acknowledgment of receipt of material
PRINTED/TYPED NAME E. T.	PRINTED/TYPED NAME
SIGNATURE Eduardo T. DATE 12/9/2015	SIGNATURE DATE

DISPOSAL FACILITY

Lea Land, LLC	ADDRESS: Mile Marker 64, U.S. Hwy 62/180, 30 Miles East of Carlsbad, NM	PHONE: 575-887-4048
PERMIT NO. WM-01-035 - New Mexico	20. COMMENTS	

21. **DISPOSAL FACILITY'S CERTIFICATION:** I Hereby certify that the above described wastes were delivered to this facility, that the facility is authorized and permitted to receive such wastes.

AUTHORIZED SIGNATURE	CELL NO.	DATE	TIME
Santos Gonzalez		12/9/2015	9:10

GENERATOR: COPIES 1 & 6 DISPOSAL SITE: COPIES 2 & 3 TRANSPORTERS: COPIES 4 & 5