SITE INFORMATION

Report Type: Closure Request 1RP-5001

General Site Information:						
Site:	**Jefe BSJ Fed Com #1H**					
Company:	**EOG Resources, Inc.**					
Section, Township and Range	**Unit O**	**Sec. 32**	**T 25S**	**R 32E**		
Lease Number:	**API No. 30-025-40722**					
County:	**Lea County**					
GPS:	**32.080260° N**			**103.695740° W**		
Surface Owner:	State					
Mineral Owner:	State					
Directions:	From the intersection of HWY 128 and CR 1, travel south on CR 1 for 10.4 miles, turn west onto lease road for 1.85 mi, turn north for 0.9 mi, turn east and continue for 0.75 mi to location.					

Release Data:	
Date Released:	3/21/2018
Type Release:	Produced Water
Source of Contamination:	Water Line
Fluid Released:	75 bbls
Fluids Recovered:	35 bbls

Official Communication:			
Name:	Jamon Hohensee		Clair Gonzales
Company:	EOG Resources		Tetra Tech
Address:	5509 Champions Drive		901 West Wall
			Suite 100
City:	Midland, TX 79706		Midland, Texas
Phone number:	(432) 556-8074		(432) 687-8123
Fax:			
Email:	Jamon_Hohensee@eogresources.com		Clair.Gonzales@tetratech.com

Ranking Criteria		
Depth to Groundwater:	***Ranking Score***	***Site Data***
<50 ft	20	
50-99 ft	10	
>100 ft.	***0***	*300' +*
WellHead Protection:	***Ranking Score***	***Site Data***
Water Source <1,000 ft., Private <200 ft.	*20*	
Water Source >1,000 ft., Private >200 ft.	***0***	*0*
Surface Body of Water:	***Ranking Score***	***Site Data***
<200 ft.	*20*	
200 ft - 1,000 ft.	10	
>1,000 ft.	***0***	*0*
Total Ranking Score:	***0***	

Acceptable Soil RRAL (mg/kg)		
Benzene	***Total BTEX***	***TPH***
10	50	5,000

TETRA TECH

November 21, 2018

Ms. Christina Hernandez
Environmental Engineer Specialist
Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

Re: Closure Request for the EOG Resources, Jefe BSJ Fed Com #1H, Unit O, Section 32, Township 25 South, Range 32 East, Lea County, New Mexico. 1RP-5001.

Ms. Hernandez:

Tetra Tech, Inc. (Tetra Tech) was contacted by EOG Resources, Inc. (EOG) to investigate and assess a release that occurred at the Jefe BSJ Fed Com #1H, Unit O, Section 32, Township 25 South, Range 32 East, Lea County, New Mexico (Site). The spill site coordinates are N 32.080260º, W 103.695740º. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the release was discovered on March 21, 2018, and released approximately seventy-five (75) barrels of produced water due to a ruptured water line. Vacuum trucks were dispatched to remove all freestanding fluids, recovering approximately thirty-five (35) barrels of produced water. The release occurred in the pasture and impacted an area measuring approximately 30' x 155' and 65' x 225'. The initial C-141 form is included in Appendix A.

Groundwater

No wells are listed within Section 32 in the New Mexico Office of the State Engineers (NMOSE) database, the USGS National Water Information System, or the Geology and Groundwater Conditions in Southern Lea County, NM (Report 6). However, the NMOSE database lists one well in Section 6, Township 26 South, Range 32 East, located approximately 1.65 miles southwest of the site, with a reported depth to groundwater of 350' below surface. According to the Chevron Texaco Groundwater Trend map, the average depth to groundwater in the area is greater than 300' below surface. The groundwater data is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and

Tetra Tech
901 West Wall, Suite 100, Midland, TX 79701
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

TETRA TECH

Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Analytical Results

On March 29, 2018, Tetra Tech personnel were on site to evaluate and sample the release area with a backhoe. A total of six (6) sample trenches (T-1 through T-6) were installed in the spill footprint to total depths ranging from 2.0' and 10.0' below surface. Selected samples were analyzed for total petroleum hydrocarbons (TPH) by method 8015 extended, BTEX by method 8021, and chlorides by EPA method 300.0. Copies of the laboratory analysis and chain-of-custody documentation are included in Appendix D. The sampling results are summarized in Table 1. The trench locations are shown in Figure 3.

Benzene and Total BTEX

Referring to Table 1, none of the trenches show any benzene or total BTEX concentrations above the RRALs, except trench (T-4). Trench (T-4) showed a benzene concentration of 12.6 mg/kg and a total BTEX concentration of 597 mg/kg at 0-1' below surface. The benzene and total BTEX concentrations in the area then declined with depth to below the RRALs at 2.0' below surface.

TPH

The areas of trenches (T-1 and T-4) did not showed TPH concentrations above the RRAL. The areas of trench (T-2, T-3, T-5, and T-6) showed TPH impact to the shallow soils (0-1'), with TPH highs of 5,710 mg/kg, 10,900 mg/kg, 180,000 mg/kg, and 5,870 mg/kg, respectively. The TPH concentrations declined below the RRAL at 2.0' below surface.

Chloride

The areas of trenches (T-1, T-2, T-3, and T-6) showed elevated chloride concentrations to the shallow soils with concentrations of 4,960 mg/kg, 13,200 mg/kg, 16,600 mg/kg, and 3,960 mg/kg at 0-1' below surface, respectively. The chlorides in these areas then declined with depth to below the 600 mg/kg threshold at depths ranging from 2.0' and 6.0' below surface. However, the areas of trenches (T-4 and T-5) showed bottom trench concentrations of 1,900 mg/kg and 1,930 mg/kg at 4.0' below surface. Deeper samples were not collected due to a dense formation in the area and the chloride impact was not vertically defined.

TETRA TECH

Remediation Activities

On July 18 through August 3, 2018, Tetra Tech personnel were on site to supervise the excavation and remediation activities. Based on the field screening data performed during the remediation activities, the area of trench (T-1) was excavated to 2.5', the area of trench (T-2) was excavated to 8.0', the area of trench (T-3) was excavated to 4.5', the area of trench (T-4) was excavated to 6.0', the area of trench (T-5) was excavated to 5.5', and the area of trench (T-6) was excavated to 4.0', as shown on Figure 4 and highlighted (green) on Table 1. Sidewall and bottom hole confirmation samples were collected to ensure proper removal of the impacted soils. The samples were submitted to the laboratory to be analyzed for TPH method 8015 extended, BTEX method 8021B, and chlorides by EPA method 300.0. The sampling results are summarized in Table 1. The excavation depths and sample locations are shown in Figure 4.

Referring to Table 1, none of the sidewall or bottom hole confirmation samples collected showed TPH, benzene, or total BTEX above the RRALs. Additionally, none of the confirmation samples showed chloride concentrations above 600 mg/kg. The excavated areas were backfilled with clean material to surface grade. Approximately 2,750 cubic yards of excavated material was transported for proper disposal.

Revegetation Plan

The backfilled areas will be seeded in June 2019 in order to coincide with the rainy season in Southeastern New Mexico to aid in revegetation. Based on the soils at the site, the NMSLO Loamy (L) Sites Seed Mixture will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

Site inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the NMSLO will be contacted to determine an effective method for eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate. The NMSLO seed mixture details and corresponding pounds pure live seed per acre are included in Appendix C.

TETRA TECH

Conclusion

Based on the soil assessment and remediation work performed at the site, EOG Resources requests closure of this spill. The final C-141 is enclosed in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities for this site, please call at (432) 682-4559.

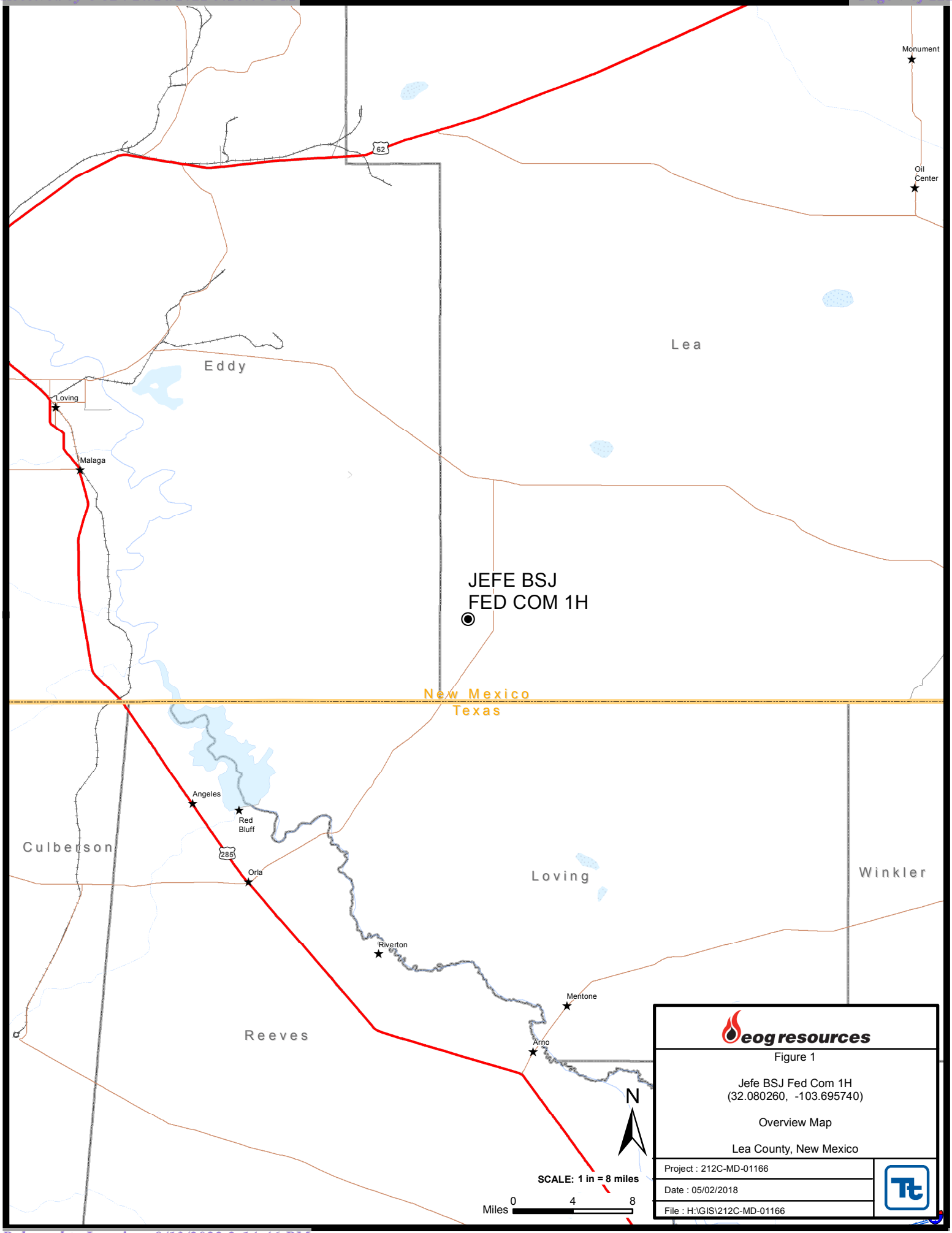
Respectfully submitted,
TETRA TECH

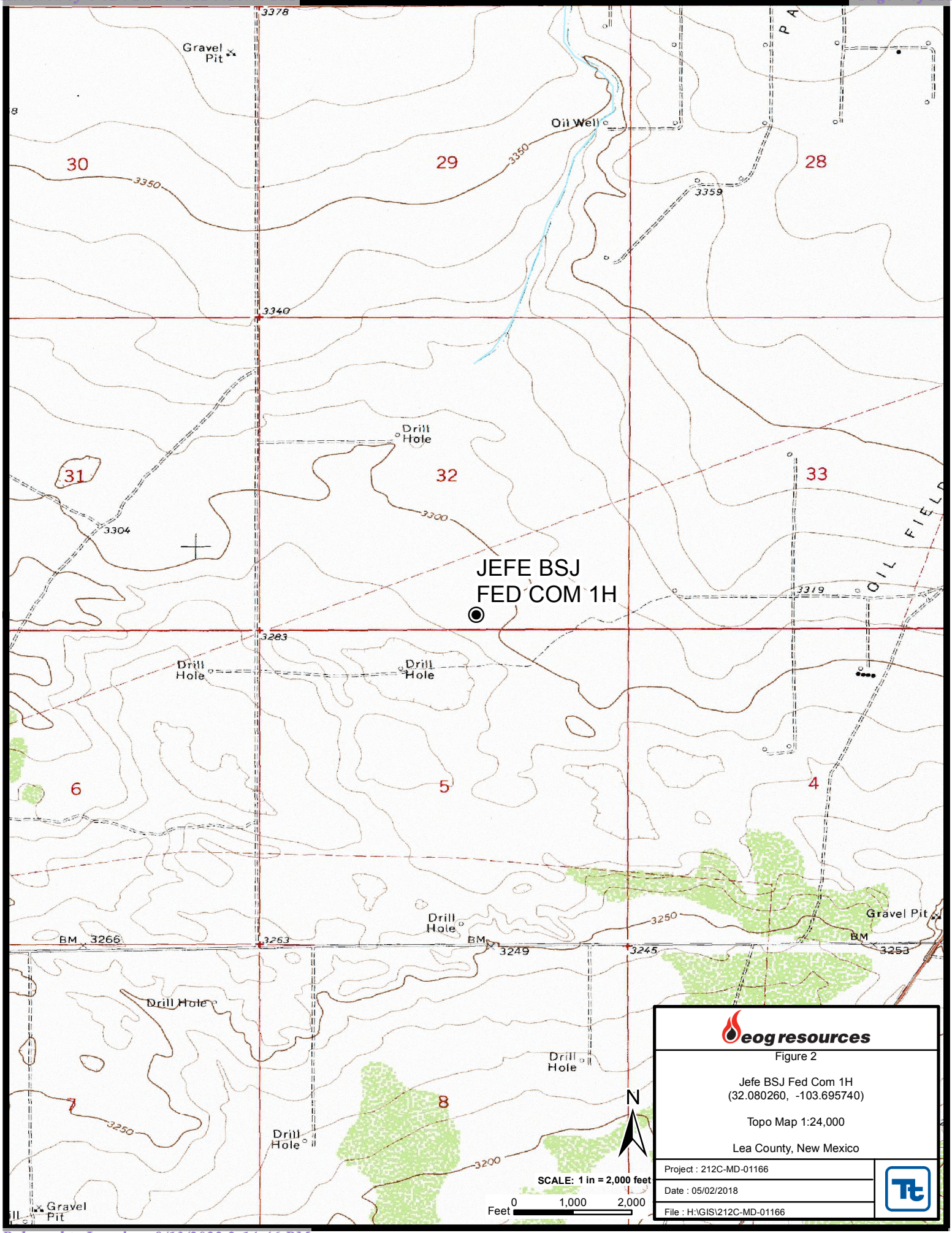
Clair Gonzales,
Project Manager

Mike Carmona
Geologist

cc: Ryan Mann – NMSLO
Jamone Hohensee - EOG

Figures


Monument
Oil Center
62
Lea
Eddy
Loving
Malaga
JEFE BSJ
FED COM 1H
New Mexico
Texas
Angeles
Red Bluff
285
Orla
Culberson
Loving
Winkler
Riverton
Mentone
Arno
Reeves
N
SCALE: 1 in = 8 miles
Miles 0 4 8
eog resources
Figure 1
Jefe BSJ Fed Com 1H
(32.080260, -103.695740)
Overview Map
Lea County, New Mexico
Project : 212C-MD-01166
Date : 05/02/2018
File : H:\GIS\212C-MD-01166



eog resources

Figure 2

Jefe BSJ Fed Com 1H
(32.080260, -103.695740)

Topo Map 1:24,000

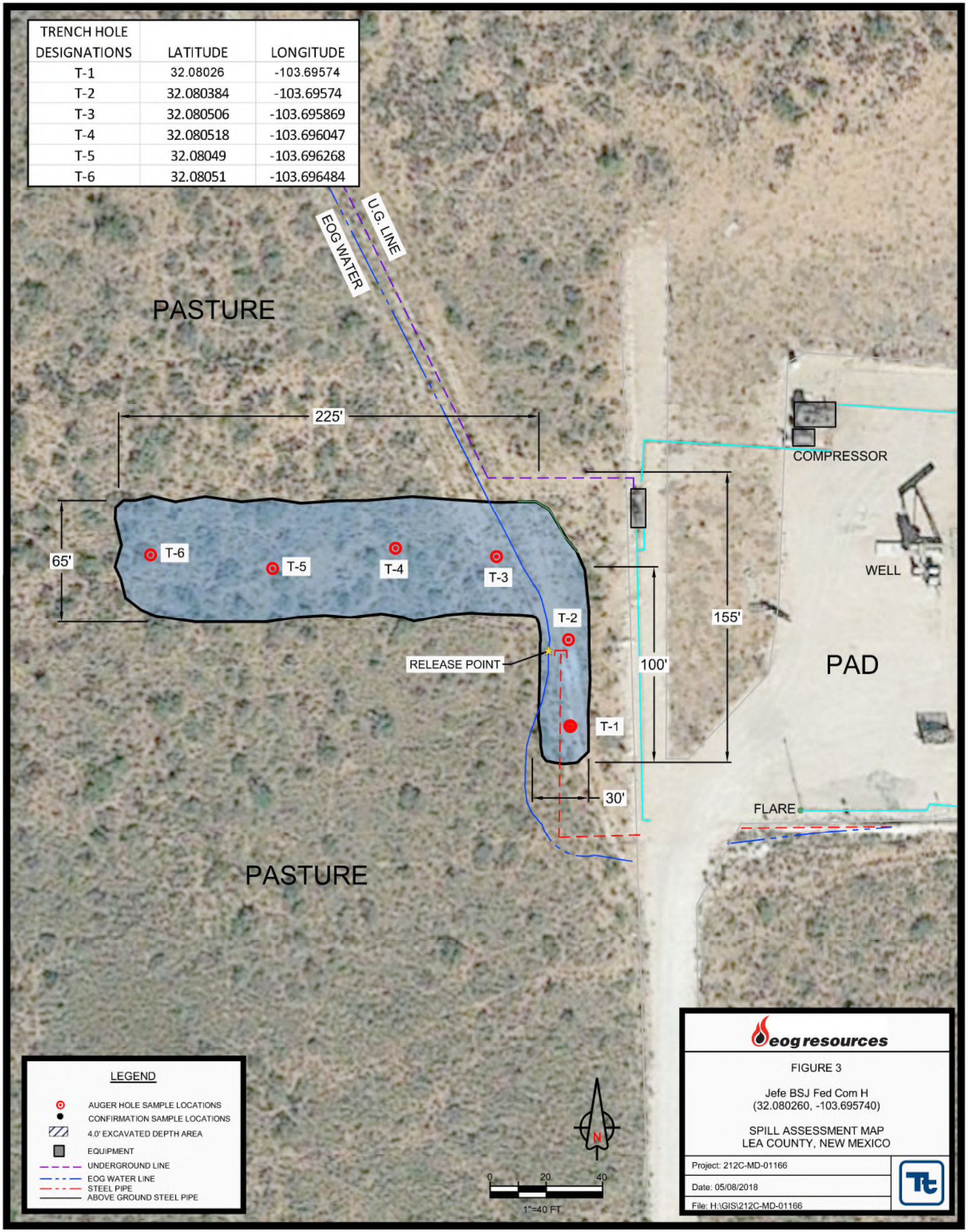
Lea County, New Mexico

Project : 212C-MD-01166

Date : 05/02/2018

File : H:\GIS\212C-MD-01166

TRENCH HOLE DESIGNATIONS	LATITUDE	LONGITUDE
T-1	32.08026	-103.69574
T-2	32.080384	-103.69574
T-3	32.080506	-103.695869
T-4	32.080518	-103.696047
T-5	32.08049	-103.696268
T-6	32.08051	-103.696484



eog resources

FIGURE 3

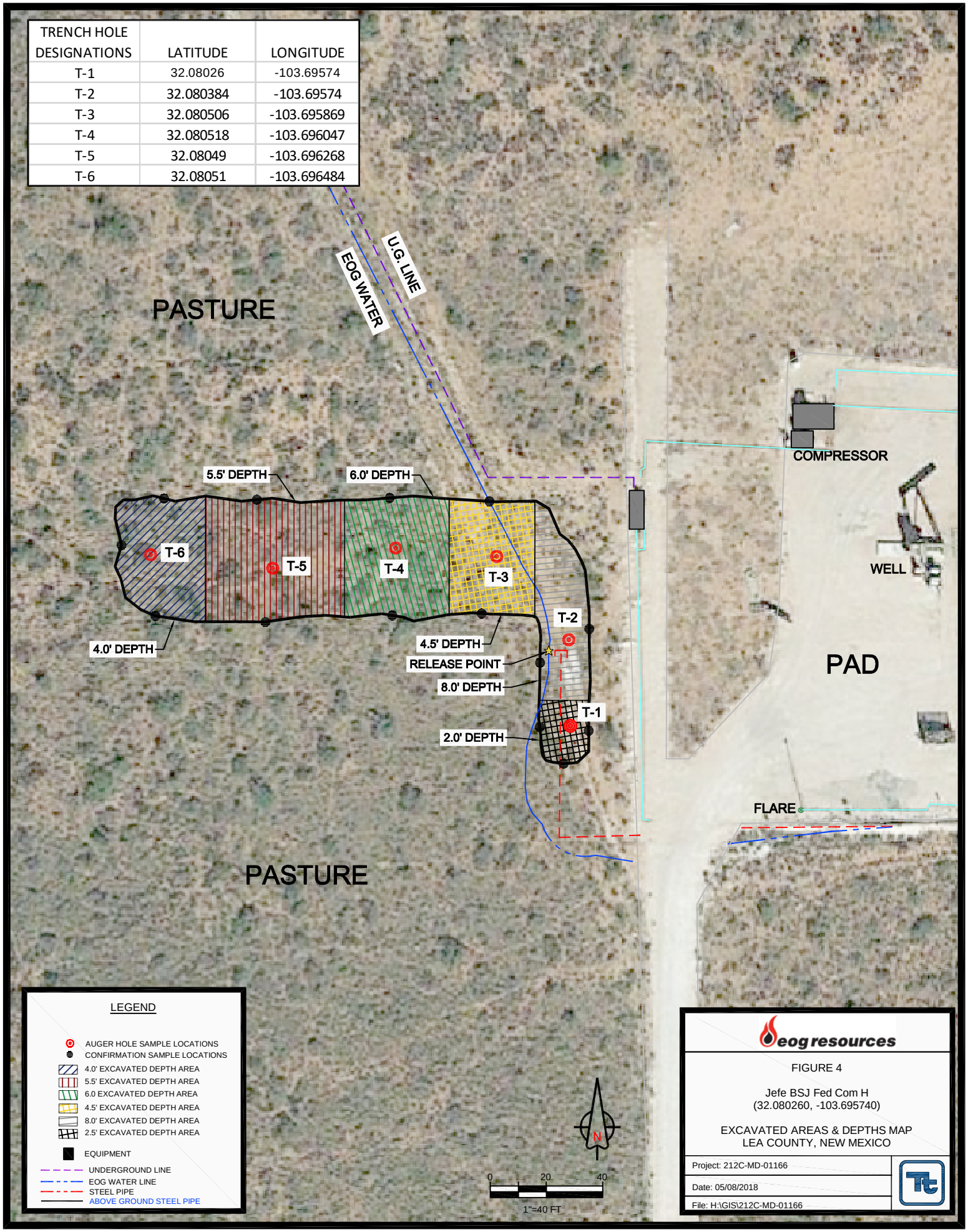
Jefe BSJ Fed Com H
(32.080260, -103.695740)

SPILL ASSESSMENT MAP
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01166
Date: 05/08/2018
File: H:\GIS\212C-MD-01166

Drawn By: MISTI MORGAN

TRENCH HOLE DESIGNATIONS	LATITUDE	LONGITUDE
T-1	32.08026	-103.69574
T-2	32.080384	-103.69574
T-3	32.080506	-103.695869
T-4	32.080518	-103.696047
T-5	32.08049	-103.696268
T-6	32.08051	-103.696484



Tables

Table 1
EOG Resources
El Jefe BSJ Fed. Com. 1H
Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
T-1	3/29/2018	0-1	-		X	<15.0	34.3	<15.0	34.3	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	**4,960**
	"	2	-		X	<15.0	53.5	<15.0	53.5	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	454
Bottom Hole #1	7/24/2018	-	2.5	X		<14.9	<14.9	<14.9	<14.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	248
South Sidewall	7/24/2018	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<5.02
East Sidewall	7/24/2018	-	-	X		<14.9	<14.9	<14.9	<14.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	10.4
West Sidewall	7/30/2018	-	-	X		16.9	<15.0	<15.0	16.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	7.28
T-2	3/29/2018	0-1	-		X	124	4,390	1,200	**5,710**	0.00714	0.0172	<0.00200	0.0133	0.0377	**13,200**
	"	2	-		X	<14.9	<14.9	<14.9	<14.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	168
	"	4	-		X	-	-	-	-	-	-	-	-	-	**1,080**
	"	6	-		X	-	-	-	-	-	-	-	-	-	**1,040**
	"	8	-		X	-	-	-	-	-	-	-	-	-	346
	"	10	-	X		-	-	-	-	-	-	-	-	-	60.6
Bottom Hole #2	7/31/2018	-	8.0	X		<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	29.0
East Sidewall	7/24/2018	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	170
West Sidewall	7/24/2018	-	-	X		<14.9	<14.9	<14.9	<14.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	55.4
T-3	3/29/2018	0-1	-		X	84.2	8,690	2,170	**10,900**	0.00279	0.0116	0.00230	0.0191	0.0358	**16,600**
	"	2	-		X	<15.0	25.9	<15.0	88.5	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	**2,110**
	"	4	-		X	-	-	-	-	-	-	-	-	-	289
	"	6	-	X		-	-	-	-	-	-	-	-	-	82.0
	"	8	-	X		-	-	-	-	-	-	-	-	-	114
Bottomhole #3	7/30/2018	-	4.5	X		<15.0	<15.0	<15.0	<15.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	324
North Sidewall	7/30/2018	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	118
South Sidewall	7/24/2018	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	79.2
East Sidewall	7/24/2018	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<5.02
T-4	3/29/2018	0-1	-		X	51.4	929	141	**1,120**	<0.00200	0.00354	<0.00200	0.0642	0.0677	**3,430**
	"	2	-		X	<15.0	21.8	<15.0	21.8	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	**1,810**
	"	4	-		X	-	-	-	-	-	-	-	-	-	**1,900**
Bottom Hole #4	7/31/2018	-	6.0	X		<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	518
North Sidewall	7/24/2018	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	452
South Sidewall	7/24/2018	-	-	X		<14.9	<14.9	<14.9	<14.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	237
T-5	3/29/2018	0-1	-		X	56,300	106,000	18,000	**180,000**	**12.6**	186	43.6	355	**597**	**20,100**
	"	2	-		X	<15.0	22.4	<15.0	22.4	<0.00200	0.00337	<0.00200	0.00672	0.0101	**6,720**
	"	4	-		X	-	-	-	-	-	-	-	-	-	**1,930**
Bottom Hole #5	7/31/2018	-	5.5	X		<15.0	<15.0	<15.0	<15.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	129
South Sidewall	7/24/2018	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	291
North Sidewall	7/27/2018	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<4.97
T-6	3/29/2018	0-1	-		X	158	4,670	1,040	**5,870**	<0.00200	0.00388	0.00920	0.106	0.119	**3,960**
	"	2	-		X	<15.0	72.9	<15.0	72.9	<0.00199	<0.00199	<0.00199	0.00685	0.00685	**3,850**
	"	4	-		X	-	-	-	-	-	-	-	-	-	**2,000**
	"	6	-	X		-	-	-	-	-	-	-	-	-	26.7
Bottom Hole #6	7/24/2018	-	4.0	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	46.2
North Sidewall	7/27/2018	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	5.69
South Sidewall	7/27/2018	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<4.95
West Sidewall	7/24/2018	-	-	X		18.7	<15.0	<15.0	18.7	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<4.95

(-) Not Analyzed

Excavation Depths

BEB Below Excavation Depth

Photos

EOG Resources
El Jefe BSJ Fed Com #1H
Lea County, New Mexico

TETRA TECH

View North- Excavated Area of T-1 and T-2

View South- Excavated –Area of T-2

EOG Resources
El Jefe BSJ Fed Com #1H
Lea County, New Mexico

TETRA TECH

View North- Excavated Area of T-3

View Northeast- Excavated Area of T4 and T-3

EOG Resources
El Jefe BSJ Fed Com #1H
Lea County, New Mexico

View West- Excavated Area of T-5

View West- Excavated Area of T-6

Appendix A

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company EOG Resources, Inc	Contact Jamon Hohensee
Address 5509 Champions Drive, Midland, Texas 79706	Telephone No. 432-556-8074
Facility Name: Jefe BSJ Fed Com 1H	Facility Type: Production facility

Surface Owner State	Mineral Owner State	API No. 30-025-40722

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	32	25S	32E					

Latitude 32.0806 Longitude -103.6959

NATURE OF RELEASE

Type of Release PW flowline break	Volume of Release 75bbls	Volume Recovered 35bbls
Source of Release PW flowline	3/21/18 3:30PM	3/21/18
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By Olivia Yu at 11:17 am, Mar 28, 2018

Describe Cause of Problem and Remedial Action Taken.*
On 3/21/18 a produced water line burst and released approx. 75bbl to the area 40ft west of the pad location. 35bbls of fluid was recovered. 3`d party consultant will go out and delineate spill area and collect samples. Samples will be analyzed and a work plan will be submitted to go out and excavate impacted soil and properly remove and dispose of impacted soil. Then area will be backfilled with clean material to normal grade.

Describe Area Affected and Cleanup Action Taken.*
Site is desert scrub with no water identified. Vacuum trucks removed free standing liquids at location.

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: Jamon Hohensee	Approved by Environmental Specialist:
Title: Environmental Representative	Approval Date: 3/28/2018 Expiration Date:
E-mail Address: jamon_hohensee@eogresources.com	Conditions of Approval: see attached directive ☒ Attached
Date: 3/27/18 Phone:4325568074	

* Attach Additional Sheets If Necessary

1RP-5001 nOY1808740822 pOY1808741062

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _3/27/2018_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number _1RP-5001__ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _4/28/2018_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

● Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

● Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

● Nominal detection limits for field and laboratory analyses must be provided.

● Composite sampling is not generally allowed.

● Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

●Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

● If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

● Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Appendix B

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	1RP-5001
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	300' (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☑ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

- ☑ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☑ Data table of soil contaminant concentration data
- ☑ Depth to water determination
- ☑ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☑ Photographs including date and GIS information
- ☑ Topographic/Aerial maps
- ☑ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	1RP-5001
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: Jamon Hohensee Title: Enviro. Rep.

Signature: Jamon H. Date: 1-3-19

email: jamon_hohensee@eogresources.com Telephone: 432-556-8074

OCD Only

Received by: Date:

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	1RP-5001
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

☑ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☑ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☑ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☑ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jaman Hohenseer Title: Envirn. Rep.

Signature: Jaman Hohenseer Date: 1-3-19

email: jaman_hohenseer@eogresources.com Telephone: 432-556-8074

OCD Only

Received by: OCD Date: 10/14/2021

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Ashley Maxwell Date: 9/13/2022

Printed Name: Ashley Maxwell Title: Environmental Spacialist

Water Well Data
Average Depth to Groundwater (ft)
EOG - Jefe BSJ Fed Com 1H
Lea County, New Mexico

24 South 31 East

6	5	4 Maljamar	3	2 192	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 390 290	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

26 South 31 East

6	5	4	3	2	1 335 287
7	8 295 275	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South 32 East

6	5	4	3	2	1
7	8	9	10 20	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33 290	34	35	36

25 South 32 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32 Site	33	34	35	36

26 South 32 East

6 350	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 333 180	22	23	24
30	29	28	27	26	25
31 295	32	33	34	35	36

24 South 33 East

6	5	4	3	2	1
7	8	9	10 24.6	11	12
18	17	16	15	14	13
19	20	21	22	23 208	24 16.9
30	29	28	27	26	25
31	32	33 93.2	34	35	36

25 South 33 East

6	5	4	3 172	2	1
7	8	9	10	11 140	12 200
18	17	16	15	14	13
19	20 200	21 120	22	23	24
30	29	28	27 125	26	25
31 257	32	33	34	35	36

26 South 33 East

6	5	4	3 175	2	1
7	8	9	10	11 145	12 200
18	17	16	15	14 135	13
19	20	21 120	22	23	24
30	29	28	27 125	26	25
31	32	33	34	35	36

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)

Geology and Groundwater Resources of Eddy County, NM (Report 3)

34 NMOCD - Groundwater Data

123 Tetra Tech installed temporary wells and field water level

143 NMOCD Groundwater map well location

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

PLSS Search:

Township: 25S **Range:** 32E

11/14/18 3:18 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02271	R	CUB	LE		2	3	21	26S	32E	624449	3544111*	150	125	25
C 02271 POD2		CUB	LE	3	2	3	21	26S	32E	624348	3544010*	270	250	20
C 02274		CUB	LE	2	1	2	31	26S	32E	621742	3541730*	300	295	5
C 02323		C	LE	3	2	3	21	26S	32E	624348	3544010*	405	405	0
C 03537 POD1		CUB	LE	3	2	3	21	26S	32E	624250	3543985	850		
C 03595 POD1		CUB	LE	4	2	3	21	26S	32E	624423	3544045	280	180	100
C 03829 POD1		CUB	LE	3	3	1	06	26S	32E	620628	3549186	646	350	296

Average Depth to Water: **267 feet**

Minimum Depth: **125 feet**

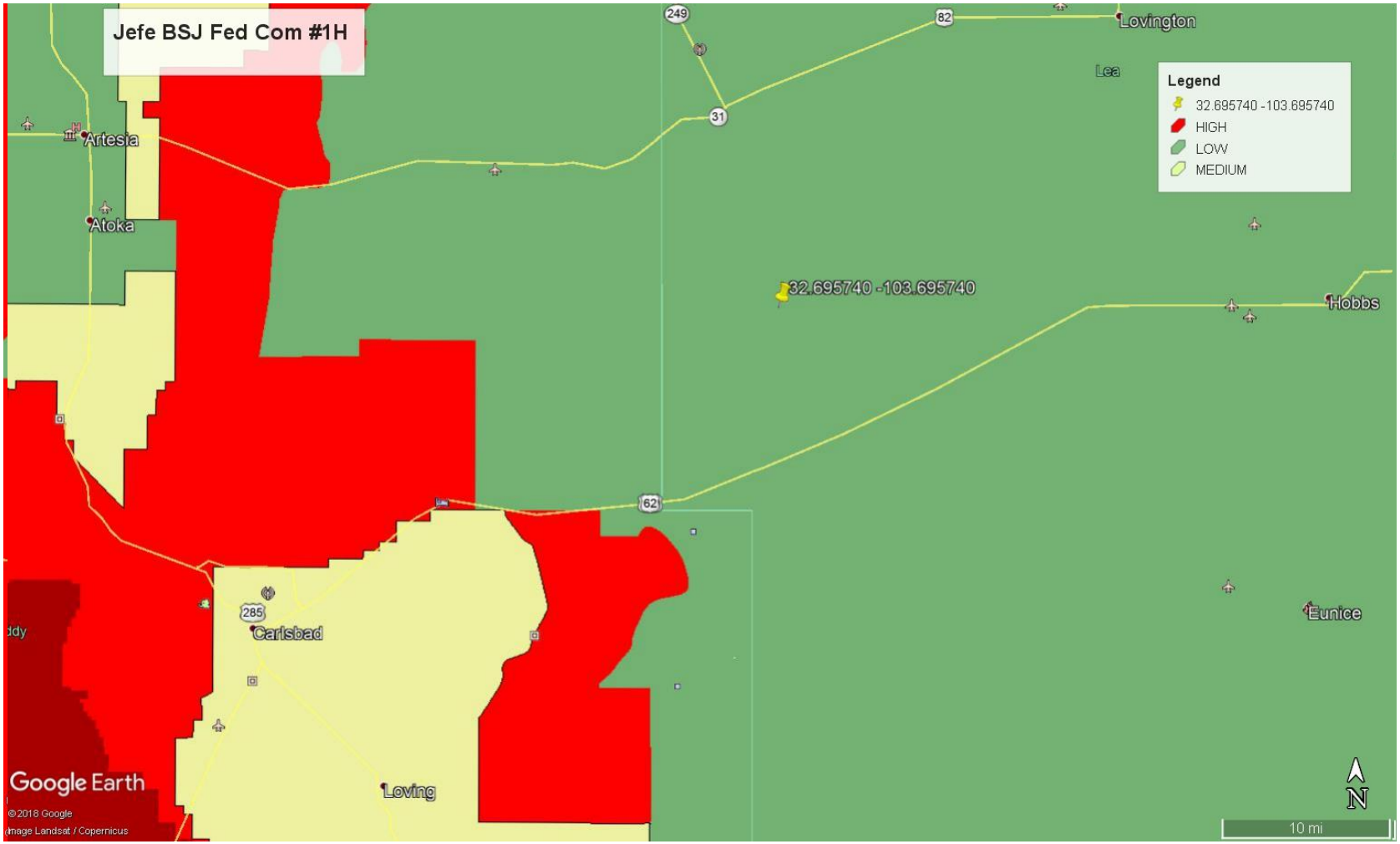
Maximum Depth: **405 feet**

Record Count: 7

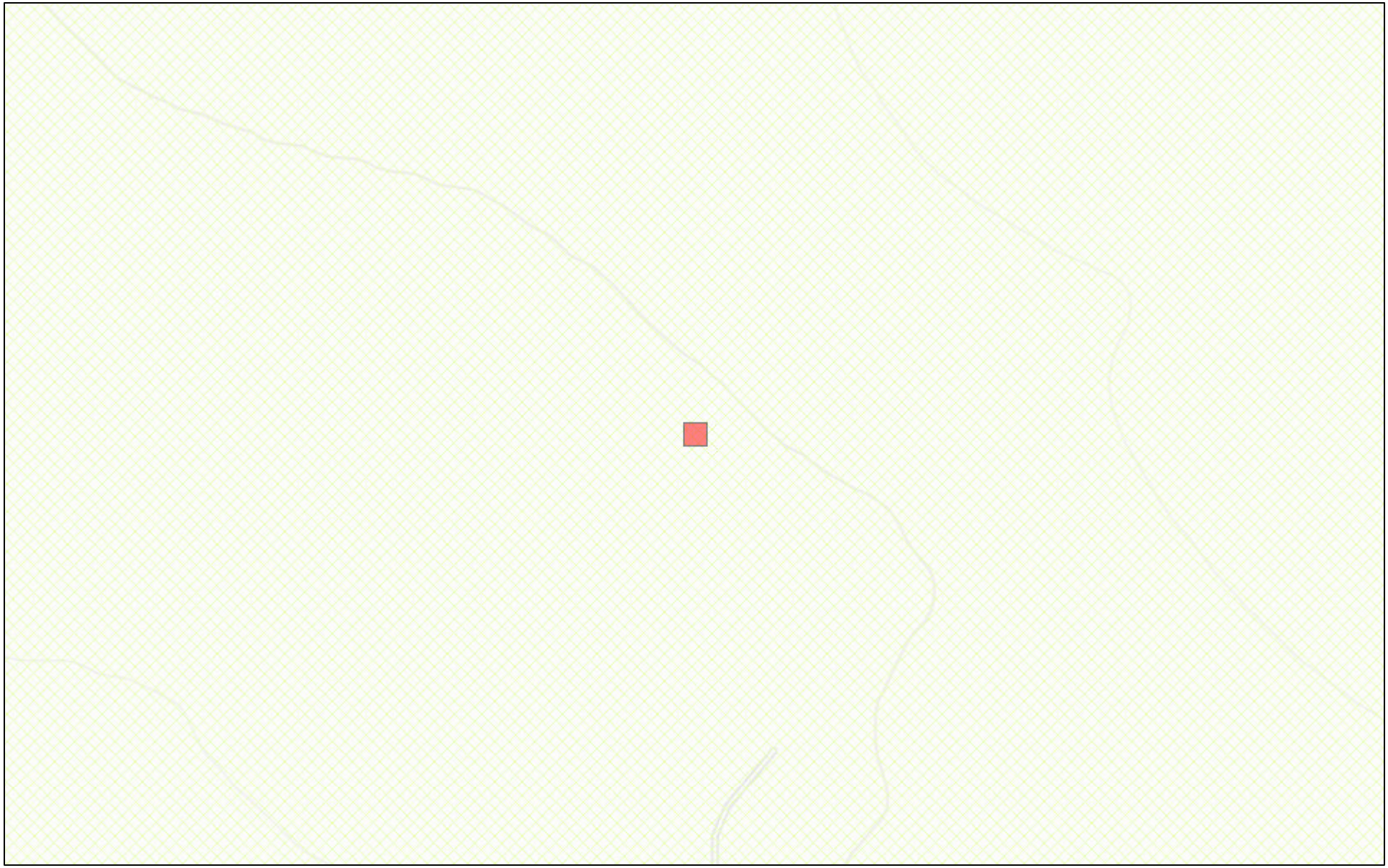
PLSS Search:

Township: 26S **Range:** 32E

***UTM location was derived from PLSS - see Help**


Jefe BSJ Fed Com #1H
Legend
32.695740 -103.695740
HIGH
LOW
MEDIUM
Artesia
Atoka
Lovington
Lea
Hobbs
Eunice
Carlsbad
Loving
32.695740 -103.695740
249
82
31
62
285
Google Earth
©2018 Google
Image Landsat / Copernicus
N
10 mi

New Mexico NFHL Data



November 13, 2018

1:4,514

0 0.0375 0.075 0.15 mi

0 0.05 0.1 0.2 km

FEMA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

Appendix C

Lea County, New Mexico

PT—Pyote loamy fine sand

Map Unit Setting

National map unit symbol: dmqp
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Pyote and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pyote

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 25 inches: loamy fine sand
Bt - 25 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Gypsum, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 2.0
Available water storage in profile: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Minor Components

Maljamar
Percent of map unit: 8 percent
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Palomas
Percent of map unit: 7 percent
Ecological site: Loamy Sand (R042XC003NM)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico
Survey Area Data: Version 14, Sep 10, 2017

NMSLO Seed Mix — Loamy (L)

LOAMY (L) SITES SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Black grama	VNS, Southern	1.0	D
Blue grama	Lovington	1.0	D
Sideoats grama	Vaughn, El Reno	4.0	F
Sand dropseed	VNS, Southern	2.0	S
Alkali sacaton	VNS, Southern	1.0	
Little bluestem	Cimarron, Pastura	1.5	F
Forbs:			
Firewheel (*Gaillardia*)	VNS, Southern	1.0	D
Shrubs:			
Fourwing saltbush	Marana, Santa Rita	1.0	D
Common winterfat	VNS, Southern	0.5	F
	Total PLS/acre	**18.0**	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box
VNS = Variety Not Stated, PLS = Pure Live Seed

- Seed mixes should be provided in bags separating seed types into the three categories: small (S), standard (D) and fluffy (F).
- VNS, Southern – Seed should be from a southern latitude collection of this species.
- Double seed application rate for broadcast or hydroseeding.
- If one species is not available, contact the SLO for an approved substitute; alternatively the SLO may require other species proportionately increased.
- Additional information on these seed species can be found on the USDA Plants Database website at http://plants.usda.gov.

Appendix D

Analytical Report 581006

for

Tetra Tech- Midland

Project Manager: Ike Tavarez

El Jefe BSJ Fed. Comm 1H

212C-MD-01166

13-APR-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-18-24), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)

13-APR-18

Project Manager: **Ike Tavarez**
Tetra Tech- Midland
4000 N. Big Spring Suite 401
Midland, TX 79705

Reference: XENCO Report No(s): **581006**
El Jefe BSJ Fed. Comm 1H
Project Address: Lea County, New Mexico

Ike Tavarez:

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) 581006. 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. 581006 will be filed for 45 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 581006

Tetra Tech- Midland, Midland, TX

El Jefe BSJ Fed. Comm 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 (0-1')	S	03-29-18 00:00		581006-001
T-1 (2')	S	03-29-18 00:00		581006-002
T-2 (0-1')	S	03-29-18 00:00		581006-003
T-2 (2')	S	03-29-18 00:00		581006-004
T-2 (4')	S	03-29-18 00:00		581006-005
T-2 (6')	S	03-29-18 00:00		581006-006
T-2 (8')	S	03-29-18 00:00		581006-007
T-2 (10')	S	03-29-18 00:00		581006-008
T-3 (0-1')	S	03-29-18 00:00		581006-009
T-3 (2')	S	03-29-18 00:00		581006-010
T-3 (4')	S	03-29-18 00:00		581006-011
T-3 (6')	S	03-29-18 00:00		581006-012
T-3 (8')	S	03-29-18 00:00		581006-013
T-4 (0-1')	S	03-29-18 00:00		581006-014
T-4 (2')	S	03-29-18 00:00		581006-015
T-4 (4')	S	03-29-18 00:00		581006-016
T-5 (0-1')	S	03-29-18 00:00		581006-017
T-5 (2')	S	03-29-18 00:00		581006-018
T-5 (4')	S	03-29-18 00:00		581006-019
T-6 (0-1')	S	03-29-18 00:00		581006-020
T-6 (2')	S	03-29-18 00:00		581006-021
T-6 (4')	S	03-29-18 00:00		581006-022
T-6 (6')	S	03-29-18 00:00		581006-023

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: El Jefe BSJ Fed. Comm 1H

Project ID: *212C-MD-01166*
Work Order Number(s): *581006*

Report Date: *13-APR-18*
Date Received: *04/02/2018*

Sample receipt non conformances and comments:

Client took Sample 017 & 018 off hold 04/09/18 JKR

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3045521 Inorganic Anions by EPA 300/300.1
Lab Sample ID 581006-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 581006-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3045540 TPH By SW8015 Mod
Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) RPD was outside laboratory control limits.
Samples in the analytical batch are: 581006-001, -002, -003, -004, -009, -010, -014, -015, -020, -021

Batch: LBA-3045673 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3045718 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3046232 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3046412 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 581006

Tetra Tech- Midland, Midland, TX

Project Name: El Jefe BSJ Fed. Comm 1H

Project Id: 212C-MD-01166
Contact: Ike Tavarez
Project Location: Lea County, New Mexico

Date Received in Lab: Mon Apr-02-18 11:31 am
Report Date: 13-APR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	581006-001		581006-002		581006-003		581006-004		581006-005		581006-006	
	Field Id:	T-1 (0-1')		T-1 (2')		T-2 (0-1')		T-2 (2')		T-2 (4')		T-2 (6')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00	
BTEX by EPA 8021B	***Extracted:***	Apr-03-18 17:00		Apr-04-18 12:00		Apr-04-18 12:00		Apr-04-18 12:00					
	Analyzed:	Apr-03-18 22:33		Apr-04-18 20:38		Apr-04-18 20:57		Apr-04-18 21:16					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00199	0.00199	0.00714	0.00200	<0.00200	0.00200				
Toluene		<0.00201	0.00201	<0.00199	0.00199	0.0172	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	0.00949	0.00399	<0.00401	0.00401				
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	0.00383	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	0.0133	0.00200	<0.00200	0.00200				
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	0.0377	0.00200	<0.00200	0.00200				
Inorganic Anions by EPA 300/300.1	***Extracted:***	Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30	
	Analyzed:	Apr-03-18 05:33		Apr-03-18 05:17		Apr-03-18 05:38		Apr-03-18 05:44		Apr-03-18 05:49		Apr-03-18 06:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		4960	49.5	454	4.98	13200	99.0	168	4.96	1080	4.98	1040	4.97
TPH By SW8015 Mod	***Extracted:***	Apr-03-18 09:00		Apr-03-18 09:00		Apr-03-18 09:00		Apr-03-18 09:00					
	Analyzed:	Apr-03-18 13:55		Apr-03-18 14:20		Apr-03-18 14:45		Apr-03-18 15:08					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	124	15.0	<14.9	14.9				
Diesel Range Organics (DRO)		34.3	15.0	53.5	15.0	4390	15.0	<14.9	14.9				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	1200	15.0	<14.9	14.9				
Total TPH		34.3	15.0	53.5	15.0	5710	15.0	<14.9	14.9				

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 581006

Tetra Tech- Midland, Midland, TX

Project Name: El Jefe BSJ Fed. Comm 1H

Project Id: 212C-MD-01166
Contact: Ike Tavarez
Project Location: Lea County, New Mexico

Date Received in Lab: Mon Apr-02-18 11:31 am
Report Date: 13-APR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	581006-007		581006-008		581006-009		581006-010		581006-011		581006-012	
	Field Id:	T-2 (8')		T-2 (10')		T-3 (0-1')		T-3 (2')		T-3 (4')		T-3 (6')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00	
BTEX by EPA 8021B	***Extracted:***					Apr-04-18 12:00		Apr-04-18 12:00					
	Analyzed:					Apr-04-18 21:36		Apr-04-18 21:55					
	Units/RL:					mg/kg	RL	mg/kg	RL				
Benzene						0.00279	0.00201	<0.00199	0.00199				
Toluene						0.0116	0.00201	<0.00199	0.00199				
Ethylbenzene						0.00230	0.00201	<0.00199	0.00199				
m,p-Xylenes						0.0142	0.00402	<0.00398	0.00398				
o-Xylene						0.00486	0.00201	<0.00199	0.00199				
Total Xylenes						0.0191	0.00201	<0.00199	0.00199				
Total BTEX						0.0358	0.00201	<0.00199	0.00199				
Inorganic Anions by EPA 300/300.1	***Extracted:***	Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30	
	Analyzed:	Apr-03-18 06:10		Apr-03-18 06:15		Apr-03-18 06:21		Apr-03-18 06:26		Apr-03-18 06:31		Apr-03-18 06:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		346	4.99	60.6	4.99	16600	250	2110	24.9	289	4.96	82.0	5.00
TPH By SW8015 Mod	***Extracted:***					Apr-03-18 09:00		Apr-03-18 09:00					
	Analyzed:					Apr-04-18 08:35		Apr-03-18 16:43					
	Units/RL:					mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)						84.2	74.7	<15.0	15.0				
Diesel Range Organics (DRO)						8690	74.7	25.9	15.0				
Oil Range Hydrocarbons (ORO)						2170	74.7	<15.0	15.0				
Total TPH						10900	74.7	88.5	15.0				

Kelsey Brooks
Project Manager

Final 1.000

Certificate of Analysis Summary 581006

Tetra Tech- Midland, Midland, TX

Project Name: El Jefe BSJ Fed. Comm 1H

Project Id: 212C-MD-01166
Contact: Ike Tavarez
Project Location: Lea County, New Mexico

Date Received in Lab: Mon Apr-02-18 11:31 am
Report Date: 13-APR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	581006-013		581006-014		581006-015		581006-016		581006-017		581006-018	
	Field Id:	T-3 (8')		T-4 (0-1')		T-4 (2')		T-4 (4')		T-5 (0-1')		T-5 (2')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00	
BTEX by EPA 8021B	***Extracted:***			Apr-04-18 12:00		Apr-04-18 12:00				Apr-11-18 08:15		Apr-10-18 08:00	
	Analyzed:			Apr-04-18 22:14		Apr-04-18 22:33				Apr-11-18 12:35		Apr-10-18 15:50	
	Units/RL:			mg/kg	RL	mg/kg	RL			mg/kg	RL	mg/kg	RL
Benzene				<0.00200	0.00200	<0.00202	0.00202			12.6	0.996	<0.00200	0.00200
Toluene				0.00354	0.00200	<0.00202	0.00202			186	0.996	0.00337	0.00200
Ethylbenzene				<0.00200	0.00200	<0.00202	0.00202			43.6	0.996	<0.00200	0.00200
m,p-Xylenes				0.0218	0.00399	<0.00403	0.00403			257	1.99	0.00438	0.00400
o-Xylene				0.0424	0.00200	<0.00202	0.00202			97.7	0.996	0.00234	0.00200
Total Xylenes				0.0642	0.00200	<0.00202	0.00202			355	0.996	0.00672	0.00200
Total BTEX				0.0677	0.00200	<0.00202	0.00202			597	0.996	0.0101	0.00200
Inorganic Anions by EPA 300/300.1	***Extracted:***	Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30		Apr-02-18 17:30	
	Analyzed:	Apr-03-18 06:53		Apr-03-18 07:08		Apr-03-18 07:14		Apr-03-18 07:19		Apr-03-18 07:24		Apr-03-18 07:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		114	4.98	3430	24.9	1810	24.8	1900	24.9	20100	249	6720	49.9
TPH By SW8015 Mod	***Extracted:***			Apr-03-18 09:00		Apr-03-18 09:00				Apr-09-18 12:00		Apr-09-18 12:00	
	Analyzed:			Apr-03-18 17:07		Apr-03-18 17:29				Apr-09-18 18:41		Apr-09-18 18:20	
	Units/RL:			mg/kg	RL	mg/kg	RL			mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)				51.4	15.0	<15.0	15.0			56300	748	<15.0	15.0
Diesel Range Organics (DRO)				929	15.0	21.8	15.0			106000	748	22.4	15.0
Oil Range Hydrocarbons (ORO)				141	15.0	<15.0	15.0			18000	748	<15.0	15.0
Total TPH				1120	15.0	21.8	15.0			180000	748	22.4	15.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Final 1.000

Certificate of Analysis Summary 581006

Tetra Tech- Midland, Midland, TX

Project Name: El Jefe BSJ Fed. Comm 1H

Project Id: 212C-MD-01166
Contact: Ike Tavarez
Project Location: Lea County, New Mexico

Date Received in Lab: Mon Apr-02-18 11:31 am
Report Date: 13-APR-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	581006-019		581006-020		581006-021		581006-022		581006-023			
	Field Id:	T-5 (4')		T-6 (0-1')		T-6 (2')		T-6 (4')		T-6 (6')			
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL			
	Sampled:	Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00		Mar-29-18 00:00			
BTEX by EPA 8021B	***Extracted:***			Apr-04-18 12:00		Apr-04-18 12:00							
	Analyzed:			Apr-04-18 22:53		Apr-04-18 23:12							
	Units/RL:			mg/kg	RL	mg/kg	RL						
Benzene				<0.00200	0.00200	<0.00199	0.00199						
Toluene				0.00388	0.00200	<0.00199	0.00199						
Ethylbenzene				0.00920	0.00200	<0.00199	0.00199						
m,p-Xylenes				0.0721	0.00401	0.00447	0.00398						
o-Xylene				0.0336	0.00200	0.00238	0.00199						
Total Xylenes				0.106	0.00200	0.00685	0.00199						
Total BTEX				0.119	0.00200	0.00685	0.00199						
Inorganic Anions by EPA 300/300.1	***Extracted:***	Apr-02-18 17:30		Apr-02-18 17:30		Apr-03-18 15:05		Apr-03-18 15:05		Apr-03-18 15:05			
	Analyzed:	Apr-03-18 07:35		Apr-03-18 07:40		Apr-03-18 15:46		Apr-03-18 15:51		Apr-03-18 15:30			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		1930	24.9	3960	25.0	3850	25.0	2000	25.0	26.7	4.95		
TPH By SW8015 Mod	***Extracted:***			Apr-03-18 09:00		Apr-03-18 09:00							
	Analyzed:			Apr-03-18 17:53		Apr-03-18 18:14							
	Units/RL:			mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)				158	15.0	<15.0	15.0						
Diesel Range Organics (DRO)				4670	15.0	72.9	15.0						
Oil Range Hydrocarbons (ORO)				1040	15.0	<15.0	15.0						
Total TPH				5870	15.0	72.9	15.0						

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks
Project Manager

Final 1.000

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

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045540 **Sample:** 581006-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 13:55

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.4	99.7	92	70-135	
o-Terphenyl	47.5	49.9	95	70-135	

Lab Batch #: 3045540 **Sample:** 581006-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 14:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.8	99.9	92	70-135	
o-Terphenyl	48.9	50.0	98	70-135	

Lab Batch #: 3045540 **Sample:** 581006-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 14:45

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.1	99.8	89	70-135	
o-Terphenyl	42.6	49.9	85	70-135	

Lab Batch #: 3045540 **Sample:** 581006-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 15:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.0	99.6	89	70-135	
o-Terphenyl	45.2	49.8	91	70-135	

Lab Batch #: 3045540 **Sample:** 581006-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 16:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	99.9	90	70-135	
o-Terphenyl	46.7	50.0	93	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.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045540 **Sample:** 581006-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 17:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.7	108	70-135	
o-Terphenyl	53.5	49.9	107	70-135	

Lab Batch #: 3045540 **Sample:** 581006-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 17:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.8	108	70-135	
o-Terphenyl	55.7	49.9	112	70-135	

Lab Batch #: 3045540 **Sample:** 581006-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 17:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.4	99.7	100	70-135	
o-Terphenyl	48.3	49.9	97	70-135	

Lab Batch #: 3045540 **Sample:** 581006-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 18:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	99.9	93	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 3045673 **Sample:** 581006-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 22:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	70-130	
4-Bromofluorobenzene	0.0288	0.0300	96	70-130	

* 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.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045540 **Sample:** 581006-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 08:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.8	99.6	92	70-135	
o-Terphenyl	50.4	49.8	101	70-135	

Lab Batch #: 3045718 **Sample:** 581006-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 20:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	70-130	
4-Bromofluorobenzene	0.0278	0.0300	93	70-130	

Lab Batch #: 3045718 **Sample:** 581006-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 20:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	70-130	
4-Bromofluorobenzene	0.0253	0.0300	84	70-130	

Lab Batch #: 3045718 **Sample:** 581006-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 21:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

Lab Batch #: 3045718 **Sample:** 581006-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 21:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	70-130	
4-Bromofluorobenzene	0.0235	0.0300	78	70-130	

* 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.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045718 **Sample:** 581006-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 21:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	70-130	
4-Bromofluorobenzene	0.0279	0.0300	93	70-130	

Lab Batch #: 3045718 **Sample:** 581006-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 22:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	70-130	
4-Bromofluorobenzene	0.0325	0.0300	108	70-130	

Lab Batch #: 3045718 **Sample:** 581006-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 22:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	70-130	
4-Bromofluorobenzene	0.0288	0.0300	96	70-130	

Lab Batch #: 3045718 **Sample:** 581006-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 22:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0250	0.0300	83	70-130	
4-Bromofluorobenzene	0.0386	0.0300	129	70-130	

Lab Batch #: 3045718 **Sample:** 581006-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 23:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	70-130	
4-Bromofluorobenzene	0.0257	0.0300	86	70-130	

* 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.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3046091 **Sample:** 581006-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/09/18 18:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.9	100	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 3046091 **Sample:** 581006-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/09/18 18:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	99.7	122	70-135	
o-Terphenyl	49.4	49.9	99	70-135	

Lab Batch #: 3046232 **Sample:** 581006-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/10/18 15:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0235	0.0300	78	70-130	
4-Bromofluorobenzene	0.0256	0.0300	85	70-130	

Lab Batch #: 3046412 **Sample:** 581006-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/18 12:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0232	0.0300	77	70-130	
4-Bromofluorobenzene	0.0219	0.0300	73	70-130	

Lab Batch #: 3045540 **Sample:** 7641929-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 09:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.3	100	88	70-135	
o-Terphenyl	46.5	50.0	93	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.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045673 **Sample:** 7642030-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 22:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0266	0.0300	89	70-130	

Lab Batch #: 3045718 **Sample:** 7642055-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 22:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0266	0.0300	89	70-130	

Lab Batch #: 3046091 **Sample:** 7642268-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/09/18 09:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.0	100	96	70-135	
o-Terphenyl	49.8	50.0	100	70-135	

Lab Batch #: 3046232 **Sample:** 7642361-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/10/18 10:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0252	0.0300	84	70-130	
4-Bromofluorobenzene	0.0243	0.0300	81	70-130	

Lab Batch #: 3046412 **Sample:** 7642454-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/18 10:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0224	0.0300	75	70-130	

* 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.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045540 **Sample:** 7641929-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 09:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	47.3	50.0	95	70-135	

Lab Batch #: 3045673 **Sample:** 7642030-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 20:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	70-130	

Lab Batch #: 3045718 **Sample:** 7642055-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 20:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0283	0.0300	94	70-130	

Lab Batch #: 3046091 **Sample:** 7642268-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/09/18 09:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	60.9	50.0	122	70-135	

Lab Batch #: 3046232 **Sample:** 7642361-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/10/18 08:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0317	0.0300	106	70-130	

* 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.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3046412 **Sample:** 7642454-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/18 08:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0289	0.0300	96	70-130	

Lab Batch #: 3045540 **Sample:** 7641929-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 10:21

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	62.1	50.0	124	70-135	

Lab Batch #: 3045673 **Sample:** 7642030-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 20:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0282	0.0300	94	70-130	

Lab Batch #: 3045718 **Sample:** 7642055-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/03/18 20:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0282	0.0300	94	70-130	

Lab Batch #: 3046091 **Sample:** 7642268-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/09/18 09:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.3	100	97	70-135	
o-Terphenyl	46.6	50.0	93	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.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3046232 **Sample:** 7642361-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/10/18 08:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	70-130	
4-Bromofluorobenzene	0.0307	0.0300	102	70-130	

Lab Batch #: 3046412 **Sample:** 7642454-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 04/11/18 08:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	70-130	
4-Bromofluorobenzene	0.0299	0.0300	100	70-130	

Lab Batch #: 3045540 **Sample:** 580999-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 11:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.9	104	70-135	
o-Terphenyl	46.0	50.0	92	70-135	

Lab Batch #: 3045673 **Sample:** 581006-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 20:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	70-130	
4-Bromofluorobenzene	0.0288	0.0300	96	70-130	

Lab Batch #: 3045718 **Sample:** 581267-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 14:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	70-130	
4-Bromofluorobenzene	0.0291	0.0300	97	70-130	

* 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.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3046091 **Sample:** 581762-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/09/18 10:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.5	99.7	95	70-135	
o-Terphenyl	42.8	49.9	86	70-135	

Lab Batch #: 3046232 **Sample:** 581763-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/10/18 08:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0333	0.0300	111	70-130	

Lab Batch #: 3046412 **Sample:** 581765-012 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/18 09:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	70-130	
4-Bromofluorobenzene	0.0293	0.0300	98	70-130	

Lab Batch #: 3045540 **Sample:** 580999-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 12:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.3	99.9	93	70-135	
o-Terphenyl	42.6	50.0	85	70-135	

Lab Batch #: 3045673 **Sample:** 581006-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/03/18 21:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	70-130	
4-Bromofluorobenzene	0.0360	0.0300	120	70-130	

* 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.

Form 2 - Surrogate Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Orders : 581006,

Project ID: 212C-MD-01166

Lab Batch #: 3045718 **Sample:** 581267-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/04/18 15:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

Lab Batch #: 3046091 **Sample:** 581762-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/09/18 11:01

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.8	102	70-135	
o-Terphenyl	47.1	49.9	94	70-135	

Lab Batch #: 3046232 **Sample:** 581763-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/10/18 09:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0334	0.0300	111	70-130	

Lab Batch #: 3046412 **Sample:** 581765-012 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 04/11/18 09:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	70-130	
4-Bromofluorobenzene	0.0293	0.0300	98	70-130	

* 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.

BS / BSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order #: 581006 **Project ID:** 212C-MD-01166

Analyst: ALJ **Date Prepared:** 04/03/2018 **Date Analyzed:** 04/03/2018

Lab Batch ID: 3045673 **Sample:** 7642030-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00202	0.101	0.116	115	0.101	0.121	120	4	70-130	35	
Toluene	<0.00202	0.101	0.108	107	0.101	0.114	113	5	70-130	35	
Ethylbenzene	<0.00202	0.101	0.102	101	0.101	0.109	108	7	70-130	35	
m,p-Xylenes	<0.00403	0.202	0.212	105	0.202	0.224	111	6	70-130	35	
o-Xylene	<0.00202	0.101	0.107	106	0.101	0.113	112	5	70-130	35	

Analyst: ALJ **Date Prepared:** 04/04/2018 **Date Analyzed:** 04/03/2018

Lab Batch ID: 3045718 **Sample:** 7642055-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00200	0.0998	0.115	115	0.100	0.120	120	4	70-130	35	
Toluene	<0.00200	0.0998	0.107	107	0.100	0.113	113	5	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.101	101	0.100	0.109	109	8	70-130	35	
m,p-Xylenes	<0.00399	0.200	0.210	105	0.201	0.223	111	6	70-130	35	
o-Xylene	<0.00200	0.0998	0.106	106	0.100	0.113	113	6	70-130	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

BS / BSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order #: 581006 **Project ID:** 212C-MD-01166

Analyst: ALJ **Date Prepared:** 04/10/2018 **Date Analyzed:** 04/10/2018

Lab Batch ID: 3046232 **Sample:** 7642361-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00198	0.0990	0.118	119	0.0994	0.116	117	2	70-130	35	
Toluene	<0.00198	0.0990	0.115	116	0.0994	0.111	112	4	70-130	35	
Ethylbenzene	<0.00198	0.0990	0.115	116	0.0994	0.112	113	3	70-130	35	
m,p-Xylenes	<0.00396	0.198	0.240	121	0.199	0.230	116	4	70-130	35	
o-Xylene	<0.00198	0.0990	0.119	120	0.0994	0.115	116	3	70-130	35	

Analyst: ALJ **Date Prepared:** 04/11/2018 **Date Analyzed:** 04/11/2018

Lab Batch ID: 3046412 **Sample:** 7642454-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00201	0.101	0.118	117	0.101	0.118	117	0	70-130	35	
Toluene	<0.00201	0.101	0.115	114	0.101	0.114	113	1	70-130	35	
Ethylbenzene	<0.00201	0.101	0.116	115	0.101	0.114	113	2	70-130	35	
m,p-Xylenes	<0.00402	0.201	0.237	118	0.202	0.232	115	2	70-130	35	
o-Xylene	<0.00201	0.101	0.118	117	0.101	0.116	115	2	70-130	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

BS / BSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order #: 581006 **Project ID:** 212C-MD-01166

Analyst: OJS **Date Prepared:** 04/02/2018 **Date Analyzed:** 04/03/2018

Lab Batch ID: 3045521 **Sample:** 7641896-1-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	<5.00	250	273	109	250	267	107	2	90-110	20	

Analyst: OJS **Date Prepared:** 04/03/2018 **Date Analyzed:** 04/03/2018

Lab Batch ID: 3045644 **Sample:** 7641963-1-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	<5.00	250	256	102	250	246	98	4	90-110	20	

Analyst: ARM **Date Prepared:** 04/03/2018 **Date Analyzed:** 04/03/2018

Lab Batch ID: 3045540 **Sample:** 7641929-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	901	90	1000	1150	115	24	70-135	20	F
Diesel Range Organics (DRO)	<15.0	1000	942	94	1000	1190	119	23	70-135	20	F

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

BS / BSD Recoveries

Project Name: El Jefe BSJ Fed. Comm 1H

Work Order #: 581006 **Project ID:** 212C-MD-01166

Analyst: ARM **Date Prepared:** 04/09/2018 **Date Analyzed:** 04/09/2018

Lab Batch ID: 3046091 **Sample:** 7642268-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1060	106	1000	995	100	6	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	1160	116	1000	1130	113	3	70-135	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: El Jefe BSJ Fed. Comm 1H

Work Order # : 581006 **Project ID:** 212C-MD-01166

Lab Batch ID: 3045673 **QC- Sample ID:** 581006-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/03/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00199	0.0994	0.109	110	0.0998	0.0915	92	17	70-130	35	
Toluene	<0.00199	0.0994	0.101	102	0.0998	0.0887	89	13	70-130	35	
Ethylbenzene	<0.00199	0.0994	0.0917	92	0.0998	0.0813	81	12	70-130	35	
m,p-Xylenes	<0.00398	0.199	0.188	94	0.200	0.162	81	15	70-130	35	
o-Xylene	<0.00199	0.0994	0.0993	100	0.0998	0.0875	88	13	70-130	35	

Lab Batch ID: 3045718 **QC- Sample ID:** 581267-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/04/2018 **Date Prepared:** 04/04/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00201	0.100	0.0839	84	0.0998	0.0996	100	17	70-130	35	
Toluene	<0.00201	0.100	0.0779	78	0.0998	0.0943	94	19	70-130	35	
Ethylbenzene	<0.00201	0.100	0.0720	72	0.0998	0.0882	88	20	70-130	35	
m,p-Xylenes	<0.00402	0.201	0.151	75	0.200	0.181	91	18	70-130	35	
o-Xylene	<0.00201	0.100	0.0755	76	0.0998	0.0920	92	20	70-130	35	

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: El Jefe BSJ Fed. Comm 1H

Work Order # : 581006 **Project ID:** 212C-MD-01166

Lab Batch ID: 3046232 **QC- Sample ID:** 581763-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/10/2018 **Date Prepared:** 04/10/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00200	0.100	0.0887	89	0.101	0.107	106	19	70-130	35	
Toluene	<0.00200	0.100	0.0819	82	0.101	0.101	100	21	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0764	76	0.101	0.100	99	27	70-130	35	
m,p-Xylenes	<0.00401	0.200	0.157	79	0.202	0.205	101	27	70-130	35	
o-Xylene	<0.00200	0.100	0.0787	79	0.101	0.103	102	27	70-130	35	

Lab Batch ID: 3046412 **QC- Sample ID:** 581765-012 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/11/2018 **Date Prepared:** 04/11/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00200	0.100	0.0867	87	0.0998	0.0956	96	10	70-130	35	
Toluene	<0.00200	0.100	0.0809	81	0.0998	0.0896	90	10	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0805	81	0.0998	0.0868	87	8	70-130	35	
m,p-Xylenes	<0.00401	0.200	0.165	83	0.200	0.177	89	7	70-130	35	
o-Xylene	<0.00200	0.100	0.0810	81	0.0998	0.0888	89	9	70-130	35	

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: El Jefe BSJ Fed. Comm 1H

Work Order # : 581006 **Project ID:** 212C-MD-01166

Lab Batch ID: 3045521 **QC- Sample ID:** 581006-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/02/2018 **Analyst:** OJS

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	454	249	715	105	249	722	108	1	90-110	20	

Lab Batch ID: 3045521 **QC- Sample ID:** 581006-011 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/02/2018 **Analyst:** OJS

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	289	248	553	106	248	571	114	3	90-110	20	X

Lab Batch ID: 3045644 **QC- Sample ID:** 581006-023 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/03/2018 **Analyst:** OJS

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	26.7	248	272	99	248	270	98	1	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: El Jefe BSJ Fed. Comm 1H

Work Order # : 581006 **Project ID:** 212C-MD-01166

Lab Batch ID: 3045644 **QC- Sample ID:** 581057-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/03/2018 **Analyst:** OJS

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	370	248	603	94	248	607	96	1	90-110	20	

Lab Batch ID: 3045540 **QC- Sample ID:** 580999-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/03/2018 **Date Prepared:** 04/03/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	999	1020	102	999	926	93	10	70-135	20	
Diesel Range Organics (DRO)	<15.0	999	1100	110	999	1040	104	6	70-135	20	

Lab Batch ID: 3046091 **QC- Sample ID:** 581762-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 04/09/2018 **Date Prepared:** 04/09/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	997	810	81	998	831	83	3	70-135	20	
Diesel Range Organics (DRO)	30.4	997	848	82	998	922	89	8	70-135	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.

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

581006

Client Name:	EOG	Site Manager:	Ike Tavarez
Project Name:	El Jefe BSJ Fed. Comm 1H		
Project Location: (county, state)	Lea County, New Mexico	Project #:	212C-MD-01166
Invoice to:	Tetra Tech, Inc.		
Receiving Laboratory:	Xenco Midland Tx	Sampler Signature:	Mike Carmona

Comments: Run deeper samples if TPH exceeds 5,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2017 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
	T-1 (0-1')	3/29/2018			X				X			1	N	X		X												X								
	T-1 (2')	3/29/2018			X				X			1	N	X		X												X								
	T-2 (0-1')	3/29/2018			X				X			1	N	X		X												X								
	T-2 (2')	3/29/2018			X				X			1	N	X		X												X								
	T-2 (4')	3/29/2018			X				X			1	N															X								
	T-2 (6')	3/29/2018			X				X			1	N															X								
	T-2 (8')	3/29/2018			X				X			1	N															X								
	T-2 (10')	3/29/2018			X				X			1	N															X								
	T-3 (0-1')	3/29/2018			X				X			1	N	X		X												X								
	T-3 (2')	3/29/2018			X				X			1	N	X		X												X								

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Mike Carmona	4-2-18	1130	[signature]	4/2/18	11:31
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

ORIGINAL COPY

LAB USE ONLY

Sample Temperature

(Circle) HAND DELIVERED

REMARKS:

- [X] STANDARD
- [ ] RUSH: Same Day 24 hr 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

Temp: 4.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.1

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

58 1006

Client Name: EOG	Site Manager: Ike Tavarez
Project Name: El Jefe BSJ Fed. Comm 1H	
Project Location: (county, state) Lea County, New Mexico	Project #: 212C-MD-01166
Invoice to: Tetra Tech, Inc.	
Receiving Laboratory: Xenco Midland Tx	Sampler Signature: Mike Carmona

Comments: Run deeper samples if TPH exceeds 5,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2017 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None		# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCBs 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
	T-3 (4')	3/29/2018			X				X			1	N															X							
	T-3 (6')	3/29/2018			X				X			1	N															X							
	T-3 (8')	3/29/2018			X				X			1	N															X							
	T-4 (0-1')	3/29/2018			X				X			1	N	X		X												X							
	T-4 (2')	3/29/2018			X				X			1	N	X		X												X							
	T-4 (4')	3/29/2018			X				X			1	N															X							
	T-5 (0-1')	3/29/2018			X				X			1	N															X							
	T-5 (2')	3/29/2018			X				X			1	N															X							
	T-5 (4')	3/29/2018			X				X			1	N															X							
	T-6 (0-1')	3/29/2018			X				X			1	N	X		X												X							

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Mike Carmona	4-2-18	1130	Bcreed	4/2/18	11:31
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature

REMARKS:

- [x] STANDARD
- [ ] RUSH: Same Day 24 hr 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

Temp: 4.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.1

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

581006

Client Name: EOG	**Site Manager:** Ike Tavarez
Project Name: El Jefe BSJ Fed. Comm 1H	
Project Location: (county, state) Lea County, New Mexico	**Project #:** 212C-MD-01166
Invoice to: Tetra Tech, Inc.	
Receiving Laboratory: Xenco Midland Tx	**Sampler Signature:** Mike Carmona

Comments: Run deeper samples if TPH exceeds 5,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2017 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	T-6 (2')	3/29/2018			X				X			1	N	X		X												X							
	T-6 (4')	3/29/2018			X				X			1	N															X							
	T-6 (6')	3/29/2018			X				X			1	N															X							

Final 1.000

Page 31 of 32

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Mike Carmona	4-2-18	1130	[signature]	4/8/18	11:31
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature

REMARKS:

- [X] STANDARD
- [ ] RUSH: Same Day 24 hr 48 hr 72 hr
- [ ] Rush Charges Authorized
- [ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

Temp: 4.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 04/02/2018 11:31:00 AM

Work Order #: 581006

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#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 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Connie Hernandez Date: 04/02/2018

Connie Hernandez

Checklist reviewed by: Jessica Kramer Date: 04/02/2018

Jessica Kramer

Analytical Report 593475

for

Tetra Tech- Midland

Project Manager: Clair Gonzales

EOG-Jefe BSJ Fed. Com 1H

212C-MD-01166

26-JUL-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

26-JUL-18

Project Manager: **Clair Gonzales**
Tetra Tech- Midland
4000 N. Big Spring Suite 401
Midland, TX 79705

Reference: XENCO Report No(s): **593475**
EOG-Jefe BSJ Fed. Com 1H
Project Address: Lea County NM

Clair Gonzales:

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) 593475. 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. 593475 will be filed for 45 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,

Mike Kimmel
Client Services 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 - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 593475

Tetra Tech- Midland, Midland, TX

EOG-Jefe BSJ Fed. Com 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bottom Hole #1 (0-6") 2.5' BEB	S	07-24-18 00:00		593475-001
Bottom Hole #1 South Sidewall	S	07-24-18 00:00		593475-002
Bottom Hole #1 East Sidewall	S	07-24-18 00:00		593475-003
Bottom Hole #2 East Sidewall	S	07-24-18 00:00		593475-004
Bottom Hole #2 West Sidewall	S	07-24-18 00:00		593475-005
Bottom Hole #3 South Sidewall	S	07-24-18 00:00		593475-006
Bottom Hole #3 East Sidewall	S	07-24-18 00:00		593475-007
Bottom Hole #4 North Sidewall	S	07-24-18 00:00		593475-008
Bottom Hole #4 South Sidewall	S	07-24-18 00:00		593475-009
Bottom Hole #5 South Sidewall	S	07-24-18 00:00		593475-010
Bottom Hole #6 (0-6") 4' BEB	S	07-24-18 00:00		593475-011
Bottom Hole #6 West Sidewall	S	07-24-18 00:00		593475-012

Version: 1.%

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: EOG-Jefe BSJ Fed. Com 1H

Project ID: *212C-MD-01166*
Work Order Number(s): *593475*

Report Date: *26-JUL-18*
Date Received: *07/25/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3057747 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 593475

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Jefe BSJ Fed. Com 1H

Project Id: 212C-MD-01166
Contact: Clair Gonzales
Project Location: Lea County NM

Date Received in Lab: Wed Jul-25-18 09:34 am
Report Date: 26-JUL-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	593475-001		593475-002		593475-003		593475-004		593475-005		593475-006	
	Field Id:	Bottom Hole #1 (0-6") 2.5' B		Bottom Hole #1 South Sidew		Bottom Hole #1 East Sidewa		Bottom Hole #2 East Sidewa		Bottom Hole #2 West Sidewa		Bottom Hole #3 South Sidew	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-24-18 00:00		Jul-24-18 00:00		Jul-24-18 00:00		Jul-24-18 00:00		Jul-24-18 00:00		Jul-24-18 00:00	
BTEX by EPA 8021B	*Extracted:*	Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00	
	Analyzed:	Jul-25-18 15:39		Jul-25-18 16:00		Jul-25-18 17:15		Jul-25-18 17:37		Jul-25-18 17:59		Jul-25-18 18:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202
m,p-Xylenes		<0.00403	0.00403	<0.00399	0.00399	<0.00398	0.00398	<0.00401	0.00401	<0.00398	0.00398	<0.00403	0.00403
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00202	0.00202
Inorganic Anions by EPA 300/300.1	*Extracted:*	Jul-25-18 16:30		Jul-25-18 16:30		Jul-25-18 16:30		Jul-25-18 16:30		Jul-25-18 16:30		Jul-25-18 16:30	
	Analyzed:	Jul-25-18 20:39		Jul-25-18 20:23		Jul-25-18 20:45		Jul-25-18 21:01		Jul-25-18 21:06		Jul-25-18 21:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		248	4.95	<5.02	5.02	10.4	4.95	170	4.98	55.4	4.97	79.2	4.96
TPH By SW8015 Mod	*Extracted:*	Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00	
	Analyzed:	Jul-25-18 14:11		Jul-25-18 14:31		Jul-25-18 14:52		Jul-25-18 15:13		Jul-25-18 15:34		Jul-25-18 16:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<14.9	14.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Mike Kimmel
Client Services Manager

Final 1.000

Certificate of Analysis Summary 593475

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Jefe BSJ Fed. Com 1H

Project Id: 212C-MD-01166
Contact: Clair Gonzales
Project Location: Lea County NM

Date Received in Lab: Wed Jul-25-18 09:34 am
Report Date: 26-JUL-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	593475-007		593475-008		593475-009		593475-010		593475-011		593475-012	
	Field Id:	Bottom Hole #3 East Sidewa		Bottom Hole #4 North Sidew		Bottom Hole #4 South Sidew		Bottom Hole #5 South Sidew		Bottom Hole #6 (0-6") 4' BE		Bottom Hole #6 West Sidewa	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-24-18 00:00		Jul-24-18 00:00		Jul-24-18 00:00		Jul-24-18 00:00		Jul-24-18 00:00		Jul-24-18 00:00	
BTEX by EPA 8021B	*Extracted:*	Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00	
	Analyzed:	Jul-25-18 18:40		Jul-25-18 19:00		Jul-25-18 19:21		Jul-25-18 19:42		Jul-25-18 20:03		Jul-25-18 20:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00401	0.00401	<0.00399	0.00399	<0.00397	0.00397	<0.00403	0.00403	<0.00401	0.00401	<0.00399	0.00399
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300/300.1	*Extracted:*	Jul-25-18 16:30		Jul-25-18 16:30		Jul-25-18 16:30		Jul-25-18 16:30		Jul-25-18 16:45		Jul-25-18 16:45	
	Analyzed:	Jul-25-18 21:17		Jul-25-18 21:23		Jul-25-18 21:28		Jul-25-18 21:33		Jul-25-18 22:06		Jul-25-18 23:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.02	5.02	452	4.96	237	4.95	291	5.01	46.2	4.97	<4.95	4.95
TPH By SW8015 Mod	*Extracted:*	Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00		Jul-25-18 10:00	
	Analyzed:	Jul-25-18 16:58		Jul-25-18 17:19		Jul-25-18 18:01		Jul-25-18 18:22		Jul-25-18 18:43		Jul-25-18 19:04	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	18.7	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	18.7	15.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Mike Kimmel
Client Services Manager

Final 1.000

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

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: EOG-Jefe BSJ Fed. Com 1H

Work Orders : 593475,

Project ID: 212C-MD-01166

Lab Batch #: 3057775 **Sample:** 593475-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 14:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.7	99.6	88	70-135	
o-Terphenyl	41.8	49.8	84	70-135	

Lab Batch #: 3057775 **Sample:** 593475-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 14:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.4	99.7	87	70-135	
o-Terphenyl	41.8	49.9	84	70-135	

Lab Batch #: 3057775 **Sample:** 593475-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 14:52

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.1	99.6	84	70-135	
o-Terphenyl	40.2	49.8	81	70-135	

Lab Batch #: 3057775 **Sample:** 593475-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 15:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.3	99.9	94	70-135	
o-Terphenyl	47.9	50.0	96	70-135	

Lab Batch #: 3057775 **Sample:** 593475-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 15:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.0	99.8	86	70-135	
o-Terphenyl	42.5	49.9	85	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: EOG-Jefe BSJ Fed. Com 1H

Work Orders : 593475,

Project ID: 212C-MD-01166

Lab Batch #: 3057747 **Sample:** 593475-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 15:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	70-130	
4-Bromofluorobenzene	0.0267	0.0300	89	70-130	

Lab Batch #: 3057747 **Sample:** 593475-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 16:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	70-130	
4-Bromofluorobenzene	0.0268	0.0300	89	70-130	

Lab Batch #: 3057775 **Sample:** 593475-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 16:37

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	74.7	100	75	70-135	
o-Terphenyl	35.0	50.0	70	70-135	

Lab Batch #: 3057775 **Sample:** 593475-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 16:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	69.9	99.7	70	70-135	
o-Terphenyl	34.9	49.9	70	70-135	

Lab Batch #: 3057747 **Sample:** 593475-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 17:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	70-130	
4-Bromofluorobenzene	0.0256	0.0300	85	70-130	

* 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: EOG-Jefe BSJ Fed. Com 1H

Work Orders : 593475,

Project ID: 212C-MD-01166

Lab Batch #: 3057775 **Sample:** 593475-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 17:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	99.8	85	70-135	
o-Terphenyl	42.1	49.9	84	70-135	

Lab Batch #: 3057747 **Sample:** 593475-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 17:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	70-130	
4-Bromofluorobenzene	0.0258	0.0300	86	70-130	

Lab Batch #: 3057747 **Sample:** 593475-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 17:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	70-130	
4-Bromofluorobenzene	0.0267	0.0300	89	70-130	

Lab Batch #: 3057775 **Sample:** 593475-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 18:01

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.3	99.6	85	70-135	
o-Terphenyl	42.6	49.8	86	70-135	

Lab Batch #: 3057747 **Sample:** 593475-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 18:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0322	0.0300	107	70-130	
4-Bromofluorobenzene	0.0263	0.0300	88	70-130	

* 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: EOG-Jefe BSJ Fed. Com 1H

Work Orders : 593475,

Project ID: 212C-MD-01166

Lab Batch #: 3057775 **Sample:** 593475-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 18:22

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	99.9	85	70-135	
o-Terphenyl	43.2	50.0	86	70-135	

Lab Batch #: 3057747 **Sample:** 593475-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 18:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0330	0.0300	110	70-130	
4-Bromofluorobenzene	0.0265	0.0300	88	70-130	

Lab Batch #: 3057775 **Sample:** 593475-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 18:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.9	99.8	85	70-135	
o-Terphenyl	41.6	49.9	83	70-135	

Lab Batch #: 3057747 **Sample:** 593475-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 19:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	70-130	
4-Bromofluorobenzene	0.0261	0.0300	87	70-130	

Lab Batch #: 3057775 **Sample:** 593475-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 19:04

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.7	99.8	77	70-135	
o-Terphenyl	35.1	49.9	70	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: EOG-Jefe BSJ Fed. Com 1H

Work Orders : 593475,

Project ID: 212C-MD-01166

Lab Batch #: 3057747 **Sample:** 593475-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 19:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	70-130	
4-Bromofluorobenzene	0.0260	0.0300	87	70-130	

Lab Batch #: 3057747 **Sample:** 593475-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 19:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0274	0.0300	91	70-130	

Lab Batch #: 3057747 **Sample:** 593475-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 20:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0319	0.0300	106	70-130	
4-Bromofluorobenzene	0.0266	0.0300	89	70-130	

Lab Batch #: 3057747 **Sample:** 593475-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 20:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0256	0.0300	85	70-130	

Lab Batch #: 3057775 **Sample:** 7659108-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/25/18 10:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	53.0	50.0	106	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: EOG-Jefe BSJ Fed. Com 1H

Work Orders : 593475,

Project ID: 212C-MD-01166

Lab Batch #: 3057747 **Sample:** 7659101-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/25/18 12:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0251	0.0300	84	70-130	

Lab Batch #: 3057747 **Sample:** 7659101-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/25/18 10:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	70-130	
4-Bromofluorobenzene	0.0241	0.0300	80	70-130	

Lab Batch #: 3057775 **Sample:** 7659108-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/25/18 11:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	100	123	70-135	
o-Terphenyl	56.7	50.0	113	70-135	

Lab Batch #: 3057747 **Sample:** 7659101-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/25/18 10:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0331	0.0300	110	70-130	
4-Bromofluorobenzene	0.0257	0.0300	86	70-130	

Lab Batch #: 3057775 **Sample:** 7659108-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/25/18 11:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	56.4	50.0	113	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: EOG-Jefe BSJ Fed. Com 1H

Work Orders : 593475, **Project ID:** 212C-MD-01166

Lab Batch #: 3057747 **Sample:** 593216-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 11:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	70-130	
4-Bromofluorobenzene	0.0257	0.0300	86	70-130	

Lab Batch #: 3057775 **Sample:** 593337-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 12:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	99.7	124	70-135	
o-Terphenyl	48.2	49.9	97	70-135	

Lab Batch #: 3057747 **Sample:** 593216-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 11:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	70-130	
4-Bromofluorobenzene	0.0257	0.0300	86	70-130	

Lab Batch #: 3057775 **Sample:** 593337-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/25/18 12:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	99.9	125	70-135	
o-Terphenyl	47.1	50.0	94	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: EOG-Jefe BSJ Fed. Com 1H

Work Order #: 593475 **Project ID:** 212C-MD-01166

Analyst: ALJ **Date Prepared:** 07/25/2018 **Date Analyzed:** 07/25/2018

Lab Batch ID: 3057747 **Sample:** 7659101-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00200	0.100	0.0990	99	0.0998	0.102	102	3	70-130	35	
Toluene	<0.00200	0.100	0.0966	97	0.0998	0.0993	99	3	70-130	35	
Ethylbenzene	<0.00200	0.100	0.108	108	0.0998	0.111	111	3	70-130	35	
m,p-Xylenes	<0.00401	0.200	0.214	107	0.200	0.220	110	3	70-130	35	
o-Xylene	<0.00200	0.100	0.104	104	0.0998	0.108	108	4	70-130	35	

Analyst: SCM **Date Prepared:** 07/25/2018 **Date Analyzed:** 07/25/2018

Lab Batch ID: 3057784 **Sample:** 7659096-1-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	<4.99	250	256	102	250	252	101	2	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: EOG-Jefe BSJ Fed. Com 1H

Work Order #: 593475 **Project ID:** 212C-MD-01166

Analyst: SCM **Date Prepared:** 07/25/2018 **Date Analyzed:** 07/25/2018

Lab Batch ID: 3057787 **Sample:** 7659098-1-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	<4.99	250	253	101	250	266	106	5	90-110	20	

Analyst: ARM **Date Prepared:** 07/25/2018 **Date Analyzed:** 07/25/2018

Lab Batch ID: 3057775 **Sample:** 7659108-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	960	96	1000	978	98	2	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	988	99	1000	1000	100	1	70-135	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.%

Form 3 - MS / MSD Recoveries

Project Name: EOG-Jefe BSJ Fed. Com 1H

Work Order # : 593475 **Project ID:** 212C-MD-01166

Lab Batch ID: 3057747 **QC- Sample ID:** 593216-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/25/2018 **Date Prepared:** 07/25/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00198	0.0992	0.0731	74	0.0996	0.0720	72	2	70-130	35	
Toluene	<0.00198	0.0992	0.0699	70	0.0996	0.0675	68	3	70-130	35	X
Ethylbenzene	<0.00198	0.0992	0.0765	77	0.0996	0.0718	72	6	70-130	35	
m,p-Xylenes	<0.00397	0.198	0.150	76	0.199	0.141	71	6	70-130	35	
o-Xylene	<0.00198	0.0992	0.0730	74	0.0996	0.0695	70	5	70-130	35	

Lab Batch ID: 3057784 **QC- Sample ID:** 593475-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/25/2018 **Date Prepared:** 07/25/2018 **Analyst:** SCM

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	<5.02	251	267	106	251	257	102	4	90-110	20	

Lab Batch ID: 3057784 **QC- Sample ID:** 593503-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/25/2018 **Date Prepared:** 07/25/2018 **Analyst:** SCM

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	<5.00	250	265	106	250	262	105	1	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.

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: EOG-Jefe BSJ Fed. Com 1H

Work Order # : 593475 **Project ID:** 212C-MD-01166

Lab Batch ID: 3057787 **QC- Sample ID:** 593475-011 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/25/2018 **Date Prepared:** 07/25/2018 **Analyst:** SCM

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	46.2	249	307	105	249	309	106	1	90-110	20	

Lab Batch ID: 3057787 **QC- Sample ID:** 593475-012 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/25/2018 **Date Prepared:** 07/25/2018 **Analyst:** SCM

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	<4.95	248	258	104	248	258	104	0	90-110	20	

Lab Batch ID: 3057775 **QC- Sample ID:** 593337-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/25/2018 **Date Prepared:** 07/25/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	997	939	94	999	944	94	1	70-135	20	
Diesel Range Organics (DRO)	<15.0	997	1000	100	999	1010	101	1	70-135	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.

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

593475

Client Name: EOG	Site Manager: Clair Gonzales
Project Name: Jefe BSJ Fed. Com 1H	
Project Location: (county, state) Lea County, New Mexico	Project #: 212C-MD-01166
Invoice to: EOG-Jamon Hohensee	
Receiving Laboratory: Xenco	Sampler Signature: Mike Carmona
Comments: 24 Hour Rush	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	Bottom Hole #1 (0-6") 2.5' BEB	7/24/2018			X				X			1	N	X		X												X							
	Bottom Hole #1 South Sidewall	7/24/2018			X				X			1	N	X		X												X							
	Bottom Hole #1 East Sidewall	7/24/2018			X				X			1	N	X		X												X							
	Bottom Hole #2 East Sidewall	7/24/2018			X				X			1	N	X		X												X							
	Bottom Hole #2 West Sidewall	7/24/2018			X				X			1	N	X		X												X							
	Bottom Hole #3 South Sidewall	7/24/2018			X				X			1	N	X		X												X							
	Bottom Hole #3 East Sidewall	7/24/2018			X				X			1	N	X		X												X							
	Bottom Hole #4 North Sidewall	7/24/2018			X				X			1	N	X		X												X							
	Bottom Hole #4 South Sidewall	7/24/2018			X				X			1	N	X		X												X							
	Bottom Hole #5 South Sidewall	7/24/2018			X				X			1	N	X		X												X							

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
mike Carmona	7/25/18	934	KRAMER	7/25	934
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY
Sample Temperature
0.3 RO

REMARKS:
- ☐ STANDARD
- ☒ RUSH: Same Day (24 hr) 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

593475

Client Name: EOG	Site Manager: Clair Gonzales
Project Name: Jefe BSJ Fed. Com 1H	
Project Location: (county, state) Lea County, New Mexico	Project #: 212C-MD-01166
Invoice to: EOG-Jamon Hohensee	
Receiving Laboratory: Xenco	Sampler Signature: Mike Carmona
Comments: 24 hour Rush	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None		# CONTAINERS	FILTERED (Y/N)
	Bottom Hole #6 (0-6") 4' BEB	7/24/2018			X				X			1	N
	Bottom Hole #6 West Sidewall	7/24/2018			X				X			1	N

ANALYSIS REQUEST (Circle or Specify Method No.)

	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	X		X												X							
	X		X												X							

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Mike Carmona	7/25/18	934	[illegible]RAMER	7/25	934
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature 0.3 R9

REMARKS:

- ☐ STANDARD
- ☒ RUSH: Same Day (24 hr) 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 07/25/2018 09:34:00 AM

Work Order #: 593475

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)?	.3	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#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 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	TPH received in bulk jars
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Connie Hernandez Date: 07/25/2018

Checklist reviewed by: Kelsey Brooks Date: 07/26/2018

Analytical Report 594127

for

Tetra Tech- Midland

Project Manager: Clair Gonzales

Jefe BSJ FED.Com 1H

212-C-MD-01166

02-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

02-AUG-18

Project Manager: **Clair Gonzales**
Tetra Tech- Midland
4000 N. Big Spring Suite 401
Midland, TX 79705

Reference: XENCO Report No(s): **594127**
Jefe BSJ FED.Com 1H
Project Address: Lea County, New Mexico

Clair Gonzales:

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) 594127. 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. 594127 will be filed for 45 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,

Jessica Kramer

Jessica Kramer
Project Assistant

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 - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 594127

Tetra Tech- Midland, Midland, TX

Jefe BSJ FED.Com 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bottom Hole #1 West Side Wall	S	07-30-18 00:00		594127-001
Bottom Hole #3 North Side Wall	S	07-30-18 00:00		594127-002
Bottom Hole #3 (0-6") 4'-5' BEB	S	07-30-18 00:00		594127-003
Bottom Hole #5 North Side Wall	S	07-27-18 00:00		594127-004
Bottom Hole #6 North Side Wall	S	07-27-18 00:00		594127-005
Bottom Hole #6 South Side Wall	S	07-27-18 00:00		594127-006

Version: 1.%

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Jefe BSJ FED.Com 1H

Project ID: *212-C-MD-01166*
Work Order Number(s): *594127*

Report Date: *02-AUG-18*
Date Received: *07/31/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3058496 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 594127

Tetra Tech- Midland, Midland, TX

Project Name: Jefe BSJ FED.Com 1H

Project Id: 212-C-MD-01166
Contact: Clair Gonzales
Project Location: Lea County, New Mexico

Date Received in Lab: Tue Jul-31-18 02:57 pm
Report Date: 02-AUG-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	594127-001		594127-002		594127-003		594127-004		594127-005		594127-006	
	Field Id:	Bottom Hole #1 West Side W		Bottom Hole #3 North Side W		Bottom Hole #3 (0-6") 4'-5' B		Bottom Hole #5 North Side W		Bottom Hole #6 North Side W		Bottom Hole #6 South Side W	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-30-18 00:00		Jul-30-18 00:00		Jul-30-18 00:00		Jul-27-18 00:00		Jul-27-18 00:00		Jul-27-18 00:00	
BTEX by EPA 8021B	**Extracted:**	Aug-01-18 08:00		Aug-01-18 08:00		Aug-01-18 08:00		Aug-01-18 08:00		Aug-01-18 08:00		Aug-01-18 08:00	
	Analyzed:	Aug-01-18 11:35		Aug-01-18 11:56		Aug-01-18 12:17		Aug-01-18 12:37		Aug-01-18 14:00		Aug-01-18 13:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00402	0.00402	<0.00399	0.00399	<0.00397	0.00397	<0.00403	0.00403	<0.00399	0.00399	<0.00398	0.00398
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Inorganic Anions by EPA 300/300.1	**Extracted:**	Jul-31-18 16:30		Jul-31-18 16:30		Jul-31-18 16:30		Jul-31-18 16:30		Jul-31-18 16:30		Jul-31-18 16:30	
	Analyzed:	Aug-01-18 00:10		Aug-01-18 00:30		Aug-01-18 00:37		Aug-01-18 00:44		Aug-01-18 00:50		Aug-01-18 01:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		7.28	5.01	118	4.99	324	4.95	<4.97	4.97	5.69	4.95	<4.95	4.95
TPH By SW8015 Mod	**Extracted:**	Jul-31-18 15:00		Jul-31-18 15:00		Jul-31-18 15:00		Jul-31-18 15:00		Jul-31-18 15:00		Jul-31-18 15:00	
	Analyzed:	Jul-31-18 16:40		Jul-31-18 17:38		Jul-31-18 17:57		Jul-31-18 18:17		Jul-31-18 18:36		Jul-31-18 18:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		16.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		16.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

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

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Jefe BSJ FED.Com 1H

Work Orders : 594127, **Project ID:** 212-C-MD-01166

Lab Batch #: 3058482 **Sample:** 594127-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/18 16:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.7	99.7	94	70-135	
o-Terphenyl	45.5	49.9	91	70-135	

Lab Batch #: 3058482 **Sample:** 594127-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/18 17:38

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.8	98	70-135	
o-Terphenyl	49.5	49.9	99	70-135	

Lab Batch #: 3058482 **Sample:** 594127-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/18 17:57

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.8	99.8	94	70-135	
o-Terphenyl	48.0	49.9	96	70-135	

Lab Batch #: 3058482 **Sample:** 594127-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/18 18:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.7	99.8	100	70-135	
o-Terphenyl	51.8	49.9	104	70-135	

Lab Batch #: 3058482 **Sample:** 594127-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/18 18:36

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.9	100	92	70-135	
o-Terphenyl	47.6	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.%

Form 2 - Surrogate Recoveries

Project Name: Jefe BSJ FED.Com 1H

Work Orders : 594127, **Project ID:** 212-C-MD-01166

Lab Batch #: 3058482 **Sample:** 594127-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/18 18:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.2	99.7	90	70-135	
o-Terphenyl	46.8	49.9	94	70-135	

Lab Batch #: 3058496 **Sample:** 594127-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 11:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0321	0.0300	107	70-130	
4-Bromofluorobenzene	0.0268	0.0300	89	70-130	

Lab Batch #: 3058496 **Sample:** 594127-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 11:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	70-130	
4-Bromofluorobenzene	0.0266	0.0300	89	70-130	

Lab Batch #: 3058496 **Sample:** 594127-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 12:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0255	0.0300	85	70-130	

Lab Batch #: 3058496 **Sample:** 594127-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 12:37

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	70-130	
4-Bromofluorobenzene	0.0258	0.0300	86	70-130	

* 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: Jefe BSJ FED.Com 1H

Work Orders : 594127,

Project ID: 212-C-MD-01166

Lab Batch #: 3058496 **Sample:** 594127-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 13:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0262	0.0300	87	70-130	

Lab Batch #: 3058496 **Sample:** 594127-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 14:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	70-130	
4-Bromofluorobenzene	0.0300	0.0300	100	70-130	

Lab Batch #: 3058482 **Sample:** 7659520-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/31/18 11:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	100	92	70-135	
o-Terphenyl	48.3	50.0	97	70-135	

Lab Batch #: 3058496 **Sample:** 7659535-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/01/18 10:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0247	0.0300	82	70-130	

Lab Batch #: 3058482 **Sample:** 7659520-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/31/18 11:39

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	56.1	50.0	112	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: Jefe BSJ FED.Com 1H

Work Orders : 594127,

Project ID: 212-C-MD-01166

Lab Batch #: 3058496 **Sample:** 7659535-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/01/18 08:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0351	0.0300	117	70-130	
4-Bromofluorobenzene	0.0252	0.0300	84	70-130	

Lab Batch #: 3058482 **Sample:** 7659520-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/31/18 11:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	56.6	50.0	113	70-135	

Lab Batch #: 3058496 **Sample:** 7659535-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/01/18 09:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	70-130	
4-Bromofluorobenzene	0.0266	0.0300	89	70-130	

Lab Batch #: 3058482 **Sample:** 593962-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/18 12:38

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.7	99.7	89	70-135	
o-Terphenyl	41.9	49.9	84	70-135	

Lab Batch #: 3058496 **Sample:** 593924-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 09:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0270	0.0300	90	70-130	

* 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: Jefe BSJ FED.Com 1H

Work Orders : 594127,

Project ID: 212-C-MD-01166

Lab Batch #: 3058482 **Sample:** 593962-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/31/18 12:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.6	99.7	90	70-135	
o-Terphenyl	46.4	49.9	93	70-135	

Lab Batch #: 3058496 **Sample:** 593924-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 09:52

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0343	0.0300	114	70-130	
4-Bromofluorobenzene	0.0282	0.0300	94	70-130	

* 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: Jefe BSJ FED.Com 1H

Work Order #: 594127 **Project ID:** 212-C-MD-01166

Analyst: ALJ **Date Prepared:** 08/01/2018 **Date Analyzed:** 08/01/2018

Lab Batch ID: 3058496 **Sample:** 7659535-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00202	0.101	0.0887	88	0.100	0.0867	87	2	70-130	35	
Toluene	<0.00202	0.101	0.0930	92	0.100	0.0920	92	1	70-130	35	
Ethylbenzene	<0.00202	0.101	0.108	107	0.100	0.106	106	2	70-130	35	
m,p-Xylenes	<0.00403	0.202	0.212	105	0.200	0.209	105	1	70-130	35	
o-Xylene	<0.00202	0.101	0.104	103	0.100	0.104	104	0	70-130	35	

Analyst: SCM **Date Prepared:** 07/31/2018 **Date Analyzed:** 07/31/2018

Lab Batch ID: 3058518 **Sample:** 7659551-1-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	<4.99	250	254	102	250	252	101	1	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: Jefe BSJ FED.Com 1H

Work Order #: 594127 **Project ID:** 212-C-MD-01166

Analyst: ARM **Date Prepared:** 07/31/2018 **Date Analyzed:** 07/31/2018

Lab Batch ID: 3058482 **Sample:** 7659520-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1050	105	1000	1060	106	1	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	1100	110	1000	1130	113	3	70-135	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.%

Form 3 - MS / MSD Recoveries

Project Name: Jefe BSJ FED.Com 1H

Work Order # : 594127 **Project ID:** 212-C-MD-01166

Lab Batch ID: 3058496 **QC- Sample ID:** 593924-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/01/2018 **Date Prepared:** 08/01/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00201	0.100	0.0710	71	0.0998	0.0665	67	7	70-130	35	X
Toluene	<0.00201	0.100	0.0726	73	0.0998	0.0635	64	13	70-130	35	X
Ethylbenzene	<0.00201	0.100	0.0788	79	0.0998	0.0641	64	21	70-130	35	X
m,p-Xylenes	<0.00402	0.201	0.154	77	0.200	0.122	61	23	70-130	35	X
o-Xylene	<0.00201	0.100	0.0777	78	0.0998	0.0622	62	22	70-130	35	X

Lab Batch ID: 3058518 **QC- Sample ID:** 594074-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/01/2018 **Date Prepared:** 07/31/2018 **Analyst:** SCM

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	<7.32	366	381	104	366	380	104	0	90-110	20	

Lab Batch ID: 3058518 **QC- Sample ID:** 594127-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/01/2018 **Date Prepared:** 07/31/2018 **Analyst:** SCM

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	7.28	251	269	104	251	272	105	1	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: Jefe BSJ FED.Com 1H

Work Order # : 594127 **Project ID:** 212-C-MD-01166

Lab Batch ID: 3058482 **QC- Sample ID:** 593962-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/31/2018 **Date Prepared:** 07/31/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	997	859	86	997	858	86	0	70-135	20	
Diesel Range Organics (DRO)	<15.0	997	884	89	997	938	94	6	70-135	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.

Analysis Request of Chain of Custody Record

594127

Page 1 of 1

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: EOG

Site Manager: CLAIR GONZALES

Project Name: JEFF BSJ FED. com 1H

Project Location: (county, state) LEA COUNTY, NEW MEXICO

Project #: 212C-MD-01166

Invoice to: EOG - Jamon Hohensee

Receiving Laboratory: XENCO

Sampler Signature: HALSTON HUNT

Comments:

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2017 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)
	Bottom Hole #1 West Side Wall	7/30/18			X				X			1	N
	Bottom Hole #3 NORTH SIDE WALL	7/30/18			X				X			1	N
	Bottom Hole #3 (0-6") 4'-5' BEB	7/30/18			X				X			1	N
	Bottom Hole #5 NORTH SIDE WALL	7/27/18			X				X			1	N
	Bottom Hole #6 NORTH SIDE WALL	7/27/18			X				X			1	N
	Bottom Hole #6 South Side Wall	7/27/18			X				X			1	N

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB #	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	X		X												X							
	X		X												X							
	X		X												X							
	X		X												X							
	X		X												X							
	X		X												X							

Relinquished by: Jamon Moehlig Date: 7/31/18 Time: 14:58

Received by: [signature] Date: 7/31/18 Time: 1457

Relinquished by: Date: Time:

Received by: Date: Time:

Relinquished by: Date: Time:

Received by: Date: Time:

LAB USE ONLY

Sample Temperature 1-3 00 1.0

REMARKS:

☐ STANDARD

☒ RUSH: Same Day (24 hr) 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 07/31/2018 02:57:00 PM

Work Order #: 594127

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)?	1.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#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 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 07/31/2018

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/01/2018

Jessica Kramer

Analytical Report 594239

for

Tetra Tech- Midland

Project Manager: Clair Gonzales

Jefe BSJ Federa Com 1H

03-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

03-AUG-18

Project Manager: **Clair Gonzales**
Tetra Tech- Midland
4000 N. Big Spring Suite 401
Midland, TX 79705

Reference: XENCO Report No(s): **594239**
Jefe BSJ Federa Com 1H
Project Address: Lea County, New Mexico

Clair Gonzales:

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) 594239. 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. 594239 will be filed for 45 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,

Jessica Kramer

Jessica Kramer
Project Assistant

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 - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 594239

Tetra Tech- Midland, Midland, TX

Jefe BSJ Federa Com 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-2 (8' BEB)	S	07-31-18 00:00		594239-001
BH-4 (6' BEB)	S	07-31-18 00:00		594239-002
BH-5 (5.5' BEB)	S	07-31-18 00:00		594239-003

Version: 1.%

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Jefe BSJ Federa Com 1H

Project ID:
Work Order Number(s): *594239*

Report Date: *03-AUG-18*
Date Received: *08/01/2018*

Sample receipt non conformances and comments:

Sample 002 Re run for Chlorides. New Version generated V1.001 JKR 08/03/18

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3058496 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 594239

Tetra Tech- Midland, Midland, TX

Project Name: Jefe BSJ Federa Com 1H

Project Id:
Contact: Clair Gonzales
Project Location: Lea County, New Mexico

Date Received in Lab: Wed Aug-01-18 11:19 am
Report Date: 03-AUG-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	594239-001		594239-002		594239-003			
	Field Id:	BH-2 (8' BEB)		BH-4 (6' BEB)		BH-5 (5.5' BEB)			
	Depth:								
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jul-31-18 00:00		Jul-31-18 00:00		Jul-31-18 00:00			
BTEX by EPA 8021B	***Extracted:***	Aug-01-18 12:00		Aug-01-18 12:00		Aug-01-18 12:00			
	Analyzed:	Aug-01-18 18:14		Aug-01-18 18:35		Aug-01-18 18:56			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202		
Toluene		<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202		
Ethylbenzene		<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202		
m,p-Xylenes		<0.00402	0.00402	<0.00402	0.00402	<0.00404	0.00404		
o-Xylene		<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202		
Total Xylenes		<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202		
Total BTEX		<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202		
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-01-18 15:30		Aug-01-18 15:30		Aug-01-18 15:30			
	Analyzed:	Aug-01-18 22:45		Aug-03-18 06:42		Aug-01-18 22:59			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		29.0	5.05	518	5.00	129	5.02		
TPH By SW8015 Mod	***Extracted:***	** ** ** **		** ** ** **		** ** ** **			
	Analyzed:	Aug-01-18 12:30		Aug-01-18 13:30		Aug-01-18 13:49			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0		

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Jessica Kramer
Project Assistant

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

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Jefe BSJ Federa Com 1H

Work Orders : 594239,

Project ID:

Lab Batch #: 3058552 **Sample:** 594239-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 12:30

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.5	99.8	99	70-135	
o-Terphenyl	49.1	49.9	98	70-135	

Lab Batch #: 3058552 **Sample:** 594239-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 13:30

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.5	99.7	89	70-135	
o-Terphenyl	44.9	49.9	90	70-135	

Lab Batch #: 3058552 **Sample:** 594239-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 13:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	99.9	95	70-135	
o-Terphenyl	48.8	50.0	98	70-135	

Lab Batch #: 3058496 **Sample:** 594239-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 18:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	70-130	
4-Bromofluorobenzene	0.0264	0.0300	88	70-130	

Lab Batch #: 3058496 **Sample:** 594239-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 18:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0339	0.0300	113	70-130	
4-Bromofluorobenzene	0.0265	0.0300	88	70-130	

* 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: Jefe BSJ Federa Com 1H

Work Orders : 594239,

Project ID:

Lab Batch #: 3058496 **Sample:** 594239-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 18:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	70-130	
4-Bromofluorobenzene	0.0272	0.0300	91	70-130	

Lab Batch #: 3058496 **Sample:** 7659535-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/01/18 10:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0324	0.0300	108	70-130	
4-Bromofluorobenzene	0.0247	0.0300	82	70-130	

Lab Batch #: 3058552 **Sample:** 7659567-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/01/18 11:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.9	100	93	70-135	
o-Terphenyl	48.5	50.0	97	70-135	

Lab Batch #: 3058496 **Sample:** 7659535-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/01/18 08:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0351	0.0300	117	70-130	
4-Bromofluorobenzene	0.0252	0.0300	84	70-130	

Lab Batch #: 3058552 **Sample:** 7659567-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/01/18 11:51

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	49.1	50.0	98	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: Jefe BSJ Federa Com 1H

Work Orders : 594239,

Project ID:

Lab Batch #: 3058496 **Sample:** 7659535-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/01/18 09:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	70-130	
4-Bromofluorobenzene	0.0266	0.0300	89	70-130	

Lab Batch #: 3058552 **Sample:** 7659567-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/01/18 12:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	50.3	50.0	101	70-135	

Lab Batch #: 3058496 **Sample:** 593924-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 09:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	70-130	
4-Bromofluorobenzene	0.0270	0.0300	90	70-130	

Lab Batch #: 3058552 **Sample:** 594239-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 12:50

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.9	123	70-135	
o-Terphenyl	47.7	50.0	95	70-135	

Lab Batch #: 3058496 **Sample:** 593924-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 09:52

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0343	0.0300	114	70-130	
4-Bromofluorobenzene	0.0282	0.0300	94	70-130	

* 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: Jefe BSJ Federa Com 1H

Work Orders : 594239,

Project ID:

Lab Batch #: 3058552 **Sample:** 594239-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/01/18 13:10

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.8	114	70-135	
o-Terphenyl	49.1	49.9	98	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: Jefe BSJ Federa Com 1H

Work Order #: 594239 **Project ID:**

Analyst: ALJ **Date Prepared:** 08/01/2018 **Date Analyzed:** 08/01/2018

Lab Batch ID: 3058496 **Sample:** 7659535-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00202	0.101	0.0887	88	0.100	0.0867	87	2	70-130	35	
Toluene	<0.00202	0.101	0.0930	92	0.100	0.0920	92	1	70-130	35	
Ethylbenzene	<0.00202	0.101	0.108	107	0.100	0.106	106	2	70-130	35	
m,p-Xylenes	<0.00403	0.202	0.212	105	0.200	0.209	105	1	70-130	35	
o-Xylene	<0.00202	0.101	0.104	103	0.100	0.104	104	0	70-130	35	

Analyst: SCM **Date Prepared:** 08/01/2018 **Date Analyzed:** 08/01/2018

Lab Batch ID: 3058608 **Sample:** 7659579-1-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	<4.99	250	258	103	250	254	102	2	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: Jefe BSJ Federa Com 1H

Work Order #: 594239 **Project ID:**

Analyst: ARM **Date Prepared:** 08/01/2018 **Date Analyzed:** 08/01/2018

Lab Batch ID: 3058552 **Sample:** 7659567-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	939	94	1000	944	94	1	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	954	95	1000	967	97	1	70-135	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.%

Form 3 - MS / MSD Recoveries

Project Name: Jefe BSJ Federa Com 1H

Work Order # : 594239 **Project ID:**

Lab Batch ID: 3058496 **QC- Sample ID:** 593924-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/01/2018 **Date Prepared:** 08/01/2018 **Analyst:** ALJ

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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
Benzene	<0.00201	0.100	0.0710	71	0.0998	0.0665	67	7	70-130	35	X
Toluene	<0.00201	0.100	0.0726	73	0.0998	0.0635	64	13	70-130	35	X
Ethylbenzene	<0.00201	0.100	0.0788	79	0.0998	0.0641	64	21	70-130	35	X
m,p-Xylenes	<0.00402	0.201	0.154	77	0.200	0.122	61	23	70-130	35	X
o-Xylene	<0.00201	0.100	0.0777	78	0.0998	0.0622	62	22	70-130	35	X

Lab Batch ID: 3058608 **QC- Sample ID:** 593804-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/01/2018 **Date Prepared:** 08/01/2018 **Analyst:** SCM

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	212	249	479	107	249	470	104	2	90-110	20	

Lab Batch ID: 3058608 **QC- Sample ID:** 593866-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/01/2018 **Date Prepared:** 08/01/2018 **Analyst:** SCM

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	248	597	104	248	591	101	1	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: Jefe BSJ Federa Com 1H

Work Order # : 594239 **Project ID:**

Lab Batch ID: 3058552 **QC- Sample ID:** 594239-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/01/2018 **Date Prepared:** 08/01/2018 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	999	860	86	998	856	86	0	70-135	20	
Diesel Range Organics (DRO)	<15.0	999	882	88	998	878	88	0	70-135	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.

Analysis Request of Chain of Custody Record

5947391 Page ____ of ____

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: EOG

Site Manager: Clair Gonzales

Project Name: El Jefe BSJ Federal Com #1

Project Location: (county, state) Lea Co. New Mexico

Project #:

Invoice to: Jamon @ EOG

Receiving Laboratory: Xenco

Sampler Signature:

Comments:

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE (YEAR: 2018)	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	# CONTAINERS	FILTERED (Y/N)
	BH-2 (8' BEB)	7/31/18			X				X	1	
	BH-4 (6' BEB)	7/31/18			X				X	1	
	BH-3 (5.5' BEB)	7/31/18			X				X	1	

ANALYSIS REQUEST (Circle or Specify Method No.)

	BTEX 8021B	BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride	Sulfate	TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	X			X												X									
	X			X												X									
	X			X												X									

Relinquished by: Matthew Custodian Date: 8/1/18 Time: 1119

Received by: J KRAMER Date: 8/1/18 Time: 1119

Relinquished by: Date: Time:

Received by: Date: Time:

Relinquished by: Date: Time:

Received by: Date: Time:

LAB USE ONLY

Sample Temperature 2.3/0.0 RB

REMARKS:

- ☐ STANDARD
- ☒ RUSH: Same Day (24 hr) 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

594739 Page _____ of _____

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: EOG

Site Manager: Clair Gonzales

Project Name: El Jefe BSJ Federal Com #1

Project Location: (county, state) Lea Co. New Mexico

Project #:

Invoice to: Jamon @ EOG

Receiving Laboratory: Xenco

Sampler Signature:

Comments:

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	Hold
	BH-2 (8' BEB)	7/31/18			X				X	1		X		X											X				
	BH-4 (6' BEB)	7/31/18			X				X	1		X		X											X				
	BH-5 (5.5' BEB)	7/31/18			X				X	1		X		X											X				

Relinquished by: Matthew Custer/m Date: 8/1/18 Time: 1119

Received by: J KRAMER Date: 8/1/18 Time: 1119

Relinquished by: Date: Time:

Received by: Date: Time:

Relinquished by: Date: Time:

Received by: Date: Time:

LAB USE ONLY

Sample Temperature 2.3/0.0 RB

REMARKS:

- ☐ STANDARD
- ☒ RUSH: Same Day (24 hr) 48 hr 72 hr
- ☐ Rush Charges Authorized
- ☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Final 1.001

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 08/01/2018 11:19:00 AM

Work Order #: 594239

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)?	2.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#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 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst:

PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 08/01/2018

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/01/2018

Jessica Kramer

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 56125

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 56125
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	9/13/2022