Robert Speer
Portfolio Manager,
Upstream Business Unit
Remediation Team

Chevron Environmental Management Company
1400 Smith St. 07049
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Tel (731) 372-6117
Cell (713) 301-7274
rspeer@chevron.com

January 25, 2017

Olivia Yu
Environmental Specialist, District 1
New Mexico Oil Conservation Division
811 South First St.
Artesia, NM 88210

Re: NM E-State NCT-1 007 Soil Assessment Report

Dear Ms. Yu:

Please find enclosed for your files copies of the following report for the NM E-State NCT-1 007 wellhead release project site.

- *New Mexico East State NCT-1 007 – 2016 Soil Assessment Report, Unit N - Section 1 – Township 20 South – Range 36 East, Lea County, NM*

This report was prepared by Conestoga-Rovers & Associates (CRA) on behalf of Chevron Environmental Management Company (CEMC) to document assessment activities for a release of between 5 and 10 bbls of oil and produced water from the wellhead due to unexpected pressure in the wellhead tubing as documented in our November 2010 submittal of form C-141. Soil sampling in the release area indicate that vertical and horizontal delineation of Chlorides have not been achieved at the site, and that further assessment activities are warranted for this project.

Should you have any questions regarding the content of this report, please do not hesitate to contact me. I look forward to working with you in the future.

Sincerely,

Rob Speer
Environmental Project Manager

Soil Assessment Report

New Mexico East State NCT-1 007
Wellhead Release
Lea County, New Mexico

Chevron Environmental Management Company

GHD | 6320 Rothway Street Suite 100 Houston Texas 77040
089861 | Report No 2 | November 2016

Soil Assessment Report

New Mexico East State NCT-1 007
Wellhead Release
Lea County, New Mexico

Chevron Environmental Management Company

Scott Foord
Project Manager

Bernie Bockisch
Senior Project Manager

GHD | 6320 Rothway, Suite 100 Houston Texas USA

089861 | Report No 2 | November 2016

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1. Introduction

GHD is pleased to present this Soil Assessment Report to Chevron Environmental Management Company (CEMC). The project is the New Mexico East State NCT-1 007 wellhead release location (hereafter referred to as the "Site").

2. Project Information and Background

The Site is located in Unit N, Section 1, Township 20 South, Range 36 East, approximately 3.2 miles southwest of Monument, New Mexico, in eastern Lea County (Figure 1 and Figure 2).

On November 17, 2010, well NM E NCT-1 #7 was in the process of being plugged and abandoned when unexpected wellhead pressure caused tubing in the well to damage the wellhead nipple connection resulting in a release of gas and well fluids around the well pad and tank battery location. The volume of fluids released was estimated at 5 to 10 barrels of an unknown fluid. Chevron submitted an initial Form C-141 to the New Mexico Oil Conservation Division (NMOCD) on November 18, 2010 which reported zero volume of fluids recovered (Appendix A). The wellhead and deadman anchors have been removed and surface casing cut off several feet below surface grade. GHD understands the surface owner is the State of New Mexico.

In 2015, Chevron contracted GHD to perform a soil assessment at the Site by implementing a soil boring program. On September 17, 2015, GHD advanced eight soil borings (SB-1 through SB-8) utilizing a hand auger to depths ranging from approximately 0.5 feet to 4 feet below ground surface (bgs). On August 24, 2016, a drill rig was used to advance four additional borings (SB-9 through SB-12) to 30 feet bgs. The findings of these investigations are presented in this report.

3. Recommended Remediation Action Limits

Information available on the Petroleum Recovery Research Center (PRRC) Mapping Portal, current (GHD) managed groundwater site(s) data, and the United States Geological Survey (USGS) Current Water Database for the Nation indicate:

- The depth to groundwater at the Site is less than 50 feet bgs.
- The nearest private domestic water source is greater than 200 feet from the release site.
- The nearest public/municipal water source is greater than 1,000 feet from the release site.
- The release site lies more than 1,000 horizontal feet from the nearest surface water body.

Consequently, the NMOCD total ranking criteria score is twenty (20) for the Site. The anticipated site-specific Recommended Remediation Action Levels (RRALs) to be applied to this location by the NMOCD are 10 milligrams per kilogram (mg/kg) for benzene; 50 mg/kg for total benzene, toluene, ethylbenzene, and xylenes (BTEX); 100 mg/kg for total petroleum hydrocarbons (TPH); and an NMOCD accepted 250 mg/kg for chlorides.

4. Drilling and Sampling

On September 17, 2015, GHD mobilized to the Site to begin soil boring activities. Eight hand auger borings (SB-1 through SB-8) were advanced across the Site on September 17, 2015. The borings were advanced to 4 feet bgs, except SB-1 which encountered refusal at 0.5 feet bgs. Site details and boring locations are shown on Figure 3.

Soil samples were collected from each hand auger boring at 1-foot intervals (when possible) beginning at the surface (0 to 2 inches bgs). Soil samples were placed into laboratory-supplied jars and stored in a cooler with ice. The soil samples were sent to Xenco Laboratories (Xenco) in Odessa, Texas for analysis of total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) by EPA Method SW 8015B Modified and chlorides by EPA Method 300.0.

In order to further define the vertical and horizontal extent of chloride impact, four (4) deeper borings were advanced in 2016 using an air rotary drill rig. GHD's contracted service provider, Harrison & Cooper, Inc. (HCI) of Lubbock, Texas submitted an initial New Mexico One Call utility locate ticket on August 18, 2016. GHD and subcontractor HCI mobilized to the Site to begin drilling activities on August 24, 2016.

The four additional soil borings (SB-9 through SB-12) were located to the north, east and west of the facility, and advanced to total depths of 30 feet bgs. The chloride screening was accomplished in the field by mixing soil samples with distilled water, then testing the rinsate using Hach chloride test strips. The soil types observed during drilling of SB-9 through SB-12 consisted primarily of very fine grained, loose sand with a layer of silty sand sometimes present in the upper 10 feet bgs. The soils were logged in accordance with the Unified Soil Classification System, and soil boring logs for the deeper borings (SB-9 through SB-12) are provided in Appendix B.

Soil samples were collected for laboratory analysis from drill cuttings from each additional boring. The samples were at five-foot intervals, screened with a photoionization detector (PID), placed into laboratory-supplied jars and stored in a cooler with ice. The soil samples were delivered to Xenco for analysis of chlorides by EPA Method 300.0.

4.1 Analytical Results

Analytical results are summarized in Table 1 and the distribution of analytical results is presented in map view on Figure 3. TPH concentrations in all hand auger borings (SB-1 through SB-8) are below the Site RRAL (100 mg/kg) and reporting limits. Chloride concentrations in hand auger borings SB-1, SB-2, and SB-5 exceeded the RRAL (250 mg/kg, see Figure 3).

Chloride concentrations in the deeper borings installed in 2016 (SB-9 through SB-12) exceeded the RRAL in most intervals sampled down to the total depths of 30 feet bgs. Chloride concentrations in deep samples range up to 3,770 mg/kg (SB-12, 15') and exceeded the RRAL in all samples collected at total depth.

The laboratory analytical reports are provided in Appendix C.

5. Conclusions

The analytical data obtained from the soil assessment and delineation activities performed in 2015 and 2016 indicates that vertical and horizontal extent of chloride impacts in soil are not delineated. The horizontal extent of chloride impact is not yet defined to the north, east and west of the Site, and chloride exceeds the RRAL in all deep borings at total depth (30 feet bgs). Additional horizontal and vertical delineation of chloride impacts is warranted. Proposed additional assessment activities are described below.

6. Path Forward – Delineation

GHD proposes to advance five (5) additional soil borings and three (3) monitoring wells in the northern, western and eastern portions of the Site (Figure 4). Field screening of soil cuttings for chlorides will be performed to guide drilling activities, and the terminal depth of each boring will be based on these field screening results. The following outlines basic project details that will be completed by GHD and GHD subcontractors.

Field Program

The field program will consist of the following:

Soil Boring and Monitoring Well Installation:

- Prior to mobilizing the drilling equipment to the Site, a site visit will be performed by GHD to mark the proposed boring locations for New Mexico 811 notification. A One Call ticket will be initiated by the driller to identify subsurface hazards within the proposed drilling areas. Chevron will spot locate any underground utilities and/or pipelines within the assessment area;
- Clearing of vegetation may be required prior to conducting geophysical utility clearance activities and will be further assessed prior to initiating additional field activities;
- A ground penetrating radar (GPR) survey will be conducted across the Site for additional utility clearance assurance and the findings of the survey will be marked, as appropriate;
- GHD will coordinate all field work with management personnel of the Chevron Hobbs Field Management Team (FMT). A MCBU Dig Plan and Hobbs FMT excavation permit will be acquired before performing the proposed tasks;
- A post-hole digger, hydro-excavation methods or similar borehole clearance equipment will be utilized to clear each boring location to a depth of approximately 5 feet bgs (or refusal) and approximately 8-inches in diameter. A hollow stem auger drilling rig, operated by a licensed State of New Mexico water well driller, will be utilized to advance the proposed borings;
- A geologist will record the subsurface lithology and sample data on soil boring logs. At a minimum, soil samples will be collected at ten foot intervals. A chloride field sampling kit will be used to field test intervals during boring activities. The total depth and nature of any sampling of soils will be based on results of the chloride field screening and the professional

judgment of the GHD geologist with the intent to establish the depth at which soil concentrations are below the Site RRAL's.

- Selected soil samples will be submitted to Xenco Laboratories, Odessa, Texas for analysis of chlorides by EPA Method 300.0;
- The soil borings will be properly plugged with hydrated bentonite;
- The monitoring wells will be drilled and installed by a New Mexico-licensed water well driller. Prior to the installation of the groundwater monitoring wells, appropriate permits will be obtained from the New Mexico Office of the State Engineer (NMOSE);
- The wells will be constructed of two-in. diameter, flush-threaded, Schedule 40 PVC casing. The wells will be constructed with 10 to 30 ft of 0.010-in. screened-casing placed at the bottom of the well, extending possibly as deep as 25 feet below the groundwater table and approximately 5-ft above the soil/groundwater interface. The total depth of the monitoring wells are estimated at approximately 60 ft bgs;
- The well annulus will be backfilled with a sand filter pack to approximately two ft above the top of the screen interval. An approximately 2-ft thick bentonite seal will be placed on top of the sand. The remainder of the well annulus will be grouted to ground surface with a 95% Portland cement and 5% bentonite powder grout;
- The wells will be completed with stick-up lockable well vaults. The well vaults will be placed within a minimum 24-in. by 24-in. by 4-in. thick concrete pad. A lock will be provided for the well vault and kept locked;
- Monitoring well construction information will be documented in well record forms submitted to the NMOSE by the drilling subcontractor; and
- The monitoring wells will be developed by removal of sufficient volumes of water to clear the well casing and annulus of sediment. The wells will be developed until geochemical field parameters of pH, temperature, and conductivity stabilize to within 10%. Following well development, the static water level will be measured with an oil/water interface probe to assess the presence of any light, non-aqueous phase liquids (LNAPL).

Groundwater Sampling:

- Prior to collecting samples, the static groundwater level, total depth, and a vertical conductivity profile will be measured and recorded for the wells using a Solinst® Temperature, Water Level, and Conductivity (TLC) meter, or similar. The static water level of the wells will be measured to the nearest hundredth of a foot. The conductivity profile will be completed by taking a conductivity reading approximately every two feet within the water column present in the wells;
- Subsequent to well gauging and profiling, the monitoring wells will be purged using EPA-approved low-flow methodology. During the purging process, geochemical field parameters including pH, conductivity, temperature, dissolved oxygen (DO), and oxidation-reduction potential (ORP) will be recorded. Purging will continue until these parameters stabilize or until the duration of purging reaches one hour.

- The representative groundwater samples will be placed in laboratory supplied containers and preserved on ice in an insulated cooler. The groundwater samples will be submitted to Xenco Laboratories of Midland, Texas for analysis of chloride by EPA method 300.1.

Health and Safety Considerations

Personal protective equipment, including fire-retardant clothing, steel-toed work boots, gloves, safety glasses, and hard hats will be required during all field tasks. The project health and safety plan will be maintained on Site and will be reviewed and signed by on-Site personnel, subcontractors, and authorized visitors.

Quality Assurance/ Quality Control

Soil and groundwater sampling will be completed in accordance with our standard Quality Assurance/ Quality Control procedures designed to minimize cross-contamination between samples and to provide reliable laboratory results.

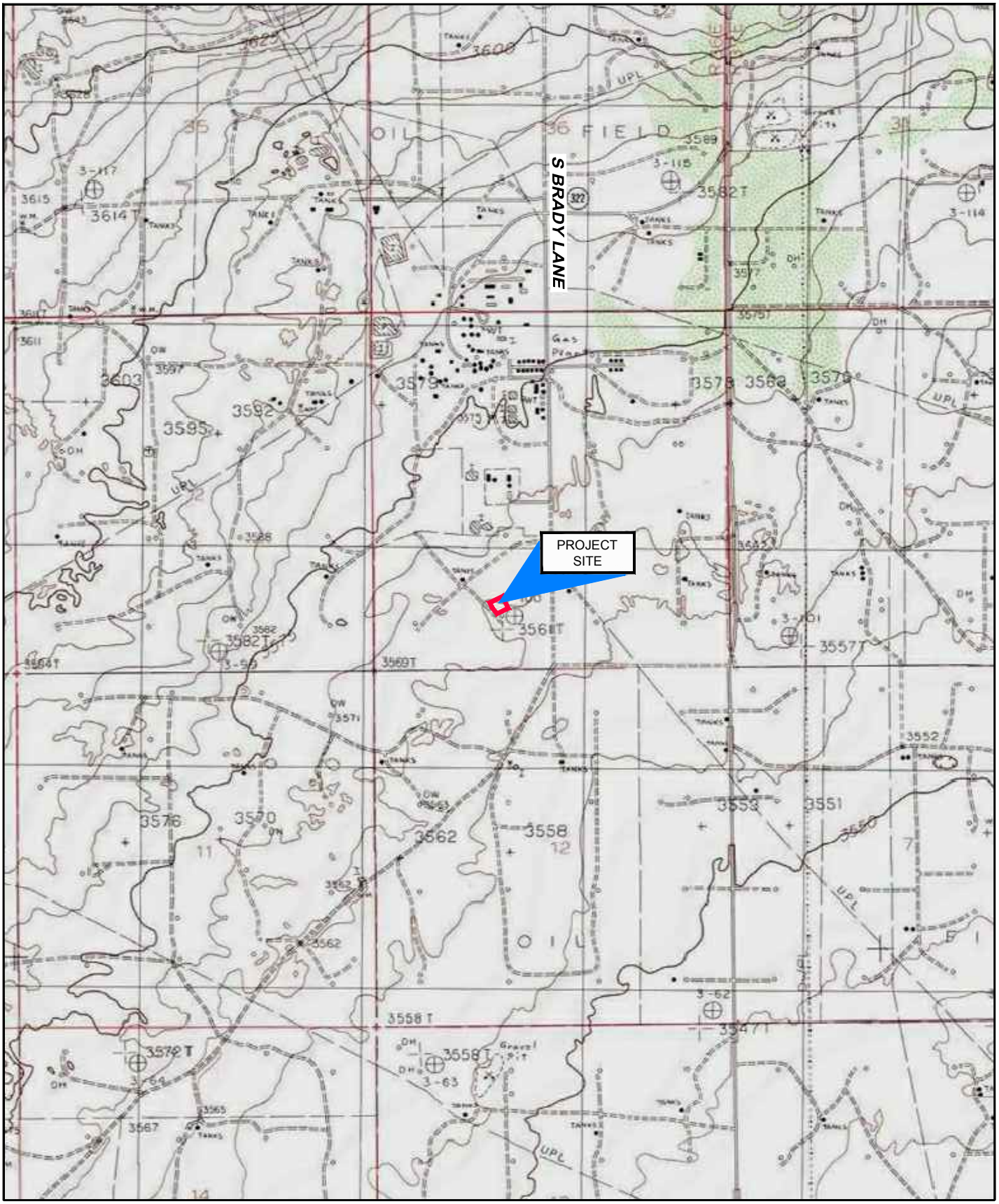
Reporting

A letter report summarizing delineation activities will be submitted. The letter report will include a Site description, project history, description of field events, a discussion of results, and recommendations (if any).

The report will include:

- A scaled Site plan showing the locations of the soil borings and other Site features;
- Soil boring logs;
- Tabulation of field screening and laboratory analytical results;
- Copies of landfill manifests; and
- Geotagged photographic documentation of field activities.

Figures



Source: USGS 7.5 Minute Quad "Monument South, New Mexico"

Lat/Long: 32.597728° North, 103.310388° West

0 1000 2000ft

Coordinate System:
NAD 1983 StatePlane-
New Mexico East (US Feet)

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
LEA COUNTY, NEW MEXICO
NEW MEXICO E STATE NCT-1 007

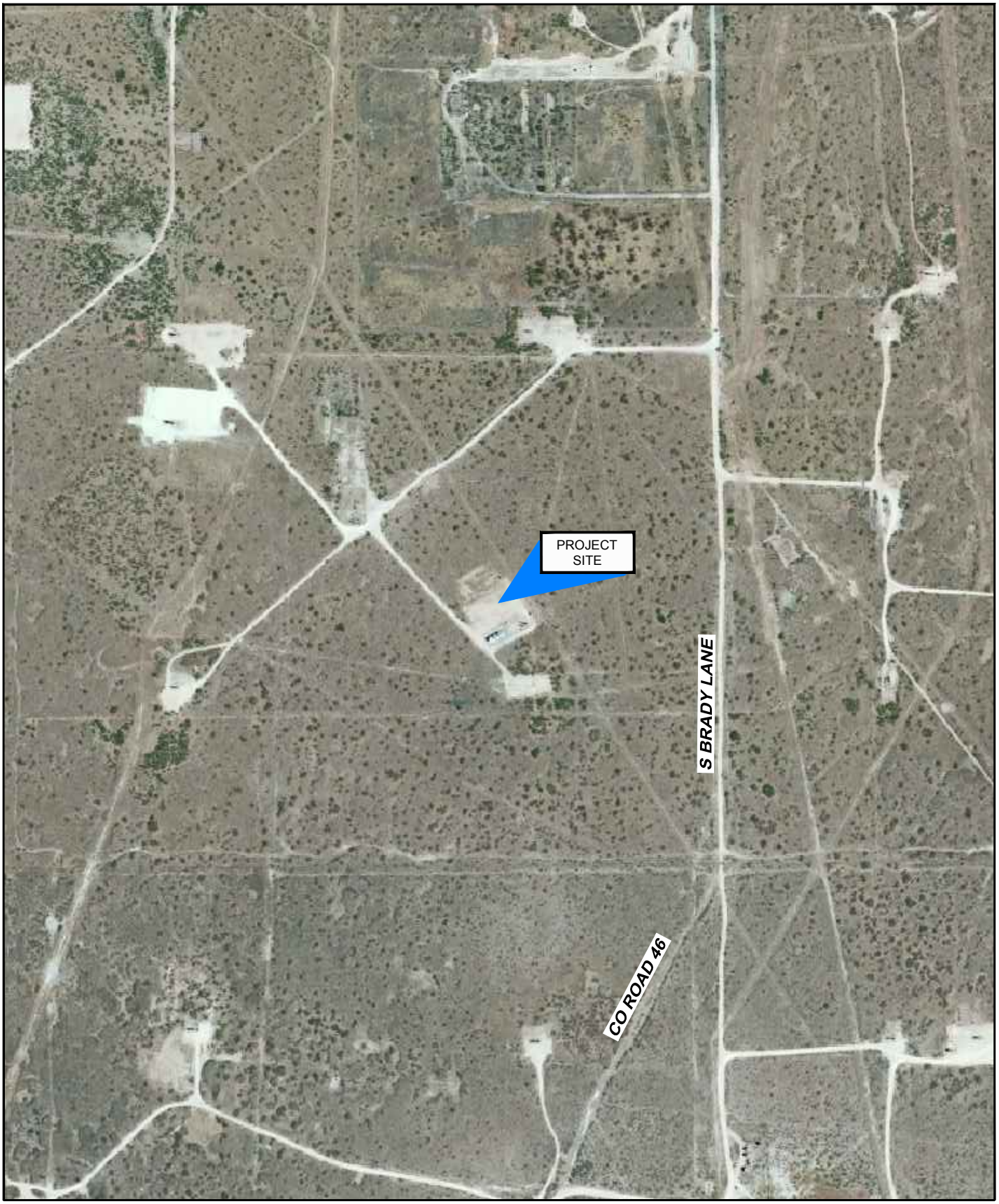
089861-00

Dec 14, 2015

SITE LOCATION MAP

FIGURE 1

CAD File: I:\CAD\Files\08----\089---\089861-CEMC-New Mexico E State\089861-00\089861-00(001)\089861-00(001)GN-DL001.dwg



Source: Bing Maps Imagery

Lat/Long: 32.597728° North, 103.310388° West

0 250 500ft

Coordinate System:
NAD 1983 StatePlane-
New Mexico East (US Feet)

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
LEA COUNTY, NEW MEXICO
NEW MEXICO E STATE NCT-1 007

089861-00

Dec 14, 2015

SITE AERIAL MAP

FIGURE 2

CAD File: I:\CAD\Files\08----\089---\089861-CEMC-New Mexico E State\089861-00\089861-00(001)\089861-00(001)GN-DL001.dwg

NOTES:

1. Yellow shaded cells indicate NMOCD Recommended Remediation Action Level exceedance.
2. "<" indicates below laboratory detection limit.
3. All analytical results reported in mg/kg.

SB-11 08/24/16						
Depth	5'	10'	15'	20'	25'	30'
Chloride	340	929	17	1770	<10	858

SB-10 08/24/16						
Depth	5'	10'	15'	20'	25'	30'
Chloride	22.9	507	847	276	381	506

SB-4 09/17/15					
Depth	0'	1'	2'	3'	4'
TPH (GRO + DRO)	<10.2	<10.4	<10.6	<10.6	<10.6
Chloride	22.2	2.33	4.49	3.98	4.58

SB-2 09/17/15					
Depth	0'	1'	2'	3'	4'
TPH (GRO + DRO)	<10.1	<10.7	<10.9	<10.8	<10.3
Chloride	17000	2920	3150	1960	1330

SB-3 09/17/15					
Depth	0'	1'	2'	3'	4'
TPH (GRO + DRO)	<10.3	<10.2	<10.3	<10.0	<10.1
Chloride	11.7	137	140	14.6	12.6

SB-12 08/24/16						
Depth	5'	10'	15'	20'	25'	30'
Chloride	118	1680	3770	2710	263	337

SB-1 09/17/15		
Depth	0'	0.5'
TPH (GRO + DRO)	<10.1	<10.6
Chloride	11300	11700

SB-9 08/24/16						
Depth	5'	10'	15'	20'	25'	30'
Chloride	25.3	615	854	174	897	888

SB-5 09/17/15					
Depth	0'	1'	2'	3'	4'
TPH (GRO + DRO)	<10.1	<10.1	<10.1	<10.1	<10.2
Chloride	569	508	600	581	598

SB-6 09/17/15					
Depth	0'	1'	2'	3'	4'
TPH (GRO + DRO)	<9.88	<9.95	<10.0	<9.95	<10.0
Chloride	24.0	11.4	27.9	31.8	51.7

SB-7 09/17/15					
Depth	0'	1'	2'	3'	4'
TPH (GRO + DRO)	<9.91	<9.99	<9.99	<10.0	<9.96
Chloride	1.79	23.2	18.1	19.1	8.73

SB-8 09/17/15					
Depth	0'	1'	2'	3'	4'
TPH (GRO + DRO)	<9.96	<10.1	<10.2	<10.3	<11.2
Chloride	2.23	16.1	5.05	15.1	83.3

SB-10, SB-11, SB-2, SB-3, SB-12, SB-1, SB-4, SB-9, SB-5, SB-6, SB-7, SB-8

Lease Road

LEGEND	
	Soil Boring Location
	New Mexico E State NCT-1 007 Well Marker
Depth	Depth of Sample (ft)
TPH	Total Petroleum Hydrocarbons Concentration (mg/kg)
DRO	TPH as Diesel Range Organics
GRO	TPH as Gasoline Range Organics
ND	Indicates Non Detect

Source: Bing Maps Imagery

Lat/Long: 32.597728° North, 103.310388° West

0 20 50ft

Coordinate System:
NAD 1983 StatePlane-
New Mexico East (US Feet)

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
LEA COUNTY, NEW MEXICO
NEW MEXICO E STATE NCT-1 007

089861-00

Oct 26, 2016

SITE DETAILS AND ANALYTICAL RESULTS MAP

FIGURE 3

CAD File: I:\CAD\Files\08----\089---\089861-CEMC-New Mexico E State\089861-00\089861-00(001)\089861-00(001)GN-DL001.dwg

Source: Bing Maps Imagery

Lat/Long: 32.597728° North, 103.310388° West

0 40 80ft

Coordinate System:
NAD 1983 StatePlane-
New Mexico East (US Feet)

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
LEA COUNTY, NEW MEXICO
NEW MEXICO E STATE NCT-1 007

PROPOSED BORING AND MONITORING WELL LOCATION MAP

089861-00

Nov 3, 2016

FIGURE 4

CAD File: I:\CAD\Files\08----\089---\089861-CEMC-New Mexico E State\089861-00\089861-00(001)\089861-00(001)GN-DL001.dwg

Tables

Soil Analytical Summary
TPH and Chlorides
New Mexico East State NCT-1 007
Lea County, New Mexico

Sample ID	Depth	Date	TPH (SW 8015 Modified)			Chlorides
			GRO	DRO	GRO+DRO	
NMOCD Recommended Remediation Action Levels			**---** mg/kg	**---** mg/kg	**1,000** mg/kg	**250** mg/kg
SB-1	0'	9/17/15	<10.1	<10.1	<10.1	**11300**
	0.5'	9/17/15	<10.6	<10.6	<10.6	**11700**
SB-2	0'	9/17/15	<10.1	<10.1	<10.1	**17000**
	1'	9/17/15	<10.7	<10.7	<10.7	**2920**
	2'	9/17/15	<10.9	<10.9	<10.9	**3150**
	3'	9/17/15	<10.8	<10.8	<10.8	**1960**
	4'	9/17/15	<10.3	<10.3	<10.3	**1330**
SB-3	0'	9/17/15	<10.3	<10.3	<10.3	**11.7**
	1'	9/17/15	<10.2	<10.2	<10.2	**137**
	2'	9/17/15	<10.3	<10.3	<10.3	**140**
	3'	9/17/15	<10.0	<10.0	<10.0	**14.6**
	4'	9/17/15	<10.1	<10.1	<10.1	**12.6**
SB-4	0'	9/17/15	<10.2	<10.2	<10.2	**22.2**
	1'	9/17/15	<10.4	<10.4	<10.4	**2.33**
	2'	9/17/15	<10.6	<10.6	<10.6	**4.49**
	3'	9/17/15	<10.6	<10.6	<10.6	**3.98**
	4'	9/17/15	<10.6	<10.6	<10.6	**4.58**
SB-5	0'	9/17/15	<10.1	<10.1	<10.1	**569**
	1'	9/17/15	<10.1	<10.1	<10.1	**508**
	2'	9/17/15	<10.1	<10.1	<10.1	**600**
	3'	9/17/15	<10.1	<10.1	<10.1	**581**
	4'	9/17/15	<10.2	<10.2	<10.2	**598**
SB-6	0'	9/17/15	<9.88	<9.88	<9.88	**24.0**
	1'	9/17/15	<9.95	<9.95	<9.95	**11.4**
	2'	9/17/15	<10.0	<10.0	<10.0	**27.9**
	3'	9/17/15	<9.95	<9.95	<9.95	**31.8**
	4'	9/17/15	<10.0	<10.0	<10.0	**51.7**
SB-7	0'	9/17/15	<9.91	<9.91	<9.91	**1.79**
	1'	9/17/15	<9.99	<9.99	<9.99	**23.2**
	2'	9/17/15	<9.99	<9.99	<9.99	**18.1**
	3'	9/17/15	<10.0	<10.0	<10.0	**19.1**
	4'	9/17/15	<9.96	<9.96	<9.96	**8.73**
SB-8	0'	9/17/15	<9.96	<9.96	<9.96	**2.23**
	1'	9/17/15	<10.1	<10.1	<10.1	**16.1**
	2'	9/17/15	<10.2	<10.2	<10.2	**5.05**
	3'	9/17/15	<10.3	<10.3	<10.3	**15.1**
	4'	9/17/15	<11.2	<11.2	<11.2	**83.3**
SB-9	5'	8/24/16	NT	NT	NT	**25.3**
	10'	8/24/16	NT	NT	NT	**615**
	15'	8/24/16	NT	NT	NT	**854**
	20'	8/24/16	NT	NT	NT	**174**
	25'	8/24/16	NT	NT	NT	**597**
	30'	8/24/16	NT	NT	NT	**888**

Soil Analytical Summary
TPH and Chlorides
New Mexico East State NCT-1 007
Lea County, New Mexico

Sample ID	Depth	Date	TPH (SW 8015 Modified)			Chlorides
			GRO	DRO	GRO+DRO	
NMOCD Recommended Remediation Action Levels			**---** mg/kg	**---** mg/kg	**1,000** mg/kg	**250** mg/kg
SB-10	5'	8/24/16	NT	NT	NT	**22.9**
	10'	8/24/16	NT	NT	NT	**507**
	15'	8/24/16	NT	NT	NT	**847**
	20'	8/24/16	NT	NT	NT	**276**
	25'	8/24/16	NT	NT	NT	**381**
	30'	8/24/16	NT	NT	NT	**506**
SB-11	5'	8/24/16	NT	NT	NT	**340**
	10'	8/24/16	NT	NT	NT	**929**
	15'	8/24/16	NT	NT	NT	**17**
	20'	8/24/16	NT	NT	NT	**1770**
	25'	8/24/16	NT	NT	NT	<10
	30'	8/24/16	NT	NT	NT	**858**
SB-12	5'	8/24/16	NT	NT	NT	**118**
	10'	8/24/16	NT	NT	NT	**1680**
	15'	8/24/16	NT	NT	NT	**3770**
	20'	8/24/16	NT	NT	NT	**2710**
	25'	8/24/16	NT	NT	NT	**263**
	30'	8/24/16	NT	NT	NT	**337**

Notes:
- All analytical results reported in (mg/kg) milligrams per kilogram.
- Chloride analyses by Method EPA 300/300.1
- TPH analysis by Method SW 8015B Modified
- bgs - below ground surface
- Bold numbers indicate detected concentrations.
- '<' indicates below laboratory Reporting Limit (RL)
- 'NT' indicated constituent was not tested.
- 'SB' indicates soil boring.
- Highlighted cells indicate exceedance of NMOCD RRALs

Appendices

Appendix A
Original Form C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company **Chevron USA**	Contact **Kevin Behrens**
Address **1400 Smith Street, Room 07080, Houston, TX 77002**	Telephone No. **713-372-0206**
Facility Name **New Mexico "E" State NCT-1 #7**	Facility Type **Well**

Surface Owner **State of New Mexico**	Mineral Owner **Chevron USA**	Lease No. **State of New Mexico B-154 LSE**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	**1**	**20S**	**36E**	**At the well-site**	**SW4**	NA	NA	**LEA**

Latitude 32.5977277226 Longitude -103.310387595 NAD 1983

NATURE OF RELEASE

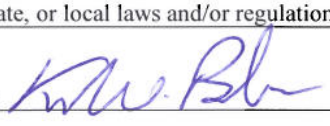
Type of Release **Gas and Drilling Fluids From Original Drilling Completion**	Volume of Release **~5-10 bbls fluid, unknown amount of gas**	Volume Recovered **0**
Source of Release **Wellbore (damaged nipple on wellhead connections)**	Date and Hour of Occurrence **10:00 AM, 11/17/10**	Date and Hour of Discovery **10:00 AM, 11/17/10**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Mark Whitaker, OCD was on-site at time of release**	
By Whom? **Greg Foster, Chevron Well Rep**	Date and Hour **10:00 AM, 11/17/10**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. **NA**	

If a Watercourse was Impacted, Describe Fully.*
NA

Describe Cause of Problem and Remedial Action Taken.*
Well was in the process of being P&A. During the P&A, unforeseen well pressure after perforating the casing caused the tubing to rise out of the wellbore and damage the wellhead nipple connection, causing a release of gas and well fluids (e.g., drilling fluids that were previously left in the well). The well was brought under control and shut-in.

Describe Area Affected and Cleanup Action Taken.*
The release affected approximately 7,500 sq ft in and around the well pad (light coating of well fluid that was "sprayed" from the damaged nipple). Plan is to sample surface soil in representative areas (~3 to 6 locations, 0-6" depth) and analyze for TPH, BTEX, PAHs, RCRA Metals, and Chloride.

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Kevin Behrens	Approved by District Supervisor:	
Title: Environmental Project Manager	Approval Date:	Expiration Date:
E-mail Address: kbehrens@chevron.com	Conditions of Approval:	Attached ☐
Date: 11/18/10 Phone: 713-372-0206, cell 281-851-5142		

* Attach Additional Sheets If Necessary

Appendix B
Boring Logs

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: New Mexico East State NCT-1 007
HOLE DESIGNATION: SB-9
PROJECT NUMBER: 89861
DATE COMPLETED: 24 August 2016
CLIENT: Chevron Environmental Management Company
DRILLING METHOD: Air Rotary
LOCATION: Lea County, New Mexico
FIELD PERSONNEL: J. Stoffel
DRILLING COMPANY: Harrison & Cooper, Inc.

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE DEPTH (ft)	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE PP (tsf)	SAMPLE PID (ppm)
0	SAND (SP); dull yellow-brown, medium to fine grained, loose, damp, well sorted, with some small caliche nodes in matrix, no hydrocarbon odor	1.00					
2	SILTY SAND (SM); dull yellow-brown, very fine grained, loose, dry, with some moderately to poorly cemented sandstone, no hydrocarbon odor						
4			5				0.4
6							
8							
10	SAND (SP); dull, yellow-orange, very fine grained, loose, dry, well sorted, with some moderately cemented very-fine grained sandstone, no hydrocarbon odor to 30 feet	10.00	10				0.2
12							
14							
16			15				0.1
18							
20	- bright yellow-brown		20				0.4
22							
24	- red-brown, damp, with some moderately to poorly cemented very-fine grained sandstone						
26			25				0.3
28							
30	- dull orange-brown, with some moderately to well cemented very-fine grained sandstone						0.4
32	END OF BOREHOLE @ 30.0ft BGS	30.00	30				
34							

NOTES: Stratigraphy descriptions are based on drill cuttings.

LABORATORY ANALYSIS ( )

OVERBURDEN LOG 089861.GPJ CRA_CORP.GDT 8/9/16

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: New Mexico East State NCT-1 007
HOLE DESIGNATION: SB-10
PROJECT NUMBER: 89861
DATE COMPLETED: 24 August 2016
CLIENT: Chevron Environmental Management Company
DRILLING METHOD: Air Rotary
LOCATION: Lea County, New Mexico
FIELD PERSONNEL: J. Stoffel
DRILLING COMPANY: Harrison & Cooper, Inc.

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE DEPTH (ft)	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE PP (tsf)	SAMPLE PID (ppm)
2	SAND (SP); dull yellow-brown, fine grained, loose, damp, well sorted, no hydrocarbon odor						
4	- fine to very-fine grained, with some moderately to poorly cemented sandstone		5				1
6							
8	SILTY SAND (SM); dull yellow-brown, very fine grained, loose, dry, with some clay in matrix, no hydrocarbon odor	7.00					
10			10				1
12	SAND (SP); dull, yellow-orange, very fine grained, loose, dry, well sorted, with some silt and moderately to well cemented very-fine grained sandstone, no hydrocarbon odor to 30 feet	11.00					
14							
16			15				0.7
18							
20	- yellow-brown, with some moderately cemented sandstone		20				1
22							
24	- red-brown, damp, with some moderately to poorly cemented sandstone						
26			25				1.4
28							
30	- dull orange-brown, with some moderately to well cemented very-fine grained sandstone		30				1.2
32	END OF BOREHOLE @ 30.0ft BGS	30.00					
34							

NOTES: Stratigraphy descriptions are based on drill cuttings.

LABORATORY ANALYSIS ( )

OVERBURDEN LOG 089861.GPJ CRA_CORP.GDT 8/9/16

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: New Mexico East State NCT-1 007
HOLE DESIGNATION: SB-11
PROJECT NUMBER: 89861
DATE COMPLETED: 24 August 2016
CLIENT: Chevron Environmental Management Company
DRILLING METHOD: Air Rotary
LOCATION: Lea County, New Mexico
FIELD PERSONNEL: J. Stoffel
DRILLING COMPANY: Harrison & Cooper, Inc.

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE DEPTH (ft)	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE PP (tsf)	SAMPLE PID (ppm)
0	SAND (SP); dull yellow-brown, fine grained, loose, damp, with some caliche fragments in matrix, no hydrocarbon odor to 30 feet						
4	- fine to very-fine grained, well sorted, with some poorly cemented very-fine grained sandstone		5				0.3
10	- dull yellow-orange, very-fine grained, dry, with some silt and some moderately to well cemented very-fine grained sandstone		10				0.8
14	- yellow-brown		15				1.1
20	- bright yellow-brown, with some well cemented very-fine grained sandstone		20				1.9
24	- dull yellow-orange, with some moderately to well cemented very-fine grained sandstone		25				0.8
28	- dull yellow-orange, damp						1.2
30	END OF BOREHOLE @ 30.0ft BGS	30.00	30				

NOTES: Stratigraphy descriptions are based on drill cuttings.

LABORATORY ANALYSIS ( )

OVERBURDEN LOG 089861.GPJ CRA_CORP.GDT 8/9/16

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: New Mexico East State NCT-1 007
HOLE DESIGNATION: SB-12
PROJECT NUMBER: 89861
DATE COMPLETED: 24 August 2016
CLIENT: Chevron Environmental Management Company
DRILLING METHOD: Air Rotary
LOCATION: Lea County, New Mexico
FIELD PERSONNEL: J. Stoffel
DRILLING COMPANY: Harrison & Cooper, Inc.

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE DEPTH (ft)	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE PP (tsf)	SAMPLE PID (ppm)
0	SAND (SP); dull yellow-brown, fine grained, loose, damp, with some caliche fragments in matrix, no hydrocarbon odor to 30 feet						
4	- fine to very-fine grained, well sorted, with some poorly cemented very-fine grained sandstone		5				0
10	- dull yellow-orange, very-fine grained, dry, with some moderately to well cemented very-fine grained sandstone		10				0
14	- with some well cemented very-fine grained sandstone		15				0
20	- fine to very-fine grained, well sorted, with some moderately to well cemented very-fine grained sandstone		20				0.1
24	- bright yellow-brown, very fine grained, damp		25				0
28	- dull orange-brown, with some moderately cemented very-fine grained sandstone		30				0
30	END OF BOREHOLE @ 30.0ft BGS	30.00					

NOTES: Stratigraphy descriptions are based on drill cuttings.

LABORATORY ANALYSIS ( )

OVERBURDEN LOG 089861.GPJ CRA_CORP.GDT 8/9/16

Appendix C
Laboratory Analytical Reports

Analytical Report 515865

for

GHD Services, INC- Midland

Project Manager: Jake Ferenz

New Mexico East State

089861

30-SEP-15

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-15-19), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

30-SEP-15

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

Reference: XENCO Report No(s): **515865**
New Mexico East State
Project Address: MONUMENT, NM

Jake Ferenz:

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) 515865. 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. 515865 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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Sample Cross Reference 515865

GHD Services, INC- Midland, Midland, TX

New Mexico East State

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB1 @ 0'-091715	S	09-17-15 11:30	- 0 ft	515865-001
SB1 @ 6"-091715	S	09-17-15 11:35	- 6 In	515865-002
SB2@ 0'-091715	S	09-17-15 11:43	- 0 ft	515865-003
SB2 @ 1'-091715	S	09-17-15 11:53	- 1 ft	515865-004
SB2 @ 2'-091715	S	09-17-15 11:56	- 2 ft	515865-005
SB2 @ 3'-091715	S	09-17-15 11:59	- 3 ft	515865-006
SB2 @ 4'-091715	S	09-17-15 12:02	- 4 ft	515865-007
SB3 @ 0'-091715	S	09-17-15 12:10	- 0 ft	515865-008
SB3 @ 1'-091715	S	09-17-15 12:13	- 1 ft	515865-009
SB3 @ 2'-091715	S	09-17-15 12:15	- 2 ft	515865-010
SB3 @ 3'-091715	S	09-17-15 12:17	- 3 ft	515865-011
SB3 @ 4'-091715	S	09-17-15 12:19	- 4 ft	515865-012
SB4 @ 0'-091715	S	09-17-15 12:27	- 0 ft	515865-013
SB4 @ 1'-091715	S	09-17-15 12:34	- 1 ft	515865-014
SB4 @ 2'-091715	S	09-17-15 12:37	- 2 ft	515865-015
SB4 @ 3'-091715	S	09-17-15 12:41	- 3 ft	515865-016
SB4 @ 4'-091715	S	09-17-15 12:43	- 4 ft	515865-017
SB5 @ 0'-091715	S	09-17-15 12:52	- 0 ft	515865-018
SB5 @ 1'-091715	S	09-17-15 12:56	- 1 ft	515865-019
SB5 @ 2'-091715	S	09-17-15 12:58	- 2 ft	515865-020
SB5 @ 3'-091715	S	09-17-15 13:00	- 3 ft	515865-021
SB5 @ 4'-091715	S	09-17-15 13:03	- 4 ft	515865-022
SB6 @ 0'-091715	S	09-17-15 13:17	- 0 ft	515865-023
SB6 @ 1'-091715	S	09-17-15 13:19	- 1 ft	515865-024
SB6 @ 2'-091715	S	09-17-15 13:22	- 2 ft	515865-025
SB6 @ 3'-091715	S	09-17-15 13:24	- 3 ft	515865-026
SB6 @ 4'-091715	S	09-17-15 13:25	- 4 ft	515865-027
SB7 @ 0'-091715	S	09-17-15 13:49	- 0 ft	515865-028
SB7 @ 1'-091715	S	09-17-15 13:53	- 1 ft	515865-029
SB7 @ 2'-091715	S	09-17-15 13:55	- 2 ft	515865-030
SB7 @ 3'-091715	S	09-17-15 13:57	- 3 ft	515865-031
SB7 @ 4'-091715	S	09-17-15 13:59	- 4 ft	515865-032
SB8 @ 0'-091715	S	09-17-15 14:02	- 0 ft	515865-033
SB8 @ 1'-091715	S	09-17-15 14:05	- 1 ft	515865-034
SB8 @ 2'-091715	S	09-17-15 14:07	- 2 ft	515865-035
SB8 @ 3'-091715	S	09-17-15 14:09	- 3 ft	515865-036
SB8 @ 4'-091715	S	09-17-15 14:12	- 4 ft	515865-037

Certificate of Analytical Results
515865
GHD Services, INC- Midland, Midland, TX
New Mexico East State

Sample Id: **SB1 @ 0'-091715** Matrix: Soil Sample Depth: 0 ft

Lab Sample Id: 515865-001 Date Collected: 09.17.15 11.30 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 2.92 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**11300**	412	14.6	mg/kg	09.29.15 04:32		200

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 2.92 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.4	10.1	mg/kg	09.25.15 12:55	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.4	10.1	mg/kg	09.25.15 12:55	U	1
Total TPH	PHC635	ND		10.1	mg/kg	09.25.15 12:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	110	70 - 135	%		
o-Terphenyl	109	70 - 135	%		

Certificate of Analytical Results
515865
GHD Services, INC- Midland, Midland, TX
New Mexico East State

Sample Id: **SB1 @ 6"-091715** Matrix: Soil Sample Depth: 6 In

Lab Sample Id: 515865-002 Date Collected: 09.17.15 11.35 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 7 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**11700**	430	15.2	mg/kg	09.29.15 04:55		200

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 7 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	16.1	10.6	mg/kg	09.25.15 13:18	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	16.1	10.6	mg/kg	09.25.15 13:18	U	1
Total TPH	PHC635	ND		10.6	mg/kg	09.25.15 13:18	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Certificate of Analytical Results
515865
GHD Services, INC- Midland, Midland, TX
New Mexico East State

Sample Id: **SB2@ 0'-091715** Matrix: Soil Sample Depth: 0 ft

Lab Sample Id: 515865-003 Date Collected: 09.17.15 11.43 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 2.6 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**17000**	411	14.5	mg/kg	09.29.15 06:03		200

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 2.6 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.4	10.1	mg/kg	09.24.15 19:11	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.4	10.1	mg/kg	09.24.15 19:11	U	1
Total TPH	PHC635	ND		10.1	mg/kg	09.24.15 19:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	199	70 - 135	%		**
o-Terphenyl	199	70 - 135	%		**

Certificate of Analytical Results
515865
GHD Services, INC- Midland, Midland, TX
New Mexico East State

Sample Id: **SB2 @ 1'-091715** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 515865-004 Date Collected: 09.17.15 11.53 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 7.68 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**2920**	108	3.83	mg/kg	09.29.15 06:25		50

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 7.68 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	16.2	10.7	mg/kg	09.24.15 19:59	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	16.2	10.7	mg/kg	09.24.15 19:59	U	1
Total TPH	PHC635	ND		10.7	mg/kg	09.24.15 19:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	125	70 - 135	%		
o-Terphenyl	125	70 - 135	%		

Certificate of Analytical Results
515865
GHD Services, INC- Midland, Midland, TX
New Mexico East State

Sample Id: **SB2 @ 2'-091715** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 515865-005 Date Collected: 09.17.15 11.56 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 9.31 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**3150**	221	7.81	mg/kg	09.29.15 06:48		100

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 9.31 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	16.5	10.9	mg/kg	09.24.15 20:24	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	16.5	10.9	mg/kg	09.24.15 20:24	U	1
Total TPH	PHC635	ND		10.9	mg/kg	09.24.15 20:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	104	70 - 135	%		
o-Terphenyl	104	70 - 135	%		

Certificate of Analytical Results
515865
GHD Services, INC- Midland, Midland, TX
New Mexico East State

Sample Id: **SB2 @ 3'-091715** Matrix: Soil Sample Depth: 3 ft

Lab Sample Id: 515865-006 Date Collected: 09.17.15 11.59 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 8.16 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**1960**	109	3.85	mg/kg	09.29.15 07:11		50

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 8.16 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	16.3	10.8	mg/kg	09.24.15 20:48	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	16.3	10.8	mg/kg	09.24.15 20:48	U	1
Total TPH	PHC635	ND		10.8	mg/kg	09.24.15 20:48	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Certificate of Analytical Results
515865
GHD Services, INC- Midland, Midland, TX
New Mexico East State

Sample Id: **SB2 @ 4'-091715** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 515865-007 Date Collected: 09.17.15 12.02 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 4.43 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**1330**	105	3.70	mg/kg	09.29.15 07:33		50

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 4.43 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.7	10.3	mg/kg	09.24.15 21:12	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.7	10.3	mg/kg	09.24.15 21:12	U	1
Total TPH	PHC635	ND		10.3	mg/kg	09.24.15 21:12	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	108	70 - 135	%		
o-Terphenyl	108	70 - 135	%		

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Sample Id: **SB3 @ 0'-091715** Matrix: Soil Sample Depth: 0 ft

Lab Sample Id: 515865-008 Date Collected: 09.17.15 12.10 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 4.86 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**11.7**	2.10	0.0744	mg/kg	09.29.15 08:19		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 4.86 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.7	10.3	mg/kg	09.24.15 21:36	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.7	10.3	mg/kg	09.24.15 21:36	U	1
Total TPH	PHC635	ND		10.3	mg/kg	09.24.15 21:36	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	109	70 - 135	%		
o-Terphenyl	108	70 - 135	%		

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Sample Id: **SB3 @ 1'-091715** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 515865-009 Date Collected: 09.17.15 12.13 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 3.59 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**137**	2.07	0.0734	mg/kg	09.29.15 08:41		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 3.59 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.5	10.2	mg/kg	09.24.15 22:00	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.5	10.2	mg/kg	09.24.15 22:00	U	1
Total TPH	PHC635	ND		10.2	mg/kg	09.24.15 22:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

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Sample Id: **SB3 @ 2'-091715** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 515865-010 Date Collected: 09.17.15 12.15 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 4.15 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**140**	2.09	0.0739	mg/kg	09.29.15 09:04		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 4.15 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.6	10.3	mg/kg	09.24.15 22:24	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.6	10.3	mg/kg	09.24.15 22:24	U	1
Total TPH	PHC635	ND		10.3	mg/kg	09.24.15 22:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	100	70 - 135	%		
o-Terphenyl	99	70 - 135	%		

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Sample Id: **SB3 @ 3'-091715** Matrix: Soil Sample Depth: 3 ft

Lab Sample Id: 515865-011 Date Collected: 09.17.15 12.17 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 1.8 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**14.6**	2.04	0.0721	mg/kg	09.29.15 09:27		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 1.8 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.2	10.0	mg/kg	09.24.15 22:48	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.2	10.0	mg/kg	09.24.15 22:48	U	1
Total TPH	PHC635	ND		10.0	mg/kg	09.24.15 22:48	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

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Sample Id: **SB3 @ 4'-091715** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 515865-012 Date Collected: 09.17.15 12.19 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 2.56 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**12.6**	2.05	0.0727	mg/kg	09.29.15 10:34		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 2.56 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.4	10.1	mg/kg	09.24.15 23:11	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.4	10.1	mg/kg	09.24.15 23:11	U	1
Total TPH	PHC635	ND		10.1	mg/kg	09.24.15 23:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

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Sample Id: **SB4 @ 0'-091715** Matrix: Soil Sample Depth: 0 ft

Lab Sample Id: 515865-013 Date Collected: 09.17.15 12.27 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 3.56 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**22.2**	2.07	0.0734	mg/kg	09.29.15 10:57		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 3.56 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.5	10.2	mg/kg	09.24.15 23:35	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.5	10.2	mg/kg	09.24.15 23:35	U	1
Total TPH	PHC635	ND		10.2	mg/kg	09.24.15 23:35	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	95	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

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Sample Id: **SB4 @ 1'-091715** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 515865-014 Date Collected: 09.17.15 12.34 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 4.99 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**2.33**	2.11	0.0745	mg/kg	09.29.15 11:20		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 4.99 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.8	10.4	mg/kg	09.25.15 00:23	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.8	10.4	mg/kg	09.25.15 00:23	U	1
Total TPH	PHC635	ND		10.4	mg/kg	09.25.15 00:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	96	70 - 135	%		

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Sample Id: **SB4 @ 2'-091715** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 515865-015 Date Collected: 09.17.15 12.37 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 6.78 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**4.49**	2.15	0.0759	mg/kg	09.29.15 11:42		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 6.78 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	16.1	10.6	mg/kg	09.25.15 00:47	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	16.1	10.6	mg/kg	09.25.15 00:47	U	1
Total TPH	PHC635	ND		10.6	mg/kg	09.25.15 00:47	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

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Sample Id: **SB4 @ 3'-091715** Matrix: Soil Sample Depth: 3 ft

Lab Sample Id: 515865-016 Date Collected: 09.17.15 12.41 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: 6.82 Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**3.98**	2.15	0.0760	mg/kg	09.29.15 12:05		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 6.82 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	16.1	10.6	mg/kg	09.25.15 01:11	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	16.1	10.6	mg/kg	09.25.15 01:11	U	1
Total TPH	PHC635	ND		10.6	mg/kg	09.25.15 01:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	100	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

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Sample Id: **SB4 @ 4'-091715** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 515865-017 Date Collected: 09.17.15 12.43 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 6.63 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**4.58**	2.14	0.0758	mg/kg	09.29.15 14:46		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 6.63 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	16.0	10.6	mg/kg	09.25.15 01:36	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	16.0	10.6	mg/kg	09.25.15 01:36	U	1
Total TPH	PHC635	ND		10.6	mg/kg	09.25.15 01:36	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	129	70 - 135	%		
o-Terphenyl	131	70 - 135	%		

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Sample Id: **SB5 @ 0'-091715** Matrix: Soil Sample Depth: 0 ft

Lab Sample Id: 515865-018 Date Collected: 09.17.15 12.52 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 2.09 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**569**	40.9	1.45	mg/kg	09.29.15 15:31		20

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 2.09 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.3	10.1	mg/kg	09.25.15 02:00	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.3	10.1	mg/kg	09.25.15 02:00	U	1
Total TPH	PHC635	ND		10.1	mg/kg	09.25.15 02:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

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Sample Id: **SB5 @ 1'-091715** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 515865-019 Date Collected: 09.17.15 12.56 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 2.56 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**508**	20.5	0.727	mg/kg	09.29.15 15:54		10

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 2.56 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.3	10.1	mg/kg	09.25.15 13:42	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.3	10.1	mg/kg	09.25.15 13:42	U	1
Total TPH	PHC635	ND		10.1	mg/kg	09.25.15 13:42	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

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Sample Id: **SB5 @ 2'-091715** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 515865-020 Date Collected: 09.17.15 12.58 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 2.5 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**600**	20.5	0.726	mg/kg	09.29.15 16:17		10

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 2.5 Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.4	10.1	mg/kg	09.25.15 03:14	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.4	10.1	mg/kg	09.25.15 03:14	U	1
Total TPH	PHC635	ND		10.1	mg/kg	09.25.15 03:14	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

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Sample Id: **SB5 @ 3'-091715** Matrix: Soil Sample Depth: 3 ft

Lab Sample Id: 515865-021 Date Collected: 09.17.15 13.00 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 2.47 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**581**	20.5	0.726	mg/kg	09.29.15 16:39		10

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 2.47 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.3	10.1	mg/kg	09.27.15 07:34	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.3	10.1	mg/kg	09.27.15 07:34	U	1
Total TPH	PHC635	ND		10.1	mg/kg	09.27.15 07:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	80	70 - 135	%		
o-Terphenyl	79	70 - 135	%		

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Sample Id: **SB5 @ 4'-091715** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 515865-022 Date Collected: 09.17.15 13.03 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 2.77 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**598**	20.6	0.728	mg/kg	09.29.15 17:02		10

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 2.77 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.4	10.2	mg/kg	09.27.15 08:00	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.4	10.2	mg/kg	09.27.15 08:00	U	1
Total TPH	PHC635	ND		10.2	mg/kg	09.27.15 08:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	117	70 - 135	%		
o-Terphenyl	116	70 - 135	%		

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Sample Id: **SB6 @ 0'-091715** Matrix: Soil Sample Depth: 0 ft

Lab Sample Id: 515865-023 Date Collected: 09.17.15 13.17 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: .42 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**24.0**	2.01	0.0711	mg/kg	09.29.15 18:10		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: .42 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.88	mg/kg	09.27.15 08:25	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.88	mg/kg	09.27.15 08:25	U	1
Total TPH	PHC635	ND		9.88	mg/kg	09.27.15 08:25	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Certificate of Analytical Results
515865
GHD Services, INC- Midland, Midland, TX
New Mexico East State

Sample Id: **SB6 @ 1'-091715** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 515865-024 Date Collected: 09.17.15 13.19 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: .84 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**11.4**	2.02	0.0714	mg/kg	09.29.15 18:32		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: .84 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.1	9.95	mg/kg	09.27.15 08:49	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.1	9.95	mg/kg	09.27.15 08:49	U	1
Total TPH	PHC635	ND		9.95	mg/kg	09.27.15 08:49	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

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Sample Id: **SB6 @ 2'-091715** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 515865-025 Date Collected: 09.17.15 13.22 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 1.23 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**27.9**	2.02	0.0717	mg/kg	09.29.15 18:55		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 1.23 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.2	10.0	mg/kg	09.27.15 09:14	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.2	10.0	mg/kg	09.27.15 09:14	U	1
Total TPH	PHC635	ND		10.0	mg/kg	09.27.15 09:14	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

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New Mexico East State

Sample Id: **SB6 @ 3'-091715** Matrix: Soil Sample Depth: 3 ft

Lab Sample Id: 515865-026 Date Collected: 09.17.15 13.24 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: .96 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**31.8**	2.02	0.0715	mg/kg	09.29.15 19:18		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: .96 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.1	9.95	mg/kg	09.27.15 09:38	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.1	9.95	mg/kg	09.27.15 09:38	U	1
Total TPH	PHC635	ND		9.95	mg/kg	09.27.15 09:38	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	111	70 - 135	%		
o-Terphenyl	107	70 - 135	%		

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New Mexico East State

Sample Id: **SB6 @ 4'-091715** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 515865-027 Date Collected: 09.17.15 13.25 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 1.69 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**51.7**	10.2	0.360	mg/kg	09.29.15 19:40		5

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 1.69 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.2	10.0	mg/kg	09.27.15 10:03	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.2	10.0	mg/kg	09.27.15 10:03	U	1
Total TPH	PHC635	ND		10.0	mg/kg	09.27.15 10:03	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	110	70 - 135	%		
o-Terphenyl	114	70 - 135	%		

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New Mexico East State

Sample Id: **SB7 @ 0'-091715** Matrix: Soil Sample Depth: 0 ft

Lab Sample Id: 515865-028 Date Collected: 09.17.15 13.49 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: .37 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**1.79**	2.01	0.0711	mg/kg	09.29.15 20:27	J	1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: .37 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.91	mg/kg	09.27.15 10:27	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.91	mg/kg	09.27.15 10:27	U	1
Total TPH	PHC635	ND		9.91	mg/kg	09.27.15 10:27	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	105	70 - 135	%		
o-Terphenyl	106	70 - 135	%		

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Sample Id: **SB7 @ 1'-091715** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 515865-029 Date Collected: 09.17.15 13.53 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 1.09 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**23.2**	2.02	0.0716	mg/kg	09.29.15 20:50		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 1.09 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.2	9.99	mg/kg	09.27.15 10:51	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.2	9.99	mg/kg	09.27.15 10:51	U	1
Total TPH	PHC635	ND		9.99	mg/kg	09.27.15 10:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	99	70 - 135	%		

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Sample Id: **SB7 @ 2'-091715** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 515865-030 Date Collected: 09.17.15 13.55 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 1.23 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**18.1**	2.02	0.0717	mg/kg	09.29.15 21:12		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 1.23 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.2	9.99	mg/kg	09.27.15 11:16	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.2	9.99	mg/kg	09.27.15 11:16	U	1
Total TPH	PHC635	ND		9.99	mg/kg	09.27.15 11:16	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	108	70 - 135	%		

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Sample Id: **SB7 @ 3'-091715** Matrix: Soil Sample Depth: 3 ft

Lab Sample Id: 515865-031 Date Collected: 09.17.15 13.57 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 1.4 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**19.1**	2.03	0.0718	mg/kg	09.29.15 21:35		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 1.4 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.2	10.0	mg/kg	09.27.15 12:04	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.2	10.0	mg/kg	09.27.15 12:04	U	1
Total TPH	PHC635	ND		10.0	mg/kg	09.27.15 12:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

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Sample Id: **SB7 @ 4'-091715** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 515865-032 Date Collected: 09.17.15 13.59 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: .93 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**8.73**	2.02	0.0715	mg/kg	09.29.15 22:43		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: .93 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.1	9.96	mg/kg	09.27.15 12:28	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.1	9.96	mg/kg	09.27.15 12:28	U	1
Total TPH	PHC635	ND		9.96	mg/kg	09.27.15 12:28	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

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New Mexico East State

Sample Id: **SB8 @ 0'-091715** Matrix: Soil Sample Depth: 0 ft

Lab Sample Id: 515865-033 Date Collected: 09.17.15 14.02 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: .97 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**2.23**	2.02	0.0715	mg/kg	09.29.15 23:06		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: .97 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.1	9.96	mg/kg	09.27.15 12:52	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.1	9.96	mg/kg	09.27.15 12:52	U	1
Total TPH	PHC635	ND		9.96	mg/kg	09.27.15 12:52	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	95	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

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Sample Id: **SB8 @ 1'-091715** Matrix: Soil Sample Depth: 1 ft

Lab Sample Id: 515865-034 Date Collected: 09.17.15 14.05 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 2.31 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**16.1**	2.05	0.0725	mg/kg	09.29.15 23:28		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 2.31 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.4	10.1	mg/kg	09.27.15 13:16	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.4	10.1	mg/kg	09.27.15 13:16	U	1
Total TPH	PHC635	ND		10.1	mg/kg	09.27.15 13:16	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 135	%		
o-Terphenyl	104	70 - 135	%		

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New Mexico East State

Sample Id: **SB8 @ 2'-091715** Matrix: Soil Sample Depth: 2 ft

Lab Sample Id: 515865-035 Date Collected: 09.17.15 14.07 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 3.5 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**5.05**	2.07	0.0734	mg/kg	09.29.15 23:51		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 3.5 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.5	10.2	mg/kg	09.27.15 13:40	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.5	10.2	mg/kg	09.27.15 13:40	U	1
Total TPH	PHC635	ND		10.2	mg/kg	09.27.15 13:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	93	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

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515865
GHD Services, INC- Midland, Midland, TX
New Mexico East State

Sample Id: **SB8 @ 3'-091715** Matrix: Soil Sample Depth: 3 ft

Lab Sample Id: 515865-036 Date Collected: 09.17.15 14.09 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 4.44 Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**15.1**	2.09	0.0741	mg/kg	09.30.15 00:14		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 4.44 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.6	10.3	mg/kg	09.27.15 14:04	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.6	10.3	mg/kg	09.27.15 14:04	U	1
Total TPH	PHC635	ND		10.3	mg/kg	09.27.15 14:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	75	70 - 135	%		
o-Terphenyl	74	70 - 135	%		

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515865
GHD Services, INC- Midland, Midland, TX
New Mexico East State

Sample Id: **SB8 @ 4'-091715** Matrix: Soil Sample Depth: 4 ft

Lab Sample Id: 515865-037 Date Collected: 09.17.15 14.12 Date Received: 09.18.15 14.37

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: 12.14 Tech: JUM

Seq Number: 978001 Date Prep: 09.29.15 19.00

Prep seq: 698777

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**83.3**	2.28	0.0806	mg/kg	09.30.15 02:30		1

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: 12.14 Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	17.1	11.2	mg/kg	09.27.15 14:28	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	17.1	11.2	mg/kg	09.27.15 14:28	U	1
Total TPH	PHC635	ND		11.2	mg/kg	09.27.15 14:28	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	81	70 - 135	%		
o-Terphenyl	80	70 - 135	%		

Certificate of Analytical Results
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New Mexico East State

Sample Id: **698674-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 698674-1-BLK Date Collected: Date Received:

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: Tech: PJB

Seq Number: 977784 Date Prep: 09.24.15 18.30

Prep seq: 698674

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.88	mg/kg	09.25.15 12:09	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.88	mg/kg	09.25.15 12:09	U	1
Total TPH	PHC635	ND		9.88	mg/kg	09.25.15 12:09	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Sample Id: **698692-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 698692-1-BLK Date Collected: Date Received:

Analytical Method: TPH By SW8015B Mod Prep Method: 1005

Analyst: PJB % Moist: Tech: PJB

Seq Number: 977819 Date Prep: 09.26.15 18.00

Prep seq: 698692

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	15.0	9.88	mg/kg	09.28.15 12:56	U	1
C10-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	15.0	9.88	mg/kg	09.28.15 12:56	U	1
Total TPH	PHC635	ND		9.88	mg/kg	09.28.15 12:56	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

Sample Id: **698744-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 698744-1-BLK Date Collected: Date Received:

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: MNR % Moist: Tech: MNR

Seq Number: 977878 Date Prep: 09.28.15 16.00

Prep seq: 698744

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	2.00	0.0708	mg/kg	09.29.15 01:31	U	1

Certificate of Analytical Results
515865
GHD Services, INC- Midland, Midland, TX
New Mexico East State

Sample Id: **698776-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 698776-1-BLK Date Collected: Date Received:

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: Tech: JUM

Seq Number: 977999 Date Prep: 09.29.15 14.00

Prep seq: 698776

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	2.00	0.0708	mg/kg	09.29.15 13:38	U	1

Sample Id: **698777-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 698777-1-BLK Date Collected: Date Received:

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Analyst: JUM % Moist: Tech: JUM

Seq Number: 978001 Date Prep: 09.29.15 19.00

Prep seq: 698777

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	2.00	0.0708	mg/kg	09.30.15 01:22	U	1

XENCO Laboratories
CHRONOLOGY OF HOLDING TIMES

Analytical Method : Percent Moisture

Client : GHD Services, INC- Midland

Work Order #: **515865**

Project ID: 089861

Field Sample ID	Date Collected	Date Received	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed **(Days)**	Q
SB5 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB6 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB6 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB8 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB1 @ 6"-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB2 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB2 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB4 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB5 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB8 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB2 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB3 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB3 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB8 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB3 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB4 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB4 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB5 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB6 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB6 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB6 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB8 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB2 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB3 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB5 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB7 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB2@ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB7 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB7 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB8 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB3 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB4 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB4 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB5 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P
SB7 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P

XENCO Laboratories
CHRONOLOGY OF HOLDING TIMES

Analytical Method : Percent Moisture

GHD Services, INC- Midland

Work Order #: **515865**

Project ID: 089861

Field Sample ID	Date Collected	Date Received	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)		Q
SB7 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.23, 2015	45	6	P
SB1 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.21, 2015	45	4	P

XENCO Laboratories
CHRONOLOGY OF HOLDING TIMES

Analytical Method : Inorganic Anions by EPA 300/300.1 Client : GHD Services, INC- Midland

Work Order #: **515865** Project ID: 089861

Field Sample ID	Date Collected	Date Received	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed **(Days)**	Q
SB4 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB5 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB6 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB7 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB5 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB2 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB2 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB3 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB3 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB4 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB4 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB4 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB5 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB6 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB8 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.30, 2015	28	13	P
SB3 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB5 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB6 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB1 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB2 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB3 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB4 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB5 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB6 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB7 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB7 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB7 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB8 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB8 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB8 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB1 @ 6"-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB3 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB2@ 0'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB2 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB6 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P

XENCO Laboratories
CHRONOLOGY OF HOLDING TIMES

Analytical Method : Inorganic Anions by EPA 300/300.1

GHD Services, INC- Midland

Work Order #: **515865**

Project ID: 089861

Field Sample ID	Date Collected	Date Received	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)		Q
SB7 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.29, 2015	28	12	P
SB8 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015				Sep.30, 2015	28	13	P

XENCO Laboratories
CHRONOLOGY OF HOLDING TIMES

Analytical Method : TPH By SW8015B Mod

Client : GHD Services, INC- Midland

Work Order #: **515865**

Project ID: 089861

Field Sample ID	Date Collected	Date Received	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed **(Days)**	Q
SB2 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.24, 2015	14	0	P
SB5 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.25, 2015	14	1	P
SB5 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.25, 2015	14	1	P
SB1 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.25, 2015	14	1	P
SB3 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.24, 2015	14	0	P
SB7 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB7 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB4 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.25, 2015	14	1	P
SB4 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.25, 2015	14	1	P
SB5 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB6 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB7 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB8 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB8 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB6 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB2@ 0'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.24, 2015	14	0	P
SB7 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB7 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB3 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.24, 2015	14	0	P
SB3 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.24, 2015	14	0	P
SB3 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.24, 2015	14	0	P
SB4 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.25, 2015	14	1	P
SB6 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB8 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB2 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.24, 2015	14	0	P
SB2 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.24, 2015	14	0	P
SB3 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.24, 2015	14	0	P
SB4 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.25, 2015	14	1	P
SB5 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB6 @ 4'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB4 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.24, 2015	14	0	P
SB5 @ 0'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.25, 2015	14	1	P
SB1 @ 6"-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.25, 2015	14	1	P
SB2 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 24, 2015	14	7	Sep.24, 2015	14	0	P
SB6 @ 1'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P

XENCO Laboratories
CHRONOLOGY OF HOLDING TIMES

Analytical Method : TPH By SW8015B Mod

GHD Services, INC- Midland

Work Order #: **515865**

Project ID: 089861

Field Sample ID	Date Collected	Date Received	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)		Q
SB8 @ 2'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P
SB8 @ 3'-091715	Sep. 17, 2015	Sep. 18, 2015	Sep. 26, 2015	14	9	Sep.27, 2015	14	1	P

F = These samples were analyzed outside the recommended holding time.
P = Samples analyzed within the recommended holding time.

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

Analytical Log

Analytical Method:	Percent Moisture	Batch #:	977749
Project Name:	New Mexico East State	Project ID:	089861
Client Name:	GHD Services, INC- Midland	WO Number:	515865

Client Sample Id	Lab Sample Id	QC Types
SB1 @ 0'-091715	515865-001	SMP
SB1 @ 6"-091715	515865-002	SMP
SB2@ 0'-091715	515865-003	SMP
	515851-014 D	MD
	515851-024 D	MD
	977749-1-BLK	BLK

Analytical Log

Analytical Method:	Percent Moisture	Batch #:	977757
Project Name:	New Mexico East State	Project ID:	089861
Client Name:	GHD Services, INC- Midland	WO Number:	515865

Client Sample Id	Lab Sample Id	QC Types
SB2 @ 1'-091715	515865-004	SMP
SB2 @ 2'-091715	515865-005	SMP
SB2 @ 3'-091715	515865-006	SMP
SB2 @ 4'-091715	515865-007	SMP
SB3 @ 0'-091715	515865-008	SMP
SB3 @ 1'-091715	515865-009	SMP
SB3 @ 2'-091715	515865-010	SMP
SB3 @ 3'-091715	515865-011	SMP
SB3 @ 4'-091715	515865-012	SMP
SB4 @ 0'-091715	515865-013	SMP
SB4 @ 1'-091715	515865-014	SMP
SB4 @ 2'-091715	515865-015	SMP
SB4 @ 3'-091715	515865-016	SMP
SB4 @ 4'-091715	515865-017	SMP
SB5 @ 0'-091715	515865-018	SMP
SB5 @ 1'-091715	515865-019	SMP
SB5 @ 2'-091715	515865-020	SMP
SB5 @ 3'-091715	515865-021	SMP
SB5 @ 4'-091715	515865-022	SMP
SB6 @ 0'-091715	515865-023	SMP
	515865-004 D	MD
	515865-014 D	MD
	977757-1-BLK	BLK

Version: 1.012

Analytical Log

Analytical Method:	Percent Moisture	Batch #:	977758
Project Name:	New Mexico East State	Project ID:	089861
Client Name:	GHD Services, INC- Midland	WO Number:	515865

Client Sample Id	Lab Sample Id	QC Types
SB6 @ 1'-091715	515865-024	SMP
SB6 @ 2'-091715	515865-025	SMP
SB6 @ 3'-091715	515865-026	SMP
SB6 @ 4'-091715	515865-027	SMP
SB7 @ 0'-091715	515865-028	SMP
SB7 @ 1'-091715	515865-029	SMP
SB7 @ 2'-091715	515865-030	SMP
SB7 @ 3'-091715	515865-031	SMP
SB7 @ 4'-091715	515865-032	SMP
SB8 @ 0'-091715	515865-033	SMP
SB8 @ 1'-091715	515865-034	SMP
SB8 @ 2'-091715	515865-035	SMP
SB8 @ 3'-091715	515865-036	SMP
SB8 @ 4'-091715	515865-037	SMP
	515865-024 D	MD
	515865-033 D	MD
	977758-1-BLK	BLK

Version: 1.012

Analytical Log

Analytical Method:	TPH By SW8015B Mod	Batch #:	977784
Project Name:	New Mexico East State	Project ID:	089861
Client Name:	GHD Services, INC- Midland	WO Number:	515865

Client Sample Id	Lab Sample Id	QC Types
SB1 @ 0'-091715	515865-001	SMP
SB1 @ 6"-091715	515865-002	SMP
SB2 @ 1'-091715	515865-004	SMP
SB2 @ 2'-091715	515865-005	SMP
SB2 @ 3'-091715	515865-006	SMP
SB2 @ 4'-091715	515865-007	SMP
SB2@ 0'-091715	515865-003	SMP
SB3 @ 0'-091715	515865-008	SMP
SB3 @ 1'-091715	515865-009	SMP
SB3 @ 2'-091715	515865-010	SMP
SB3 @ 3'-091715	515865-011	SMP
SB3 @ 4'-091715	515865-012	SMP
SB4 @ 0'-091715	515865-013	SMP
SB4 @ 1'-091715	515865-014	SMP
SB4 @ 2'-091715	515865-015	SMP
SB4 @ 3'-091715	515865-016	SMP
SB4 @ 4'-091715	515865-017	SMP
SB5 @ 0'-091715	515865-018	SMP
SB5 @ 1'-091715	515865-019	SMP
SB5 @ 2'-091715	515865-020	SMP
	515865-001 S	MS
	515865-001 SD	MSD
	698674-1-BKS	BKS
	698674-1-BLK	BLK
	698674-1-BSD	BSD

Analytical Log

Analytical Method:	TPH By SW8015B Mod	Batch #:	977819
Project Name:	New Mexico East State	Project ID:	089861
Client Name:	GHD Services, INC- Midland	WO Number:	515865

Client Sample Id	Lab Sample Id	QC Types
SB5 @ 3'-091715	515865-021	SMP
SB5 @ 4'-091715	515865-022	SMP
SB6 @ 0'-091715	515865-023	SMP
SB6 @ 1'-091715	515865-024	SMP
SB6 @ 2'-091715	515865-025	SMP
SB6 @ 3'-091715	515865-026	SMP
SB6 @ 4'-091715	515865-027	SMP
SB7 @ 0'-091715	515865-028	SMP
SB7 @ 1'-091715	515865-029	SMP
SB7 @ 2'-091715	515865-030	SMP
SB7 @ 3'-091715	515865-031	SMP
SB7 @ 4'-091715	515865-032	SMP
SB8 @ 0'-091715	515865-033	SMP
SB8 @ 1'-091715	515865-034	SMP
SB8 @ 2'-091715	515865-035	SMP
SB8 @ 3'-091715	515865-036	SMP
SB8 @ 4'-091715	515865-037	SMP
	515865-037 S	MS
	515865-037 SD	MSD
	698692-1-BKS	BKS
	698692-1-BLK	BLK
	698692-1-BSD	BSD

Version: 1.012

Analytical Log

Analytical Method:	Inorganic Anions by EPA 300/300.1	Batch #:	977878
Project Name:	New Mexico East State	Project ID:	089861
Client Name:	GHD Services, INC- Midland	WO Number:	515865

Client Sample Id	Lab Sample Id	QC Types
SB1 @ 0'-091715	515865-001	SMP
SB1 @ 6"-091715	515865-002	SMP
SB2 @ 1'-091715	515865-004	SMP
SB2 @ 2'-091715	515865-005	SMP
SB2 @ 3'-091715	515865-006	SMP
SB2 @ 4'-091715	515865-007	SMP
SB2@ 0'-091715	515865-003	SMP
SB3 @ 0'-091715	515865-008	SMP
SB3 @ 1'-091715	515865-009	SMP
SB3 @ 2'-091715	515865-010	SMP
SB3 @ 3'-091715	515865-011	SMP
SB3 @ 4'-091715	515865-012	SMP
SB4 @ 0'-091715	515865-013	SMP
SB4 @ 1'-091715	515865-014	SMP
SB4 @ 2'-091715	515865-015	SMP
SB4 @ 3'-091715	515865-016	SMP
	515865-007 S	MS
	516015-001 S	MS
	698744-1-BKS	BKS
	698744-1-BLK	BLK
	698744-1-BSD	BSD

Version: 1.012

Analytical Log

Analytical Method:	Inorganic Anions by EPA 300/300.1	Batch #:	977999
Project Name:	New Mexico East State	Project ID:	089861
Client Name:	GHD Services, INC- Midland	WO Number:	515865

Client Sample Id	Lab Sample Id	QC Types
SB4 @ 4'-091715	515865-017	SMP
SB5 @ 0'-091715	515865-018	SMP
SB5 @ 1'-091715	515865-019	SMP
SB5 @ 2'-091715	515865-020	SMP
SB5 @ 3'-091715	515865-021	SMP
SB5 @ 4'-091715	515865-022	SMP
SB6 @ 0'-091715	515865-023	SMP
SB6 @ 1'-091715	515865-024	SMP
SB6 @ 2'-091715	515865-025	SMP
SB6 @ 3'-091715	515865-026	SMP
SB6 @ 4'-091715	515865-027	SMP
SB7 @ 0'-091715	515865-028	SMP
SB7 @ 1'-091715	515865-029	SMP
SB7 @ 2'-091715	515865-030	SMP
SB7 @ 3'-091715	515865-031	SMP
SB7 @ 4'-091715	515865-032	SMP
SB8 @ 0'-091715	515865-033	SMP
SB8 @ 1'-091715	515865-034	SMP
SB8 @ 2'-091715	515865-035	SMP
SB8 @ 3'-091715	515865-036	SMP
	515865-017 S	MS
	515865-027 S	MS
	698776-1-BKS	BKS
	698776-1-BLK	BLK
	698776-1-BSD	BSD

Analytical Log

Analytical Method:	Inorganic Anions by EPA 300/300.1	Batch #:	978001
Project Name:	New Mexico East State	Project ID:	089861
Client Name:	GHD Services, INC- Midland	WO Number:	515865

Client Sample Id	Lab Sample Id	QC Types
SB8 @ 4'-091715	515865-037	SMP
	515865-037 S	MS
	698777-1-BKS	BKS
	698777-1-BLK	BLK
	698777-1-BSD	BSD

Form 2 - Surrogate Recoveries

Project Name: New Mexico East State

Work Orders : 515865, **Project ID:** 089861

Lab Batch #: 977784 **Sample:** 698674-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/24/15 01:27

TPH By SW8015B Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	42.8	50.0	86	70-135	

Lab Batch #: 977784 **Sample:** 698674-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/24/15 01:51

TPH By SW8015B Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 977784 **Sample:** 515865-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/24/15 11:44

TPH By SW8015B Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.9	119	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 977784 **Sample:** 515865-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/25/15 03:38

TPH By SW8015B Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	132	99.8	132	70-135	
o-Terphenyl	61.3	49.9	123	70-135	

Lab Batch #: 977784 **Sample:** 698674-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/25/15 12:09

TPH By SW8015B Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: New Mexico East State

Work Orders : 515865, **Project ID:** 089861

Lab Batch #: 977819 **Sample:** 698692-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/27/15 06:46

TPH By SW8015B Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.2	100	98	70-135	
o-Terphenyl	44.1	50.0	88	70-135	

Lab Batch #: 977819 **Sample:** 515865-037 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/15 14:52

TPH By SW8015B Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.0	100	91	70-135	
o-Terphenyl	40.1	50.0	80	70-135	

Lab Batch #: 977819 **Sample:** 515865-037 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 09/27/15 15:16

TPH By SW8015B Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-135	
o-Terphenyl	43.1	49.9	86	70-135	

Lab Batch #: 977819 **Sample:** 698692-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/28/15 12:56

TPH By SW8015B Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	50.6	50.0	101	70-135	

Lab Batch #: 977819 **Sample:** 698692-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 09/28/15 17:04

TPH By SW8015B Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

BS / BSD Recoveries

Project Name: New Mexico East State

Work Order #: 515865 **Project ID:** 089861

Analyst: MNR **Date Prepared:** 09/28/2015 **Date Analyzed:** 09/29/2015

Lab Batch ID: 977878 **Sample:** 698744-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	U	50.0	49.8	100	50.0	49.2	98	1	90-110	20	

Analyst: JUM **Date Prepared:** 09/29/2015 **Date Analyzed:** 09/29/2015

Lab Batch ID: 977999 **Sample:** 698776-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	U	50.0	49.6	99	50.0	48.8	98	2	90-110	20	

Analyst: JUM **Date Prepared:** 09/29/2015 **Date Analyzed:** 09/30/2015

Lab Batch ID: 978001 **Sample:** 698777-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	U	50.0	49.2	98	50.0	49.2	98	0	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

BS / BSD Recoveries

Project Name: New Mexico East State

Work Order #: 515865 **Project ID:** 089861

Analyst: PJB **Date Prepared:** 09/24/2015 **Date Analyzed:** 09/24/2015

Lab Batch ID: 977784 **Sample:** 698674-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	U	1000	822	82	1000	934	93	13	70-135	35	
C10-C28 Diesel Range Hydrocarbons	U	1000	704	70	1000	805	81	13	70-135	35	

Analyst: PJB **Date Prepared:** 09/26/2015 **Date Analyzed:** 09/27/2015

Lab Batch ID: 977819 **Sample:** 698692-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	U	1000	913	91	1000	952	95	4	70-135	35	
C10-C28 Diesel Range Hydrocarbons	U	1000	732	73	1000	843	84	14	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

Form 3 - MS Recoveries

Project Name: New Mexico East State

Work Order #: 515865

Lab Batch #: 977878 **Project ID:** 089861

Date Analyzed: 09/29/2015 **Date Prepared:** 09/28/2015 **Analyst:** MNR

QC- Sample ID: 515865-007 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	1330	2620	4250	111	80-120	

Lab Batch #: 977878

Date Analyzed: 09/29/2015 **Date Prepared:** 09/28/2015 **Analyst:** MNR

QC- Sample ID: 516015-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	4510	2500	7000	100	80-120	

Lab Batch #: 977999

Date Analyzed: 09/29/2015 **Date Prepared:** 09/29/2015 **Analyst:** JUM

QC- Sample ID: 515865-017 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	4.58	53.6	56.5	97	80-120	

Lab Batch #: 977999

Date Analyzed: 09/29/2015 **Date Prepared:** 09/29/2015 **Analyst:** JUM

QC- Sample ID: 515865-027 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	51.7	254	303	99	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Version: 1.%

Form 3 - MS Recoveries

Project Name: New Mexico East State

Work Order #: 515865

Lab Batch #: 978001 **Project ID:** 089861

Date Analyzed: 09/30/2015 **Date Prepared:** 09/29/2015 **Analyst:** JUM

QC- Sample ID: 515865-037 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Inorganic Anions by EPA 300 **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**%R [D]**	**Control Limits %R**	**Flag**
Chloride	83.3	56.9	141	101	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Version: 1.%

Form 3 - MS / MSD Recoveries

Project Name: New Mexico East State

Work Order # : 515865 **Project ID:** 089861

Lab Batch ID: 977784 **QC- Sample ID:** 515865-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/24/2015 **Date Prepared:** 09/24/2015 **Analyst:** PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	U	1030	1020	99	1030	1180	115	15	70-135	35	
C10-C28 Diesel Range Hydrocarbons	U	1030	832	81	1030	952	92	13	70-135	35	

Lab Batch ID: 977819 **QC- Sample ID:** 515865-037 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/27/2015 **Date Prepared:** 09/26/2015 **Analyst:** PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	U	1140	906	79	1140	978	86	8	70-135	35	
C10-C28 Diesel Range Hydrocarbons	U	1140	799	70	1140	864	76	8	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Sample Duplicate Recovery

Project Name: New Mexico East State

Work Order #: 515865

Lab Batch #: 977749 **Project ID:** 089861
Date Analyzed: 09/21/2015 14:30 **Date Prepared:** 09/21/2015 **Analyst:** WRU
QC- Sample ID: 515851-014 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.14	4.63	10	20	

Lab Batch #: 977749
Date Analyzed: 09/21/2015 14:30 **Date Prepared:** 09/21/2015 **Analyst:** WRU
QC- Sample ID: 515851-024 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.20	1.09	10	20	

Lab Batch #: 977757
Date Analyzed: 09/21/2015 14:30 **Date Prepared:** 09/21/2015 **Analyst:** WRU
QC- Sample ID: 515865-004 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.68	7.50	2	20	

Lab Batch #: 977757
Date Analyzed: 09/21/2015 14:30 **Date Prepared:** 09/21/2015 **Analyst:** WRU
QC- Sample ID: 515865-014 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	4.99	5.17	4	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Version: 1.%

Sample Duplicate Recovery

Project Name: New Mexico East State

Work Order #: 515865

Lab Batch #: 977758 **Project ID:** 089861

Date Analyzed: 09/23/2015 17:30 **Date Prepared:** 09/23/2015 **Analyst:** WRU

QC- Sample ID: 515865-024 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	U	U	0	20	U

Lab Batch #: 977758

Date Analyzed: 09/23/2015 17:30 **Date Prepared:** 09/23/2015 **Analyst:** WRU

QC- Sample ID: 515865-033 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	U	1.13	NC	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Attachment A Laboratory Data Package Cover Page

Project Name: **New Mexico East State** Laboratory Number: **515865**

This Data package consists of : Laboratory Batch No(s) **977757, 977758, 698777, 698776, 977749, 6**

This signature page, the laboratory review checklist, and the following reportable data:

☐ R1 Field chain-of-custody documentation;

☐ R2 Sample identification cross-reference;

☐ R3 Test reports (analytical data sheets) for each environmental sample that includes:
- a) Items consistent with NELAC 5
- b) dilution factors,
- c) preparation methods,
- d) cleanup methods, and
- e) if required for the project, tentatively identified compounds (TICs).

☐ R4 Surrogate Recovery data including:
- a) Calculated recovery (%R), and
- b) The laboratory's surrogate QC limits.

☐ R5 Test reports/summary forms for blank samples;

☐ R6 Test reports/summary forms for laboratory control samples (LCSs) including:
- a) LCS spiking amounts,
- b) Calculated %R for each analyte, and
- c) The laboratory's LCS QC limits.

☐ R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
- a) Samples associated with the MS/MSD clearly identified,
- b) MS/MSD spiking amounts,
- c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
- d) Calculated %Rs and relative percent differences (RPDs) and
- e) The laboratory's MS/MSD QC limits

☐ R8 Laboratory anaytical duplicate (if applicable) recovery and precision:
- a) the amount of analyte measured in the duplicate,
- b) the calculated RPD, and
- c) the laboratory's QC limits for analytical duplicates.

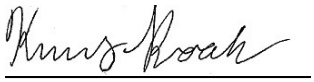
☐ R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;

☐ R10 Other problems or anomalies.

☐ Exception Report for every "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies, observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [ ] This laboratory meets an exception under 30 TAC 25.6 and was last inspection by [ ] TCEQ or [ ] _____ on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The offical signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Kelsey Brooks		**Project Manager**	**30-SEP-15**
Name (Printed)	Signature	Official Title (printed)	Date

A1

Attachment A (cont'd) : Laboratory Review Checklist: Reportable Data

Laboratory Name:	XENCO LABORATORIES	LRC Date :	30-SEP-15
Project Name:	New Mexico East State	Laboratory Job Number :	515865
Reviewer Name:	KEB	Batch Number(s) :	977757, 977758, 698777, 698776, 977749, 698744, 698692, 698674

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-Custody (COC)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and Quality Control (QC) Identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test Reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results <MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soil/solid samples for volatile analysis extracted with methanol per SW846 Method 5035?	X				
		If required for the project, were TICs reported?			X		
R4	O	**Surrogate Recovery Data**					
		Were surrogates added prior to extraction?	X				
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			1
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency ?	X				
		Were method blanks taken through the entire analytical procedure, including preparation and, if applicable, cleanup procedures ?	X				
		Were Blank Concentrations <MQL?	X				
R6	OI	**Laboratory Control Samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within the QC limits?	X				
		Was the LCSD RPD within the QC limits?			X		
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within the laboratory QC limits?			X		
R8	OI	**Analytical Duplicate Data**					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		

R9	OI	**Method Quantitation Limits (MQLs)**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other Problems/Anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted to the TCEQ-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report Identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Attachment A (cont'd) : Laboratory Review Checklist: Reportable Data

Laboratory Name:	XENCO LABORATORIES	LRC Date :	30-SEP-15
Project Name:	New Mexico East State	Laboratory Job Number :	515865
Reviewer Name:	KEB	Batch Number(s) :	977757, 977758, 698777, 698776, 977749, 698744, 698692, 698674

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and the highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and Continuing Calibration Verification (ICCV and CCV) and continuing calibration blank (**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB <MDL?			X		
S3	O	**Mass Spectral Tuning**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal Standard (IS)**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw Data (NELAC 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual Column Confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results**					
		Were percent recoveries within method QC limits?			X		
S9	I	**Serial Dilutions, Post Digestions Spikes, and Method of Standard Additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method Detection Limit (MDL) Studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency Test Reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/Validation Documentation for Methods (NELAC Chapter 5)**					
		Are all methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs)**					
		Are laboratory SOPs current and on file for each method performed?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted to the TCEQ-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report Identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Attachment A (cont'd): Laboratory Review Checklist: Exception Reports

Laboratory Name:	XENCO LABORATORIES	LRC Date:	30-SEP-15
Project Name:	New Mexico East State	Laboratory Job Number:	515865
Reviewer Name:	KEB	Batch Number(s) :	977757, 977758, 698777, 698776, 977749, 698744, 698692, 698674

ER# [1]	DESCRIPTION
1	SW8015B_NM Batch 977784, Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis. Samples affected are: 515865-003.

1 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No is checked on the LRC).

GHD Services, INC- Midland, Midland, TX

New Mexico East State

CHAIN OF CUSTODY

Page 1 Of 4

XENCO LABORATORIES

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Odessa, Texas (432-563-1800)
Norcross, Georgia (770-449-8800)
Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)
www.xenco.com

Xenco Quote #: | Xenco Job #: 515865

Client / Reporting Information

Company Name / Branch: GHD / Dallas
Company Address: 1755 Wittington Place #500 Dallas TX 75234
Email: 1-972-331-3500 Phone No:
Jake.Ferent@ghd.com
Project Contact: Jake Ferent
Sampler's Name: Joe Mireles

Project Information

Project Name/Number: 089861
Project Location: Monument, NM
Invoice To:
PO Number: 34001060

Analytical Information

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	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH DRO GRO 8015	chloride 9252	Field Comments
1	SB1 @ 0' - 091715	0'	9-17	1130	S	1								X	X	X	
2	SB1 @ 6" - 091715	6"	9-17	1135													
3	SB2 @ 0' - 091715	0'	9-17	1143													
4	SB2 @ 1' - 091715	1'	9-17	1153													
5	SB3 @ 2' - 091715	2'	9-17	1156													
6	SB2 @ 3' - 091715	3'	9-17	1159													
7	SB2 @ 4' - 091715	4'	9-17	1202													
8	SB3 @ 0' - 091715	0'	9-17	1210													
9	SB3 @ 1' - 091715	1'	9-17	1213													
10	SB3 @ 2' - 091715	2'	9-17	1215	S	1								X	X	X	

Turnaround Time (Business days)

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

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

Data Deliverable Information

- [ ] 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: Please reference SSOW

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	Joe Mireles	9/18/15 1500	1 Caroline Dy	2	9.18.15 1437	2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp.: 8° | Thermo. Corr. Factor

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.

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Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)
www.xenco.com

Xenco Quote # | Xenco Job # 515865

Client / Reporting Information

Company Name / Branch: GHD / Dallas
Company Address: 1755 Wittington Place #500
Email: 1-972-331-7500 Phone No:
Jake.Ferenz@ghd.com
Project Contact: Jake Ferenz
Sampler's Name: Joe Mireles

Project Information

Project Name/Number: 089861
Project Location: Monument, NM
Invoice To:
PO Number: 3400001060

Analytical Information

TPH GRO DRO 8015
Chloride 9252

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	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH GRO DRO 8015	Chloride 9252	Field Comments
1	SB3@3' - 091715	3'	9-17	1217	S	1								X	X	X	
2	SB3@4' - 091715	4'		1219													
3	SB4@0' - 091715	0'		1227													
4	SB4@1' - 091715	1'		1234													
5	SB4@2' - 091715	2'		1237													
6	SB4@3' - 091715	3'		1241													
7	SB4@4' - 091715	4'		1243													
8	SB5@0' - 091715	0'		1252													
9	SB5@1' - 091715	1'		1256													
10	SB5@2' - 091715	2'	9-17	1258	S	1								X	X	X	

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- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

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	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Joe Mireles	9/18/15 1500	1 Courier	2	9.18.15 1437	2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. 8° Thermo. Corr. Factor

CHAIN OF CUSTODY

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Tampa, Florida (813-620-2000)

www.xenco.com

Xenco Quote #

Xenco Job # 515865

Client / Reporting Information

Company Name / Branch: GHD / Dallas

Company Address: 1755 Wittington Place #500

Email: 1-972-331-8500 Phone No: Jake.ferenz@ghd.com

Project Contact: Jake Ferenz

Samplers's Name: Joe Mireles

Project Information

Project Name/Number: 089861

Project Location: Monument NM

Invoice To:

PO Number: 34001060

Analytical Information

TPH GRO DRO 8015

Chloride 9252

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
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1	SB5 @ 3' - 091715	3'	9-17	1300	S	1								X	X	X	
2	SB5 @ 4' - 091715	4'		1303													
3	SB6 @ 0' - 091715	0'		1317													
4	SB6 @ 1' - 091715	1'		1319													
5	SB6 @ 2' - 091715	2'		1322													
6	SB6 @ 3' - 091715	3'		1324													
7	SB6 @ 4' - 091715	4'		1325													
8	SB7 @ 0' - 091715	0'		1349													
9	SB7 @ 1' - 091715	1'		1353													
10	SB7 @ 2' - 091715	2'	9-17	1355	S	1								X	X	X	

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- [ ] TRRP Level IV
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3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. 8° Thermo. Corr. Factor

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CHAIN OF CUSTODY

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Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

Xenco Quote #

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Client / Reporting Information

Company Name / Branch: GHD / Dallas

Company Address: 1755 Wittington Place #500

Email: 1-972-334-8500 Phone No:

Jake.ferenz@ghd.com

Project Contact: Jake Ferenz

Samplers's Name: Joe Micieles

Project Information

Project Name/Number: 089861

Project Location: Monument NM

Invoice To:

PO Number: 3400 1060

Analytical Information

TPH GRO DRO 8015

Chlorides 9252

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S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
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W = Wipe
O = Oil

WW= Waste Water

No	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH GRO DRO 8015	Chlorides 9252	Field Comments
1	SB7@3' - 091715	3'	9-17	1357	S	1								X	X	X	
2	SB7@4' - 091715	4'		1359													
3	SB8@0' - 091715	0'		1402													
4	SB8@1' - 091715	1'		1405													
5	SB8@2' - 091715	2'		1407													
6	SB8@3' - 091715	3'		1409													
7	SB8@4' 091715	4'	9-17	1412	S	1								X	X	X	
8																	
9																	
10																	

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- [ ] 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	Joe Micieles	9/18/15 1500	Caroline		9.18.15 1437	
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 — Cooler Temp. 8° — Thermo. Corr. Factor

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: 09/18/2015 02:37:00 PM

Work Order #: 515865

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

Temperature Measuring device used :

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**No**	samples received out of appropriate temperature range
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6 *Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Sample instructions complete on Chain of Custody?	**Yes**	
#9 Any missing/extra samples?	**No**	
#10 Chain of Custody signed when relinquished/ received?	**Yes**	
#11 Chain of Custody agrees with sample label(s)?	**Yes**	
#12 Container label(s) legible and intact?	**Yes**	
#13 Sample matrix/ properties agree with Chain of Custody?	**Yes**	
#14 Samples in proper container/ bottle?	**Yes**	
#15 Samples properly preserved?	**Yes**	
#16 Sample container(s) intact?	**Yes**	
#17 Sufficient sample amount for indicated test(s)?	**Yes**	
#18 All samples received within hold time?	**Yes**	
#19 Subcontract of sample(s)?	**No**	
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**	
#21 <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**	
#22 >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#:

NonConformance:
samples received out of appropriate temperature range
Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **DateTime :** _____

Checklist completed by:  Date: 09/19/2015
Julian Martinez

Checklist reviewed by:  Date: 09/19/2015
Julian Martinez

Analytical Report 535668

for

GHD Services, INC- Midland

Project Manager: Chris Knight

New Mexico East State

089861

01-SEP-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)

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Sample Receipt Conformance Report	18

01-SEP-16

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

Reference: XENCO Report No(s): **535668**
New Mexico East State
Project Address: Lovington, NM

Chris Knight:

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) 535668. 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. 535668 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 535668

GHD Services, INC- Midland, Midland, TX

New Mexico East State

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-10-082416-5'	S	08-24-16 10:35	- 5 ft	535668-001
SB-10-082416-10'	S	08-24-16 10:45	- 10 ft	535668-002
SB-10-082416-15'	S	08-24-16 10:45	- 15 ft	535668-003
SB-10-082416-20'	S	08-24-16 10:50	- 20 ft	535668-004
SB-10-082416-25'	S	08-24-16 10:55	- 25 ft	535668-005
SB-10-082416-30'	S	08-24-16 11:00	- 30 ft	535668-006
SB-11-082416-5'	S	08-24-16 11:05	- 5 ft	535668-007
SB-11-082416-10'	S	08-24-16 11:10	- 10 ft	535668-008
SB-11-082416-15'	S	08-24-16 11:15	- 15 ft	535668-009
SB-11-082416-20'	S	08-24-16 11:20	- 20 ft	535668-010
SB-11-082416-25'	S	08-24-16 11:25	- 25 ft	535668-011
SB-11-082416-30'	S	08-24-16 11:30	- 30 ft	535668-012
SB-12-082416-5'	S	08-24-16 11:35	- 5 ft	535668-013
SB-12-082416-10'	S	08-24-16 11:40	- 10 ft	535668-014
SB-12-082416-15'	S	08-24-16 11:45	- 15 ft	535668-015
SB-12-082416-20'	S	08-24-16 11:50	- 20 ft	535668-016
SB-12-082416-25'	S	08-24-16 11:55	- 25 ft	535668-017
SB-12-082416-30'	S	08-24-16 12:00	- 30 ft	535668-018
SB-9-082416-5'	S	08-24-16 12:05	- 5 ft	535668-019
SB-9-082416-10'	S	08-24-16 12:10	- 10 ft	535668-020
SB-9-082416-15'	S	08-24-16 12:15	- 15 ft	535668-021
SB-9-082416-20'	S	08-24-16 12:20	- 20 ft	535668-022
SB-9-082416-25'	S	08-24-16 12:25	- 25 ft	535668-023
SB-9-082416-30'	S	08-24-16 12:30	- 30 ft	535668-024

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 535668

GHD Services, INC- Midland, Midland, TX

Project Name: New Mexico East State

Project Id: 089861
Contact: Chris Knight
Project Location: Lovington, NM

Date Received in Lab: Thu Aug-25-16 11:26 am
Report Date: 01-SEP-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	535668-001		535668-002		535668-003		535668-004		535668-005		535668-006	
	Field Id:	SB-10-082416-5'		SB-10-082416-10'		SB-10-082416-15'		SB-10-082416-20'		SB-10-082416-25'		SB-10-082416-30'	
	Depth:	5 ft		10 ft		15 ft		20 ft		25 ft		30 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-24-16 10:35		Aug-24-16 10:45		Aug-24-16 10:45		Aug-24-16 10:50		Aug-24-16 10:55		Aug-24-16 11:00	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-25-16 17:00		Aug-25-16 17:00		Aug-25-16 17:00		Aug-25-16 17:00		Aug-25-16 17:00		Aug-25-16 17:00	
	Analyzed:	Aug-25-16 19:55		Aug-25-16 20:18		Aug-25-16 20:26		Aug-25-16 20:34		Aug-25-16 20:42		Aug-25-16 20:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		22.9	10.0	507	10.0	847	10.0	276	10.0	381	10.0	506	10.0
Percent Moisture by SM2540G	***Extracted:***												
	Analyzed:	Aug-29-16 11:15		Aug-29-16 11:15		Aug-29-16 11:15		Aug-29-16 11:15		Aug-29-16 11:15		Aug-29-16 11:15	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		1.81		8.33		11.4		9.49		7.55		7.35	

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 535668

GHD Services, INC- Midland, Midland, TX

Project Name: New Mexico East State

Project Id: 089861
Contact: Chris Knight
Project Location: Lovington, NM

Date Received in Lab: Thu Aug-25-16 11:26 am
Report Date: 01-SEP-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	535668-007		535668-008		535668-009		535668-010		535668-011		535668-012	
	Field Id:	SB-11-082416-5'		SB-11-082416-10'		SB-11-082416-15'		SB-11-082416-20'		SB-11-082416-25'		SB-11-082416-30'	
	Depth:	5 ft		10 ft		15 ft		20 ft		25 ft		30 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-24-16 11:05		Aug-24-16 11:10		Aug-24-16 11:15		Aug-24-16 11:20		Aug-24-16 11:25		Aug-24-16 11:30	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-25-16 17:00		Aug-25-16 17:00		Aug-25-16 17:00		Aug-25-16 17:00		Aug-25-16 17:00		Aug-25-16 17:00	
	Analyzed:	Aug-25-16 20:57		Aug-25-16 21:21		Aug-25-16 21:29		Aug-25-16 21:52		Aug-25-16 22:00		Aug-25-16 22:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		340	10.0	929	10.0	17.0	10.0	1770	10.0	ND	10.0	858	10.0
Percent Moisture by SM2540G	***Extracted:***												
	Analyzed:	Aug-29-16 11:15		Aug-29-16 11:37		Aug-29-16 11:37		Aug-29-16 11:37		Aug-29-16 11:37		Aug-29-16 11:37	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		6.17		7.76		10.4		8.91		8.13		6.82	

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 535668

GHD Services, INC- Midland, Midland, TX

Project Name: New Mexico East State

Project Id: 089861
Contact: Chris Knight
Project Location: Lovington, NM

Date Received in Lab: Thu Aug-25-16 11:26 am
Report Date: 01-SEP-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	535668-013		535668-014		535668-015		535668-016		535668-017		535668-018	
	Field Id:	SB-12-082416-5'		SB-12-082416-10'		SB-12-082416-15'		SB-12-082416-20'		SB-12-082416-25'		SB-12-082416-30'	
	Depth:	5 ft		10 ft		15 ft		20 ft		25 ft		30 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-24-16 11:35		Aug-24-16 11:40		Aug-24-16 11:45		Aug-24-16 11:50		Aug-24-16 11:55		Aug-24-16 12:00	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-25-16 17:00		Aug-25-16 17:00		Aug-25-16 17:00		Aug-25-16 17:00		Aug-26-16 09:00		Aug-26-16 09:00	
	Analyzed:	Aug-25-16 22:15		Aug-25-16 22:23		Aug-25-16 22:31		Aug-29-16 12:55		Aug-26-16 13:16		Aug-26-16 13:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		118	10.0	1680	10.0	3770	50.0	2710	50.0	263	10.0	337	10.0
Percent Moisture by SM2540G	***Extracted:***												
	Analyzed:	Aug-29-16 11:37		Aug-29-16 11:37		Aug-29-16 11:37		Aug-29-16 11:37		Aug-29-16 11:37		Aug-29-16 11:37	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		2.96		8.54		9.80		9.77		8.95		9.95	

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 535668

GHD Services, INC- Midland, Midland, TX

Project Name: New Mexico East State

Project Id: 089861
Contact: Chris Knight
Project Location: Lovington, NM

Date Received in Lab: Thu Aug-25-16 11:26 am
Report Date: 01-SEP-16
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	535668-019		535668-020		535668-021		535668-022		535668-023		535668-024	
	Field Id:	SB-9-082416-5'		SB-9-082416-10'		SB-9-082416-15'		SB-9-082416-20'		SB-9-082416-25'		SB-9-082416-30'	
	Depth:	5 ft		10 ft		15 ft		20 ft		25 ft		30 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-24-16 12:05		Aug-24-16 12:10		Aug-24-16 12:15		Aug-24-16 12:20		Aug-24-16 12:25		Aug-24-16 12:30	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-26-16 09:00		Aug-26-16 09:00		Aug-26-16 09:00		Aug-26-16 09:00		Aug-26-16 09:00		Aug-26-16 09:00	
	Analyzed:	Aug-26-16 13:47		Aug-26-16 13:55		Aug-26-16 14:03		Aug-26-16 14:26		Aug-26-16 14:34		Aug-26-16 14:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		25.3	10.0	615	10.0	854	10.0	174	10.0	597	10.0	888	10.0
Percent Moisture by SM2540G	***Extracted:***												
	Analyzed:	Aug-29-16 11:37		Aug-29-16 11:37		Aug-29-16 11:37		Aug-29-16 11:37		Aug-29-16 11:37		Aug-29-16 11:37	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		5.28		10.1		12.6		8.31		9.17		10.5	

Kelsey Brooks
Project Manager

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

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

BS / BSD Recoveries

Project Name: New Mexico East State

Work Order #: 535668 **Project ID:** 089861

Analyst: MNR **Date Prepared:** 08/25/2016 **Date Analyzed:** 08/25/2016

Lab Batch ID: 1000716 **Sample:** 713076-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	270	108	250	263	105	3	90-110	20	

Analyst: MNR **Date Prepared:** 08/26/2016 **Date Analyzed:** 08/26/2016

Lab Batch ID: 1000725 **Sample:** 713113-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	232	93	250	253	101	9	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: New Mexico East State

Work Order # : 535668 **Project ID:** 089861

Lab Batch ID: 1000716 **QC- Sample ID:** 535668-007 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/25/2016 **Date Prepared:** 08/25/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	340	250	585	98	250	588	99	1	90-110	20	

Lab Batch ID: 1000716 **QC- Sample ID:** 535677-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/25/2016 **Date Prepared:** 08/25/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	265	106	250	274	110	3	90-110	20	

Lab Batch ID: 1000725 **QC- Sample ID:** 535668-017 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/26/2016 **Date Prepared:** 08/26/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	263	250	512	100	250	511	99	0	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: New Mexico East State

Work Order # : 535668 **Project ID:** 089861

Lab Batch ID: 1000725 **QC- Sample ID:** 535672-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/26/2016 **Date Prepared:** 08/26/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	257	103	250	262	105	2	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Sample Duplicate Recovery

Project Name: New Mexico East State

Work Order #: 535668

Lab Batch #: 1000871 **Project ID:** 089861

Date Analyzed: 08/29/2016 11:37 **Date Prepared:** 08/29/2016 **Analyst:** WRU

QC- Sample ID: 535668-008 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture by SM2540G	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.76	7.96	3	20	

Lab Batch #: 1000871

Date Analyzed: 08/29/2016 11:37 **Date Prepared:** 08/29/2016 **Analyst:** WRU

QC- Sample ID: 535668-018 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture by SM2540G	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	9.95	9.84	1	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

CHAIN OF CUSTODY

Page 1 Of 3

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)

Dallas Texas (214-902-0300)

Service Center - San Antonio, Texas (210-509-3334)

www.xenco.com

Odessa, Texas (432-563-1800)

Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

Xenco Quote #

Xenco Job # 535668

Client / Reporting Information

Company Name / Branch: GHD-Midland

Company Address: 2135 S Loop 250 W, Midland, TX 79703

Email: christopher.knight@ghd.com

Phone No: 512-506-8803

Project Contact: Christopher Knight

Samplers's Name

Project Information

Project Name/Number: New Mexico East State/ 089861

Project Location: Lovington, New Me

Invoice To:

PO Number:

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chloride	Percent Moisture	Field Comments
1	SB-10-082416-5'	5'	8/24	1035	S	1								X	X	X	
2	SB-10-082416-10'	10'	↓	1040	↓	↓								↓	↓	↓	
3	SB-10-082416-15'	15'		1045													
4	SB-10-082416-20'	20'		1050													
5	SB-10-082416-25'	25'		1055													
6	SB-10-082416-30'	30'		1100													
7	SB-11-082416-5'	5'		1105													
8	SB-11-082416-10'	10'		1110													
9	SB-11-082416-15'	15'		1115													
10	SB-11-082416-20'	20'	↓	1120	↓	↓								↓	↓	↓	

Turnaround Time (Business days)

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

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] 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: Reference SSOW. If questions, please contact project manager.

FED-EX / UPS: Tracking #

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

	Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1	Relinquished by Sampler: [signature]	8/25/16 1120	1 [signature] 1120	Relinquished By:	Date Time:	2 Received By:
3	Relinquished by:	Date Time:	3 Received By:	4 Relinquished By:	Date Time:	4 Received By:
5	Relinquished by:	Date Time:	5 Received By:	Custody Seal #	Preserved where applicable	On Ice [X]

Temp: 11.3 IR ID:R-8
C/F:0
Corrected Temp: 11.3

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 neg

CHAIN OF CUSTODY

Page 2 Of 3

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 # 535668

Client / Reporting Information

Company Name / Branch: GHD-Midland

Company Address: 2135 S Loop 250 W, Midland, TX 79703

Email: christopher.knight@ghd.com | Phone No: 512-506-8803

Project Contact: Christopher Knight

Samplers's Name

Project Information

Project Name/Number: New Mexico East State/ 089861

Project Location: Lovington, New Me

Invoice To:

PO Number:

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOHZn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chloride	Percent Moisture	Field Comments
1	SB-11-082416-25'	25'	8/24	1125	S	1								X	X	X	
2	SB-11-082416-30'	30'		1130													
3	SB-12-082416-5'	5'		1135													
4	SB-12-082416-10'	10'		1140													
5	SB-12-082416-15'	15'		1145													
6	SB-12-082416-20'	20'		1150													
7	SB-12-082416-25'	25'		1155													
8	SB-12-082416-30'	30'		1200													
9	SB-9-082416-5'	5'		1205													
10	SB-9-082416-10'	10'		1210													

Turnaround Time (Business days)

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

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] 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:

Reference SSOW
If questions, Please contact Project Manager

FED-EX / UPS: Tracking #

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

	Relinquished by:	Date Time:	Received By:
1	Enrique Stoffl	8/25/16 1120	
2			
3			
4			
5			

Custody Seal # | Preserved where applicable | On Ice: X | Cooler Temp. | Thermo. Corr. Factor

Temp: 11.3 IR ID:R-8
C/F:0
Corrected Temp: 11.3

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 neg...

Final 1.000

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CHAIN OF CUSTODY

XENCO LABORATORIES
Setting the Standard since 1990
Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
Service Center - San Antonio, Texas (210-509-3334)
www.xenco.com
Odessa, Texas (432-563-1800)
Norcross, Georgia (770-449-8800)
Lakeland, Florida (863-646-8526)
Tampa, Florida (813-620-2000)

Xenco Quote #:
Xenco Job #: 535668

Client / Reporting Information
Company Name / Branch: GHD-Midland
Company Address: 2135 S Loop 250 W, Midland, TX 79703
Email: christopher.knight@ghd.com
Phone No: 512-506-8803
Project Contact: Christopher Knight
Samplers's Name:

Project Information
Project Name/Number: New Mexico East State/ 089861
Project Location: Lovington, New Me
Invoice To:
PO Number:

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

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chloride	Percent Moisture	Field Comments
1	SB-9-082416-15'	15'	8/24	1215	S	1								X	X	X	
2	SB-9-082416-20'	20'	↓	1220	↓	↓								↓	↓	↓	
3	SB-9-082416-25'	25'	↓	1225	↓	↓								↓	↓	↓	
4	SB-9-082416-30'	30'	↓	1230	↓	↓								↓	↓	↓	
5																	
6																	
7																	
8																	
9																	
10																	

Turnaround Time (Business days)
- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information
- [ ] Level II Std QC
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- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes: Reference SSOW
If questions, please contact Project Manager

FED-EX / UPS: Tracking #

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

Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1 Relinquished by Sampler: [signature]	8/25/16 1120	1 [signature] 1126	2		2
3 Relinquished by:	Date Time:	3 Received By:	4 Relinquished By:	Date Time:	4 Received By:
5 Relinquished by:	Date Time:	5 Received By:	Custody Seal #	Preserved where applicable	On Ice: X; Temp: 1.3; IR ID:R-8; C/F:0; Corrected Temp: 1.3

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 08/25/2016 11:26:00 AM

Work Order #: 535668

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)?	11.3	
#2 *Shipping container in good condition?	**N/A**	
#3 *Samples received on ice?	**Yes**	chilling in progress
#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)?	**N/A**	
#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: Jessica Kramer
Jessica Kramer
Date: 08/25/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 08/25/2016