

Site Information

Report Type: Work Plan 2RP-5500/NAB1917555844

General Site Information:

Site:	Banjo Federal #1					
Company:	EOG Resources					
Section, Township and Range	Unit P	Sec 05	T 26S	R 30E		
County:	Eddy County					
GPS:	32.065934			-103.985701		
Surface Owner:	Federal					
Directions:	From the intersection of HWY 285 and Longhorn Rd, travel east on Longhorn Rd for 4.40 miles, turn east onto Pipeline Rd for 6.10 miles, turn north onto lease road for 400 feet to the location on the west side of the road.					

Release Data:

Date Released:	5/16/2019
Type Release:	Oil
Source of Contamination:	Manway Cover
Fluid Released:	13 bbls
Fluids Recovered:	0 bbls

Official Communication:

Name:	Todd Wells		Clair Gonzales
Company:	EOG Resources		Tetra Tech
Address:	5509 Champions Dr		901 W. Wall St.
			Ste 100
City:	Midland Texas, 79706		Midland, Texas
Phone number:	(432) 258-4346		(432) 682-4559
Fax:			
Email:	Todd_Wells@eogresources.com		Clair.Gonzales@tetrattech.com

Site Characterization

Depth to Groundwater:	173'
Karst Potential:	Medium

Recommended Remedial Action Levels (RRALs)

Benzene	Total BTEX	TPH (GRO+DRO+MRO)	Chlorides
10 mg/kg	50 mg/kg	100 mg/kg	600 mg/kg



August 23, 2021

Mr. Mike Bratcher
District Supervisor
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

**Re: Work Plan for the EOG Resources, Banjo BNO Federal #1, Unit P, Section 05, Township 26 South, Range 30 East, Eddy County, New Mexico.
2RP-5500
NAB1917555844**

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by EOG Resources (EOG) to assess a release that occurred at the Banjo BNO Federal #1, Unit P, Section 05, Township 26 South, Range 30 East, Eddy County, New Mexico (Site). The spill site coordinates are 32.065934°, -103.895701°. 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 May 6, 2019 and released approximately 13 barrels of oil due to a leak in the tank manway cover. None of the fluids were recovered. The tank was removed from the facility. The release occurred inside the bermed facility and impacted an area measuring approximately 48' x 23'. The C-141 Form is included in Appendix A.

Site Characterization

A site characterization was performed for the site and no lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. However, the site is located in a medium karst potential area.

The nearest well is listed on the New Mexico Office of the State Engineers (NMOSE) database, in Section 05 approximately 0.60 miles west of the site and has a reported depth to groundwater of 173 feet below surface. The USGS National Water Information Database lists one well in Section 05, approximately 1.05 miles east of the site, and has a reported depth to groundwater of 185 feet below surface.

Tetra Tech

901 West Wall St, Suite 100, Midland, TX 79701

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com



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 Releases, updated August 14, 2018. 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 site characterization, the proposed RRAL for TPH is 100 mg/kg (GRO + DRO + MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 600 mg/kg.

Soil Assessment and Analytical Results

Initial Assessment

On July 9, 2019, Tetra Tech personnel were onsite to evaluate and sample the release area. A total of 3 auger holes (AH-1, AH-2, and AH-3) were installed in the release footprint to total depths ranging from 2.0'-2.5' and 4.0'-4.5' below surface. All collected samples were submitted to the laboratory for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix D. The results of the sampling are summarized in Table 1. The sample locations are shown in Figure 3.

Referring to Table 1, The areas of AH-1 and AH-3 did not show any benzene or total BTEX concentrations above the RRALs, however elevated TPH concentrations were detected at in the shallow soils before declining with depth to 101 mg/kg at 2.0'-2.5' (AH-1) and 47.4 mg/kg at 3.0'-3.5' (AH-3). The area of AH-2 showed total BTEX concentrations above 50 mg/kg between 1.0'-1.5' and 3.0'-3.5' below surface and the TPH concentrations were not vertically defined.

Additionally, the areas of AH-1, AH-2, and AH-3 showed elevated chloride concentrations that were not vertically defined.

Bore Holes

Based on the laboratory data, Tetra Tech personnel returned to the site on August 13, 2019, to install two boreholes (BH-1 and BH-2) to total depths of 29'-30' below surface in order to vertically define the hydrocarbon and chloride impacts. All collected soil samples and submitted to the laboratory for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix D. The results of the sampling are summarized in Table 1. The borehole drilling logs are included in Appendix C. The sample locations are shown on Figure 3.

Referring to Table 1, the area of BH-1, which was placed between AH-2 and AH-3, showed a TPH high of 7,390 mg/kg at 0-1', which declined with depth to below the laboratory reporting limits at 4.0'-5.0' and a TPH spike of 676 mg/kg at 9'-10' below surface was detected. Additionally, the area of BH-1 showed a total BTEX concentration above the RRAL at 0-1', which declined with depth to below the RRALs at 2'-3' below surface. Chlorides in the area of BH-1 steadily declined with depth and showed a bottom hole concentration of 595 mg/kg at 29'-30' below surface.



The area of BH-2, did not show any benzene or total BTEX concentrations above the RRALs, however elevated TPH concentrations were detected to a depth of 4'-5' below surface, before declining to below the laboratory reporting limits. Additionally, the chlorides in the area of BH-2 showed elevated concentrations which declined with depth to 661 mg/kg at 14'-15' and showed a bottom hole concentration of 212 mg/kg at 29'-30' below surface.

Work Plan

Based on the previous laboratory results EOG proposes to install a groundwater determination bore to determine and establish depth to groundwater. EOG will further sample the release to collect current data, and attempt to remediate the remaining impact, by remediating the top 4.0' of soil to the most stringent standards, and any remaining impact to the determined RRALs. EOG will remediate the release to the maximum extent practical that does not cause pipeline, equipment, or safety concerns, or cause major facility deconstruction. Once remediation activities are complete, bottom hole and sidewall confirmation samples will be collected every 200 square feet to ensure concentrations are reported below the determined RRALs. If groundwater is proven to be less than 50' below surface, EOG will remediate the site to the most stringent standards. The final C-141 is enclosed in Appendix A. If you have any questions or comments concerning the assessment for this site, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

A handwritten signature in black ink, appearing to read 'Brittany Long'.

Brittany Long,
Project Manager

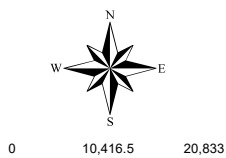
A handwritten signature in blue ink, appearing to read 'Clair Gonzales'.

Clair Gonzales, P.G.
Senior Project Manager

Figures



● SITE LOCATION



Approximate Scale in Feet

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

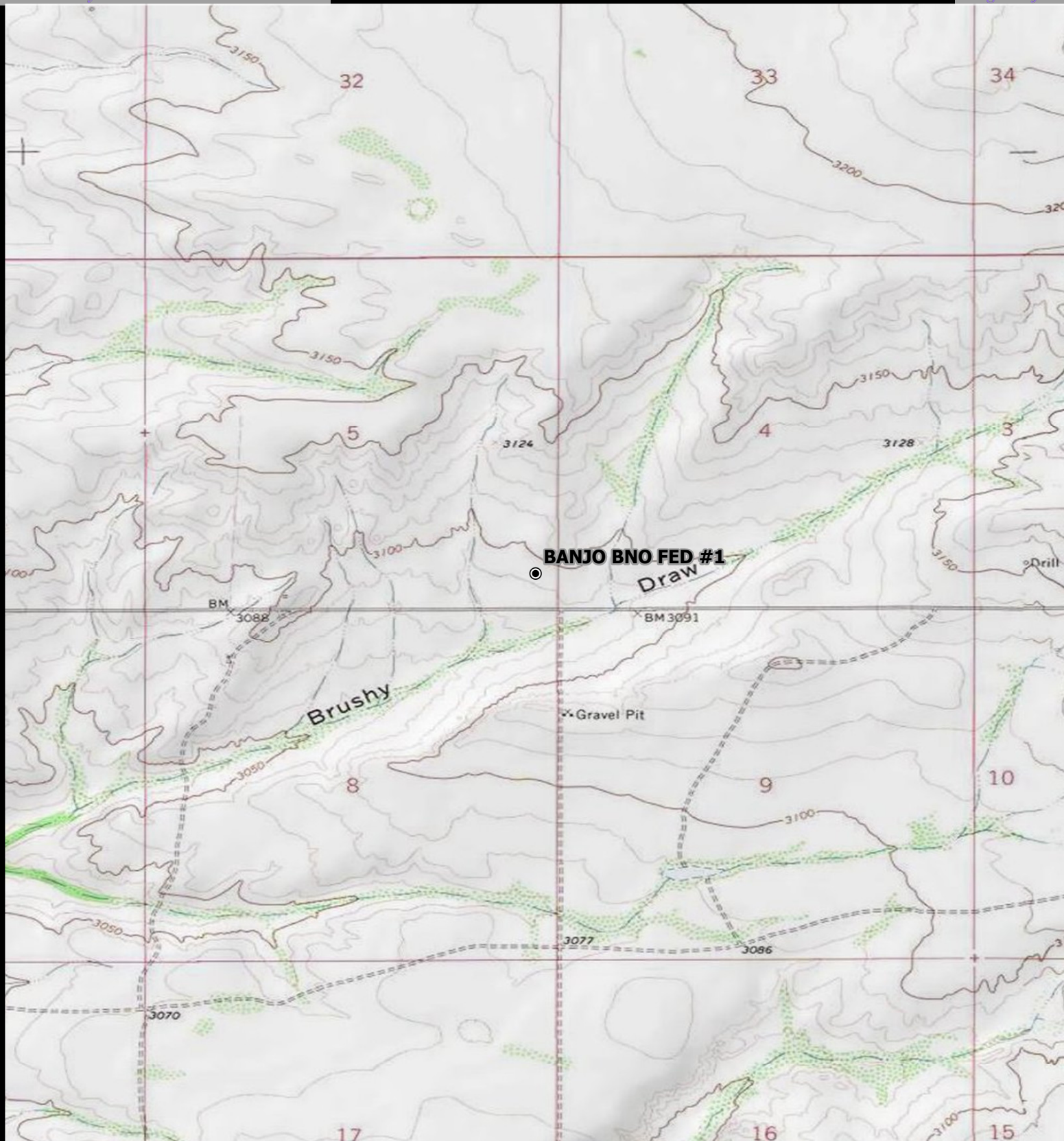


STATE LOCATOR MAP

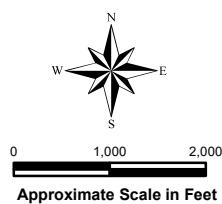
OVERVIEW MAP
BANJO BNO FED #1
PROPERTY LOCATED AT 32.065934°,-103.895701°
EDDY COUNTY, NEW MEXICO



FIGURE
1



● SITE LOCATION



Service Layer Credits: Copyright:© 2013 National Geographic Society, I-cubed

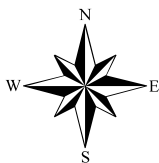
TOPOGRAPHIC MAP
BANJO BNO FED #1
PROPERTY LOCATED AT 32.065934°,-103.895701°
EDDY COUNTY, NEW MEXICO



FIGURE
2



- BOREHOLE SAMPLE LOCATIONS
- AUGERHOLE SAMPLE LOCATIONS
- FENCELINE
- AFFECTED SPILL AREA



0 25 50
Approximate Scale in Feet

SPILL ASSESSMENT MAP BANJO BNO FED #1

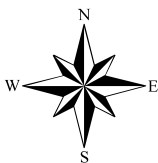
Property Located at coordinates 32.065934°,-103.895701°
EDDY COUNTY, NEW MEXCIO



FIGURE
3



 4.0' PROPOSED EXCAVATION



0 25 50
Approximate Scale in Feet

PROPOSED EXCAVATION MAP
BANJO BNO FED #1
Property Located at coordinates 32.065934°,-103.895701°
EDDY COUNTY, NEW MEXCIO



FIGURE
4

Tables

Table 1
EOG
Banjo BNO Fed #1
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (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						
AH-1	7/9/2019	0-1	-	X		134	9,500	1,220	10,900	<0.00200	0.00361	0.00531	0.0275	0.0364	1,180
	"	1-1.5	-	X		38.3	916	119	1,070	<0.00199	<0.00199	<0.00199	0.00420	0.00420	3,240
	"	2-2.5	-	X		<15.0	101	<15.0	101	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	5,540
BH-2	8/13/2019	0-1	-	X		709	8,400	403	9,510	0.0136	0.3830	0.386	7.08	7.86	3,390
	"	2-3	-	X		1,020	8,950	393	10,400	<.0497	0.592	0.725	9.38	10.7	2,820
	"	4-5	-	X		<49.0	435	<49.0	435	<0.00199	0.0188	0.0277	0.445	0.492	3,910
	"	6-7	-	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	0.0140	0.0140	2,760
	"	9-10	-	X		<49.0	59.0	<49.0	59.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	621
	"	14-15	-	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	661
	"	19-20	-	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	518
	"	24-25	-	X		<49.0	<49.0	<49.0	<49.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	295
AH-2	7/9/2019	0-1	-	X		1,930	38,900	4,080	44,900	0.0589	0.313	1.16	1.42	2.95	7,330
	"	1-1.5	-	X		2,600	11,300	1,170	15,100	0.934	17.5	7.09	52.7	78.2	1,640
	"	2-2.5	-	X		3,350	6,680	752	10,800	2.56	37.4	17.0	106	163	9,470
	"	3-3.5	-	X		5,290	10,100	1,130	16,500	3.29	53.1	23.0	142	221	10,100
	"	4-4.5	-	X		1,750	4,890	600	7,240	0.165	4.77	2.88	21.4	29.2	9,910
BH-1	8/13/2019	0-1	-	X		1,810	5,080	503	7,390	0.381	13.6	6.03	51.0	71.0	9,030
	"	2-3	-	X		<50.0	135	<50.0	135	<0.00200	<0.00200	<0.00200	0.0110	0.0110	7,280
	"	4-5	-	X		<49.0	<49.0	<49.0	<49.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	1,070
	"	6-7	-	X		<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	1,550
	"	9-10	-	X		115	500	61.4	676	<0.0200	0.0591	0.0470	0.570	0.676	2,020
	"	14-15	-	X		<49.0	<49.0	<49.0	<49.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	1,070
	"	19-20	-	X		<49.0	<49.0	<49.0	<49.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	1,060
	"	24-25	-	X		<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	1,520
AH-3	7/9/2019	0-1	-	X		432	9,470	1,480	11,400	<0.00200	0.00500	<0.00200	0.0634	0.0684	1,520
	"	1-1.5	-	X		141	2,190	273	2,600	<0.00200	0.0388	0.00678	0.0573	0.103	1,890
	"	2-2.5	-	X		<15.0	110	<15.0	110	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	1,420
	"	3-3.5	-	X		<15.0	47.4	<15.0	47.4	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	902

 Proposed Excavation Depths

Photos

EOG Resources
Banjo BNO Federal #1
Eddy County, New Mexico



TETRA TECH



View North – Area of AH-1



View South – Area of AH-2

EOG Resources
Banjo BNO Federal #1
Eddy County, New Mexico



View South – Area of AH-3



View West – Release Area

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAB1917555844
District RP	2RP-5500
Facility ID	
Application ID	pAB1917555512

Release Notification

Responsible Party

Responsible Party EOG Resources	OGRID 7377
Contact Name Todd Wells	Contact Telephone (432) 686-3613
Contact email Todd_Wells@eogresources.com	Incident # (assigned by OCD) NAB1917555844
Contact mailing address 5509 Champions Drive Midland, TX 79706	

Location of Release Source

Latitude 32.065934° Longitude -103.895701°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Banjo BNO Federal #1	Site Type EOG Facility
Date Release Discovered 5/6/19	API# (if applicable) 30-015-36923

Unit Letter	Section	Township	Range	County
P	5	26S	30E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls) 13	Volume Recovered (bbls) 0
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: The LO arrived on location to gauge the oil tanks and found the tank level dropped in gauge by 13 bbls and noticed signs of leakage around the manway cover. A vacuum truck transferred the remaining oil to another tank. Thirteen, 13 bbls, of oil was released from the tank and none was recovered.

Incident ID	NAB1917555844
District RP	2RP-5500
Facility ID	
Application ID	pAB1917555512

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
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: <u>Todd Wells</u> Title: <u>Environmental Specialist</u> Signature: <u>Todd Wells</u> Date: <u>6-20-19</u> email: <u>Todd_Wells@eogresources.com</u> Telephone: <u>(432) 686-3613</u>
<u>OCD Only</u> Received by: <u>Amalia Bustamante</u> Date: <u>6/24/2019</u>

Incident ID	
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?	_____ (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.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
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: _____ Title: _____

Signature: Todd Wells Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: _____ Title: _____

Signature: Todd Wells Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
EOG - Banjo BNO Federal #1

25 South 29 East

6	5	4	3	2	1
40					
7	8	9	10	11	12
			40		
18	17	16	15	14	13
			60		
19	20	21	22	23	24
30	29	28	27	26	25
30					
31	32	115	33	34	35

25 South 30 East

6	5	4	3	2	1
				295	
7	264	8	9	295	10
					390
18	17	16	15	14	13
19	20	21	265	22	23
			268		
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	22	23
			290		
30	29	28	27	26	25
31	32	33	34	35	36

26 South 29 East

6	5	4	3	2	1
	78				
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	57	23
			69		
30	29	28	27	26	25
31	32	33	34	35	36

26 South 30 East

6	5	4	3	2	1
	179				
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

26 South 31 East

6	5	4	3	2	1
					335
7	8	9	10	11	12
	295				287
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	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)

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

34 NMOCD - Groundwater Data

121 Abandoned Waterwell (recently measured)



National Water Information System: Mapper

SitesMap

Search

Search by Street Address:

Search by Place Name:

Search by Site Number(s):

Search by State/Territory:

Search by Watershed Region:

Surface-Water Sites

Groundwater Sites

Springs

Atmospheric Sites

Other Sites

0 0.2 0.6mi
-103.911, 32.090
USDA

Site Information



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

GO

Click to hide News Bulletins

- [Introducing The Next Generation of USGS Water Data for the Nation](#)
- [Full News](#) 

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 320405103524001

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 320405103524001 26S.30E.05.33441

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code --

Latitude 32°04'05", Longitude 103°52'40" NAD27

Land-surface elevation 3,159 feet above NAVD88

The depth of the well is 770 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

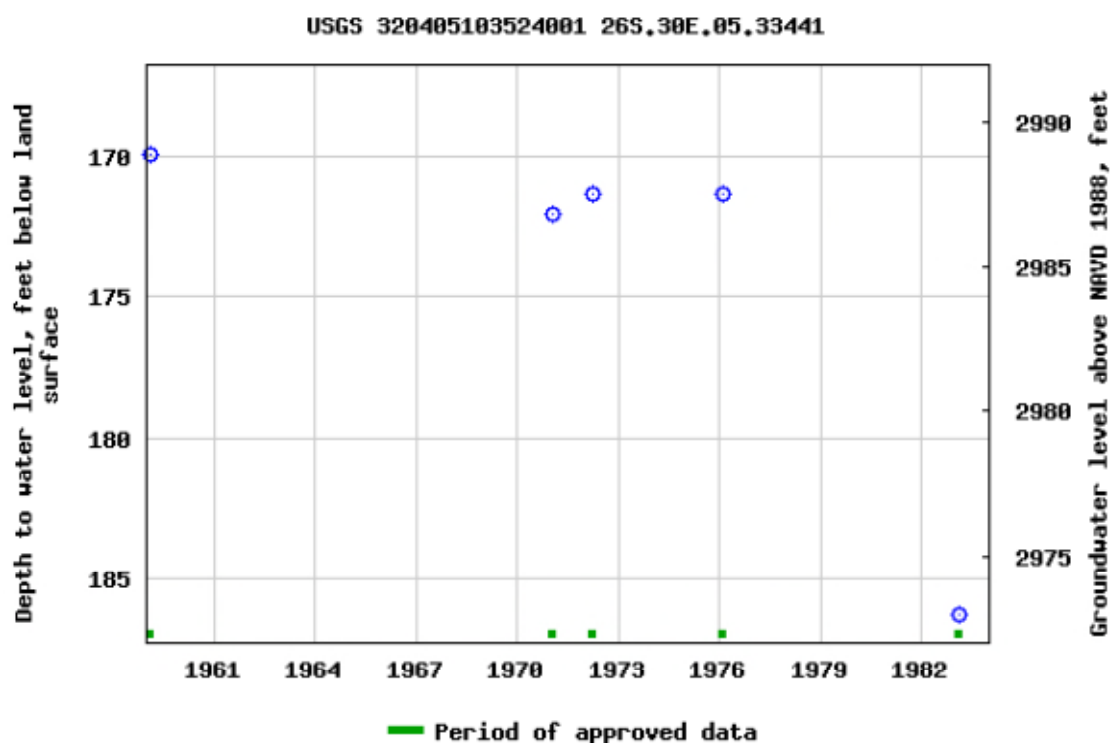
Output formats

[Table of data](#)

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[Graph of data](#)

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Breaks in the plot represent a gap of at least one year between field measurements.

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[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2019-07-25 15:47:49 EDT

0.95 0.9 nadww01



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	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01360	CUB	ED		4	3	3	05	26S	30E	602997	3548152	770	173	597
C 01361	CUB	ED		3	4	3	05	26S	30E	603240	3548157	775	184	591
C 02165	C	ED					24	26S	30E	610036	3544121*	440	180	260
C 03483	C	ED		4	4	4	05	26S	30E	604296	3548251	700	200	500
C 03581 POD1	CUB	ED		4	4	4	05	26S	30E	604298	3548291	800	320	480
C 04068 POD1	CUB	ED		1	3	1	16	26S	30E	604397	3546018			

Average Depth to Water: **211 feet**

Minimum Depth: **173 feet**

Maximum Depth: **320 feet**

Record Count: 6

PLSS Search:

Township: 26S

Range: 30E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/25/19 1:46 PM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER

Banjo BNO Federal #1

Karst Potential Map

Legend

-  32.065934 -103.895701
-  High
-  Low
-  Medium

 32.065934 -103.895701

285

Google Earth



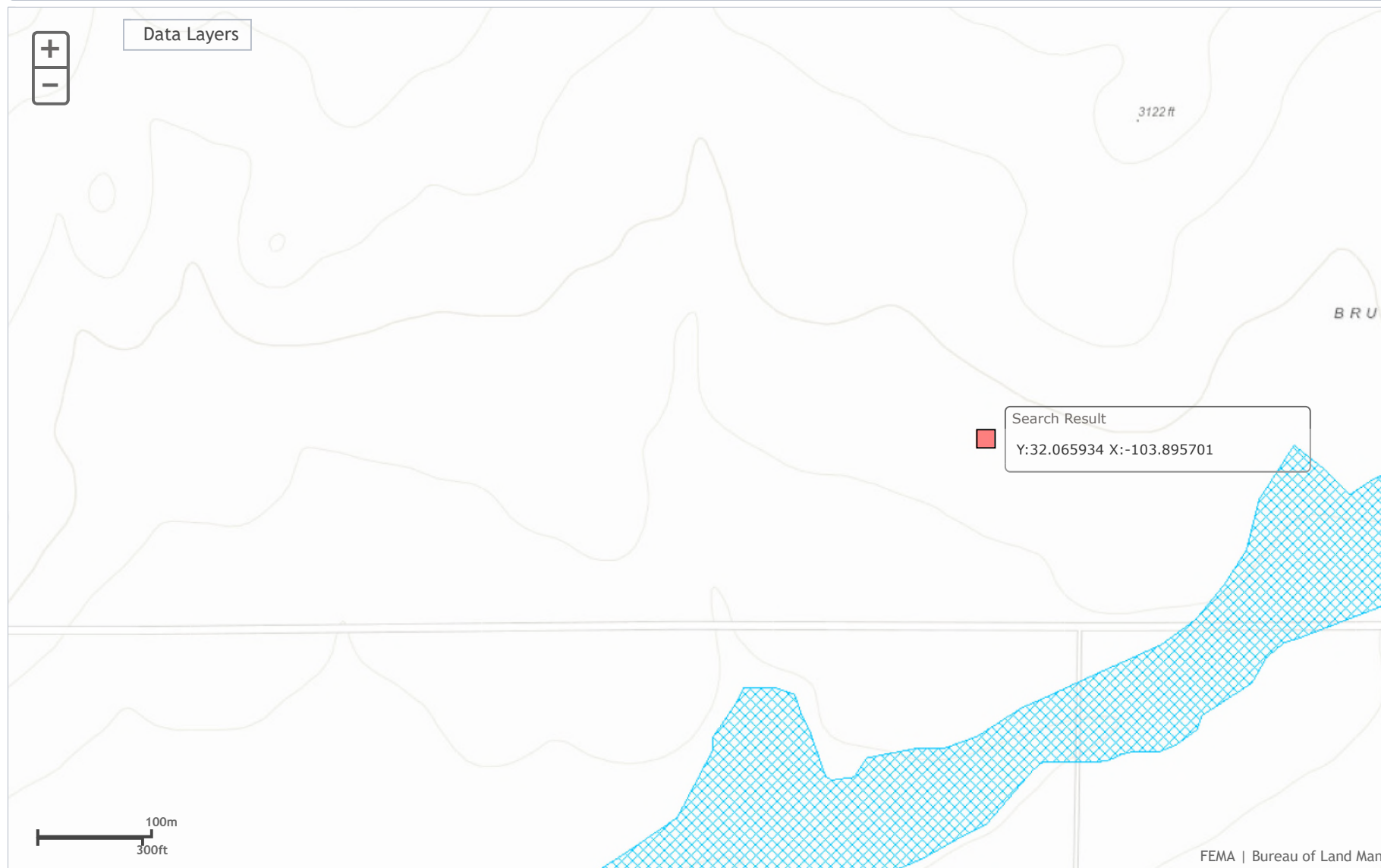
5 mi



NFHL Web Mapping Application



Data Layers



Appendix C



Borehole ID:
Borehole 1 (BH-1)

**Soil Drilling Log with
Field Testing Results**

Project Name : EOG Banjo BNO Fed #1 Battery
Project No. : 212C-MD-01839
Location : Eddy County, New Mexico
Coordinates : 32.065934°, -103.895701°
Elevation : NA

Date : 8/13/2019
Sampler : Joe Tyler
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Discoloration/ Staining	Odors/ Fumes	OVM Field Test (ppm)	Chloride Field Test (ppm)	Field Titration Test (ppm)
0		Brown Silty Sand		Heavy odor	9,524	-	-
				Heavy odor	623.4	-	-
5				Heavy odor	236.1	-	-
					70.0	-	-
10					235.2	2,240	-
15					64.4	1,280	-
20					35.1	1,240	-
25					15.5	598	-
30					8.4	512	-
		Total Depth = 30 feet					
35							
40							
45							
50							

H.O. = Heavy Odor
H.S. = Heavy Staining

L.O. = Low Odor
L.S. = Low Staining

O.L. = Over Readable Limit
"- " = Not field screened



Borehole ID:
Borehole 2 (BH-2)

**Soil Drilling Log with
Field Testing Results**

Project Name : EOG Banjo BNO Fed #1 Battery
Project No. : 212C-MD-01839
Location : Eddy County, New Mexico
Coordinates : 32.065934°, -103.895701°
Elevation : NA

Date : 8/13/2019
Sampler : Joe Tyler
Driller : Scarborough Drilling
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Discoloration/ Staining	Odors/ Fumes	OVM Field Test (ppm)	Chloride Field Test (ppm)	Field Titration Test (ppm)
0		Brown Silty Sand		Heavy odor	1,522	-	-
				Heavy odor	980.7	-	-
5				Heavy odor	403.1	-	-
					43.3	-	-
10					32.1	1,220	-
15					25.6	1,280	-
20					6.5	942	-
25					6.9	581	-
30					6.1	514	-
		Total Depth = 30 feet					
35							
40							
45							
50							

H.O. = Heavy Odor
H.S. = Heavy Staining

L.O. = Low Odor
L.S. = Low Staining

O.L. = Over Readable Limit
"- " = Not field screened

Appendix D



Certificate of Analysis Summary 630249

Tetra Tech- Midland, Midland, TX

Project Name: EOG - Banjo BNO Fed #1

Project Id: Pending
Contact: Mike Carmona
Project Location: Eddy Co, NM

Date Received in Lab: Tue Jul-09-19 01:46 pm
Report Date: 15-JUL-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	630249-001	630249-002	630249-003	630249-004	630249-005	630249-006
	<i>Field Id:</i>	AH 1 (0-1')	AH 1 (1- 1.5')	AH 1 (2-2.5')	AH 2 (0-1')	AH 2 (1-1.5')	AH 2 (2-2.5')
	<i>Depth:</i>	0-1 ft	1-1.5 ft	2-2.5 ft	0-1 ft	1-1.5 ft	2-2.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-09-19 00:00	Jul-09-19 00:00	Jul-09-19 00:00	Jul-09-19 00:00	Jul-09-19 00:00	Jul-09-19 00:00
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-11-19 11:30	Jul-11-19 11:30	Jul-11-19 11:30	Jul-11-19 11:30	Jul-11-19 11:30	Jul-11-19 11:30
	<i>Analyzed:</i>	Jul-12-19 22:16	Jul-12-19 22:40	Jul-12-19 23:03	Jul-13-19 05:27	Jul-13-19 15:02	Jul-13-19 15:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	0.0589 0.0499	0.934 0.402	2.56 0.403
Toluene		0.00361 0.00200	<0.00199 0.00199	<0.00202 0.00202	0.313 0.0499	17.5 0.402	37.4 0.403
Ethylbenzene		0.00531 0.00200	<0.00199 0.00199	<0.00202 0.00202	1.16 0.0499	7.09 0.402	17.0 0.403
m,p-Xylenes		0.0147 0.00400	<0.00398 0.00398	<0.00404 0.00404	1.16 0.0998	39.1 0.803	80.0 0.806
o-Xylene		0.0128 0.00200	0.00420 0.00199	<0.00202 0.00202	0.257 0.0499	13.6 0.402	26.4 0.403
Total Xylenes		0.0275 0.00200	0.00420 0.00199	<0.00202 0.00202	1.42 0.0499	52.7 0.402	106 0.403
Total BTEX		0.0364 0.00200	0.00420 0.00199	<0.00202 0.00202	2.95 0.0499	78.2 0.402	163 0.403
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-10-19 15:45	Jul-10-19 15:45	Jul-10-19 15:45	Jul-10-19 15:45	Jul-10-19 15:45	Jul-10-19 15:45
	<i>Analyzed:</i>	Jul-10-19 16:47	Jul-10-19 16:52	Jul-10-19 16:57	Jul-10-19 17:02	Jul-10-19 17:16	Jul-10-19 17:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1180 4.95	3240 25.1	5540 25.0	7330 49.9	1640 25.2	9470 49.6
TPH By SW8015 Mod SUB: T104704400-18-16	<i>Extracted:</i>	Jul-11-19 16:00	Jul-11-19 16:00	Jul-11-19 16:00	Jul-11-19 16:00	Jul-11-19 16:00	Jul-11-19 16:00
	<i>Analyzed:</i>	Jul-12-19 07:12	Jul-12-19 04:05	Jul-12-19 04:26	Jul-12-19 07:31	Jul-12-19 07:51	Jul-12-19 08:11
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		134 74.9	38.3 14.9	<15.0 15.0	1930 150	2600 74.9	3350 74.7
Diesel Range Organics (DRO)		9500 74.9	916 14.9	101 15.0	38900 150	11300 74.9	6680 74.7
Motor Oil Range Hydrocarbons (MRO)		1220 74.9	119 14.9	<15.0 15.0	4080 150	1170 74.9	752 74.7
Total TPH		10900 74.9	1070 14.9	101 15.0	44900 150	15100 74.9	10800 74.7

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
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Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 630249

Tetra Tech- Midland, Midland, TX

Project Name: EOG - Banjo BNO Fed #1

Project Id: Pending
Contact: Mike Carmona
Project Location: Eddy Co, NM

Date Received in Lab: Tue Jul-09-19 01:46 pm
Report Date: 15-JUL-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	630249-007	630249-008	630249-009	630249-010	630249-011	630249-012
	<i>Field Id:</i>	AH 2 (3-3.5')	AH 2 (4-4.5')	AH 3 (0-1')	AH 3 (1-1.5')	AH 3 (2-2.5')	AH 3 (3-3.5')
	<i>Depth:</i>	3-3.5 ft	4-4.5 ft	0-1 ft	1-1.5 ft	2-2.5 ft	3-3.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-09-19 00:00	Jul-09-19 00:00	Jul-09-19 00:00	Jul-09-19 00:00	Jul-09-19 00:00	Jul-09-19 00:00
BTEX by EPA 8021B SUB: T104704400-18-16	<i>Extracted:</i>	Jul-11-19 11:30	Jul-11-19 11:30	Jul-11-19 11:30	Jul-11-19 11:30	Jul-11-19 11:30	Jul-11-19 11:30
	<i>Analyzed:</i>	Jul-13-19 15:49	Jul-13-19 06:59	Jul-12-19 23:26	Jul-12-19 23:49	Jul-13-19 00:12	Jul-13-19 00:35
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		3.29 0.402	0.165 0.0503	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Toluene		53.1 0.402	4.77 0.0503	0.00500 0.00200	0.0388 0.00200	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		23.0 0.402	2.88 0.0503	<0.00200 0.00200	0.00678 0.00200	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		107 0.805	15.9 0.101	0.0418 0.00401	0.0410 0.00400	<0.00401 0.00401	<0.00398 0.00398
o-Xylene		35.0 0.402	5.53 0.0503	0.0216 0.00200	0.0163 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		142 0.402	21.4 0.0503	0.0634 0.00200	0.0573 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		221 0.402	29.2 0.0503	0.0684 0.00200	0.103 0.00200	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-18-16	<i>Extracted:</i>	Jul-10-19 15:45	Jul-10-19 15:45	Jul-10-19 15:45	Jul-10-19 15:45	Jul-10-19 15:45	Jul-10-19 15:45
	<i>Analyzed:</i>	Jul-10-19 17:26	Jul-10-19 17:31	Jul-10-19 17:36	Jul-10-19 18:00	Jul-10-19 18:14	Jul-10-19 18:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		10100 49.8	9910 50.1	1520 24.9	1890 24.9	1420 25.0	902 5.03
TPH By SW8015 Mod SUB: T104704400-18-16	<i>Extracted:</i>	Jul-11-19 16:00	Jul-11-19 16:00	Jul-11-19 16:00	Jul-11-19 16:00	Jul-11-19 16:00	Jul-11-19 16:00
	<i>Analyzed:</i>	Jul-12-19 08:31	Jul-12-19 08:51	Jul-12-19 09:11	Jul-12-19 09:32	Jul-12-19 09:52	Jul-12-19 10:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		5290 74.9	1750 75.0	432 74.9	141 74.9	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		10100 74.9	4890 75.0	9470 74.9	2190 74.9	110 15.0	47.4 15.0
Motor Oil Range Hydrocarbons (MRO)		1130 74.9	600 75.0	1480 74.9	273 74.9	<15.0 15.0	<15.0 15.0
Total TPH		16500 74.9	7240 75.0	11400 74.9	2600 74.9	110 15.0	47.4 15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 630249

for
Tetra Tech- Midland

Project Manager: Mike Carmona

EOG - Banjo BNO Fed #1

Pending

15-JUL-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)



15-JUL-19

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **630249**

EOG - Banjo BNO Fed #1

Project Address: Eddy Co, NM

Mike Carmona:

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) 630249. 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. 630249 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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Sample Cross Reference 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH 1 (0-1')	S	07-09-19 00:00	0 - 1 ft	630249-001
AH 1 (1- 1.5')	S	07-09-19 00:00	1 - 1.5 ft	630249-002
AH 1 (2-2.5')	S	07-09-19 00:00	2 - 2.5 ft	630249-003
AH 2 (0-1')	S	07-09-19 00:00	0 - 1 ft	630249-004
AH 2 (1-1.5')	S	07-09-19 00:00	1 - 1.5 ft	630249-005
AH 2 (2-2.5')	S	07-09-19 00:00	2 - 2.5 ft	630249-006
AH 2 (3-3.5')	S	07-09-19 00:00	3 - 3.5 ft	630249-007
AH 2 (4-4.5')	S	07-09-19 00:00	4 - 4.5 ft	630249-008
AH 3 (0-1')	S	07-09-19 00:00	0 - 1 ft	630249-009
AH 3 (1-1.5')	S	07-09-19 00:00	1 - 1.5 ft	630249-010
AH 3 (2-2.5')	S	07-09-19 00:00	2 - 2.5 ft	630249-011
AH 3 (3-3.5')	S	07-09-19 00:00	3 - 3.5 ft	630249-012

**CASE NARRATIVE****Client Name: Tetra Tech- Midland****Project Name: EOG - Banjo BNO Fed #1**Project ID: Pending
Work Order Number(s): 630249Report Date: 15-JUL-19
Date Received: 07/09/2019**Sample receipt non conformances and comments:**

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3095160 TPH By SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 630249-001.

Batch: LBA-3095240 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 630249-002,630249-009,630249-007,630249-008,630249-006,630249-004.

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

Lab Sample ID 630249-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).

Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 630249-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 1 (0-1')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-001

Date Collected: 07.09.19 00.00

Sample Depth: 0 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1180	4.95	mg/kg	07.10.19 16.47		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	134	74.9	mg/kg	07.12.19 07.12		5
Diesel Range Organics (DRO)	C10C28DRO	9500	74.9	mg/kg	07.12.19 07.12		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1220	74.9	mg/kg	07.12.19 07.12		5
Total TPH	PHC635	10900	74.9	mg/kg	07.12.19 07.12		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	110	%	70-135	07.12.19 07.12		
o-Terphenyl	84-15-1	220	%	70-135	07.12.19 07.12	**	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 1 (0-1')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-001

Date Collected: 07.09.19 00.00

Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.12.19 22.16	U	1
Toluene	108-88-3	0.00361	0.00200	mg/kg	07.12.19 22.16		1
Ethylbenzene	100-41-4	0.00531	0.00200	mg/kg	07.12.19 22.16		1
m,p-Xylenes	179601-23-1	0.0147	0.00400	mg/kg	07.12.19 22.16		1
o-Xylene	95-47-6	0.0128	0.00200	mg/kg	07.12.19 22.16		1
Total Xylenes	1330-20-7	0.0275	0.00200	mg/kg	07.12.19 22.16		1
Total BTEX		0.0364	0.00200	mg/kg	07.12.19 22.16		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	07.12.19 22.16		
1,4-Difluorobenzene	540-36-3	86	%	70-130	07.12.19 22.16		



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 1 (1- 1.5')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-002

Date Collected: 07.09.19 00.00

Sample Depth: 1 - 1.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3240	25.1	mg/kg	07.10.19 16.52		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	38.3	14.9	mg/kg	07.12.19 04.05		1
Diesel Range Organics (DRO)	C10C28DRO	916	14.9	mg/kg	07.12.19 04.05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	119	14.9	mg/kg	07.12.19 04.05		1
Total TPH	PHC635	1070	14.9	mg/kg	07.12.19 04.05		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	103	%	70-135	07.12.19 04.05		
o-Terphenyl	84-15-1	118	%	70-135	07.12.19 04.05		



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: AH 1 (1- 1.5')

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-002

Date Collected: 07.09.19 00.00

Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.12.19 22.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.12.19 22.40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.12.19 22.40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.12.19 22.40	U	1
o-Xylene	95-47-6	0.00420	0.00199	mg/kg	07.12.19 22.40		1
Total Xylenes	1330-20-7	0.00420	0.00199	mg/kg	07.12.19 22.40		1
Total BTEX		0.00420	0.00199	mg/kg	07.12.19 22.40		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	81	%	70-130	07.12.19 22.40		
4-Bromofluorobenzene	460-00-4	142	%	70-130	07.12.19 22.40	**	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 1 (2-2.5')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-003

Date Collected: 07.09.19 00.00

Sample Depth: 2 - 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5540	25.0	mg/kg	07.10.19 16.57		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.12.19 04.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	101	15.0	mg/kg	07.12.19 04.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.12.19 04.26	U	1
Total TPH	PHC635	101	15.0	mg/kg	07.12.19 04.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.12.19 04.26	
o-Terphenyl	84-15-1	98	%	70-135	07.12.19 04.26	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 1 (2-2.5')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-003

Date Collected: 07.09.19 00.00

Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.12.19 23.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.12.19 23.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.12.19 23.03	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.12.19 23.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.12.19 23.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.12.19 23.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.12.19 23.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	07.12.19 23.03		
1,4-Difluorobenzene	540-36-3	90	%	70-130	07.12.19 23.03		



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: AH 2 (0-1')

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-004

Date Collected: 07.09.19 00.00

Sample Depth: 0 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7330	49.9	mg/kg	07.10.19 17.02		10

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1930	150	mg/kg	07.12.19 07.31		10
Diesel Range Organics (DRO)	C10C28DRO	38900	150	mg/kg	07.12.19 07.31		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	4080	150	mg/kg	07.12.19 07.31		10
Total TPH	PHC635	44900	150	mg/kg	07.12.19 07.31		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	07.12.19 07.31	
o-Terphenyl	84-15-1	99	%	70-135	07.12.19 07.31	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 2 (0-1')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-004

Date Collected: 07.09.19 00.00

Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0589	0.0499	mg/kg	07.13.19 05.27		25
Toluene	108-88-3	0.313	0.0499	mg/kg	07.13.19 05.27		25
Ethylbenzene	100-41-4	1.16	0.0499	mg/kg	07.13.19 05.27		25
m,p-Xylenes	179601-23-1	1.16	0.0998	mg/kg	07.13.19 05.27		25
o-Xylene	95-47-6	0.257	0.0499	mg/kg	07.13.19 05.27		25
Total Xylenes	1330-20-7	1.42	0.0499	mg/kg	07.13.19 05.27		25
Total BTEX		2.95	0.0499	mg/kg	07.13.19 05.27		25
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	07.13.19 05.27		
4-Bromofluorobenzene	460-00-4	213	%	70-130	07.13.19 05.27	**	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: AH 2 (1-1.5')

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-005

Date Collected: 07.09.19 00.00

Sample Depth: 1 - 1.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1640	25.2	mg/kg	07.10.19 17.16		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2600	74.9	mg/kg	07.12.19 07.51		5
Diesel Range Organics (DRO)	C10C28DRO	11300	74.9	mg/kg	07.12.19 07.51		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1170	74.9	mg/kg	07.12.19 07.51		5
Total TPH	PHC635	15100	74.9	mg/kg	07.12.19 07.51		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	129	%	70-135	07.12.19 07.51	
o-Terphenyl	84-15-1	123	%	70-135	07.12.19 07.51	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 2 (1-1.5')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-005

Date Collected: 07.09.19 00.00

Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.934	0.402	mg/kg	07.13.19 15.02		200
Toluene	108-88-3	17.5	0.402	mg/kg	07.13.19 15.02		200
Ethylbenzene	100-41-4	7.09	0.402	mg/kg	07.13.19 15.02		200
m,p-Xylenes	179601-23-1	39.1	0.803	mg/kg	07.13.19 15.02		200
o-Xylene	95-47-6	13.6	0.402	mg/kg	07.13.19 15.02		200
Total Xylenes	1330-20-7	52.7	0.402	mg/kg	07.13.19 15.02		200
Total BTEX		78.2	0.402	mg/kg	07.13.19 15.02		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	126	%	70-130	07.13.19 15.02		
1,4-Difluorobenzene	540-36-3	92	%	70-130	07.13.19 15.02		



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: AH 2 (2-2.5')

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-006

Date Collected: 07.09.19 00.00

Sample Depth: 2 - 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9470	49.6	mg/kg	07.10.19 17.21		10

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	3350	74.7	mg/kg	07.12.19 08.11		5
Diesel Range Organics (DRO)	C10C28DRO	6680	74.7	mg/kg	07.12.19 08.11		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	752	74.7	mg/kg	07.12.19 08.11		5
Total TPH	PHC635	10800	74.7	mg/kg	07.12.19 08.11		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	07.12.19 08.11	
o-Terphenyl	84-15-1	123	%	70-135	07.12.19 08.11	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 2 (2-2.5')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-006

Date Collected: 07.09.19 00.00

Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	2.56	0.403	mg/kg	07.13.19 15.25		200
Toluene	108-88-3	37.4	0.403	mg/kg	07.13.19 15.25		200
Ethylbenzene	100-41-4	17.0	0.403	mg/kg	07.13.19 15.25		200
m,p-Xylenes	179601-23-1	80.0	0.806	mg/kg	07.13.19 15.25		200
o-Xylene	95-47-6	26.4	0.403	mg/kg	07.13.19 15.25		200
Total Xylenes	1330-20-7	106	0.403	mg/kg	07.13.19 15.25		200
Total BTEX		163	0.403	mg/kg	07.13.19 15.25		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	144	%	70-130	07.13.19 15.25	**	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.13.19 15.25		



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: AH 2 (3-3.5')

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-007

Date Collected: 07.09.19 00.00

Sample Depth: 3 - 3.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10100	49.8	mg/kg	07.10.19 17.26		10

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	5290	74.9	mg/kg	07.12.19 08.31		5
Diesel Range Organics (DRO)	C10C28DRO	10100	74.9	mg/kg	07.12.19 08.31		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1130	74.9	mg/kg	07.12.19 08.31		5
Total TPH	PHC635	16500	74.9	mg/kg	07.12.19 08.31		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	126	%	70-135	07.12.19 08.31		
o-Terphenyl	84-15-1	105	%	70-135	07.12.19 08.31		



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: AH 2 (3-3.5')

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-007

Date Collected: 07.09.19 00.00

Sample Depth: 3 - 3.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	3.29	0.402	mg/kg	07.13.19 15.49		200
Toluene	108-88-3	53.1	0.402	mg/kg	07.13.19 15.49		200
Ethylbenzene	100-41-4	23.0	0.402	mg/kg	07.13.19 15.49		200
m,p-Xylenes	179601-23-1	107	0.805	mg/kg	07.13.19 15.49		200
o-Xylene	95-47-6	35.0	0.402	mg/kg	07.13.19 15.49		200
Total Xylenes	1330-20-7	142	0.402	mg/kg	07.13.19 15.49		200
Total BTEX		221	0.402	mg/kg	07.13.19 15.49		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.13.19 15.49		
4-Bromofluorobenzene	460-00-4	156	%	70-130	07.13.19 15.49	**	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: AH 2 (4-4.5')

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-008

Date Collected: 07.09.19 00.00

Sample Depth: 4 - 4.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9910	50.1	mg/kg	07.10.19 17.31		10

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1750	75.0	mg/kg	07.12.19 08.51		5
Diesel Range Organics (DRO)	C10C28DRO	4890	75.0	mg/kg	07.12.19 08.51		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	600	75.0	mg/kg	07.12.19 08.51		5
Total TPH	PHC635	7240	75.0	mg/kg	07.12.19 08.51		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	114	%	70-135	07.12.19 08.51		
o-Terphenyl	84-15-1	119	%	70-135	07.12.19 08.51		



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 2 (4-4.5')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-008

Date Collected: 07.09.19 00.00

Sample Depth: 4 - 4.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.165	0.0503	mg/kg	07.13.19 06.59		25
Toluene	108-88-3	4.77	0.0503	mg/kg	07.13.19 06.59		25
Ethylbenzene	100-41-4	2.88	0.0503	mg/kg	07.13.19 06.59		25
m,p-Xylenes	179601-23-1	15.9	0.101	mg/kg	07.13.19 06.59		25
o-Xylene	95-47-6	5.53	0.0503	mg/kg	07.13.19 06.59		25
Total Xylenes	1330-20-7	21.4	0.0503	mg/kg	07.13.19 06.59		25
Total BTEX		29.2	0.0503	mg/kg	07.13.19 06.59		25
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	258	%	70-130	07.13.19 06.59	**	
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.13.19 06.59		



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 3 (0-1')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-009

Date Collected: 07.09.19 00.00

Sample Depth: 0 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1520	24.9	mg/kg	07.10.19 17.36		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	432	74.9	mg/kg	07.12.19 09.11		5
Diesel Range Organics (DRO)	C10C28DRO	9470	74.9	mg/kg	07.12.19 09.11		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1480	74.9	mg/kg	07.12.19 09.11		5
Total TPH	PHC635	11400	74.9	mg/kg	07.12.19 09.11		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	07.12.19 09.11	
o-Terphenyl	84-15-1	119	%	70-135	07.12.19 09.11	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 3 (0-1')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-009

Date Collected: 07.09.19 00.00

Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.12.19 23.26	U	1
Toluene	108-88-3	0.00500	0.00200	mg/kg	07.12.19 23.26		1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.12.19 23.26	U	1
m,p-Xylenes	179601-23-1	0.0418	0.00401	mg/kg	07.12.19 23.26		1
o-Xylene	95-47-6	0.0216	0.00200	mg/kg	07.12.19 23.26		1
Total Xylenes	1330-20-7	0.0634	0.00200	mg/kg	07.12.19 23.26		1
Total BTEX		0.0684	0.00200	mg/kg	07.12.19 23.26		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	90	%	70-130	07.12.19 23.26		
4-Bromofluorobenzene	460-00-4	132	%	70-130	07.12.19 23.26	**	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 3 (1-1.5')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-010

Date Collected: 07.09.19 00.00

Sample Depth: 1 - 1.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1890	24.9	mg/kg	07.10.19 18.00		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	141	74.9	mg/kg	07.12.19 09.32		5
Diesel Range Organics (DRO)	C10C28DRO	2190	74.9	mg/kg	07.12.19 09.32		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	273	74.9	mg/kg	07.12.19 09.32		5
Total TPH	PHC635	2600	74.9	mg/kg	07.12.19 09.32		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	07.12.19 09.32	
o-Terphenyl	84-15-1	125	%	70-135	07.12.19 09.32	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: AH 3 (1-1.5')

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-010

Date Collected: 07.09.19 00.00

Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.12.19 23.49	U	1
Toluene	108-88-3	0.0388	0.00200	mg/kg	07.12.19 23.49		1
Ethylbenzene	100-41-4	0.00678	0.00200	mg/kg	07.12.19 23.49		1
m,p-Xylenes	179601-23-1	0.0410	0.00400	mg/kg	07.12.19 23.49		1
o-Xylene	95-47-6	0.0163	0.00200	mg/kg	07.12.19 23.49		1
Total Xylenes	1330-20-7	0.0573	0.00200	mg/kg	07.12.19 23.49		1
Total BTEX		0.103	0.00200	mg/kg	07.12.19 23.49		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88		%	70-130	07.12.19 23.49	
4-Bromofluorobenzene	460-00-4	123		%	70-130	07.12.19 23.49	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 3 (2-2.5')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-011

Date Collected: 07.09.19 00.00

Sample Depth: 2 - 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1420	25.0	mg/kg	07.10.19 18.14		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.12.19 09.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	110	15.0	mg/kg	07.12.19 09.52		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.12.19 09.52	U	1
Total TPH	PHC635	110	15.0	mg/kg	07.12.19 09.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	07.12.19 09.52	
o-Terphenyl	84-15-1	101	%	70-135	07.12.19 09.52	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: AH 3 (2-2.5')

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-011

Date Collected: 07.09.19 00.00

Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.13.19 00.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.13.19 00.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.13.19 00.12	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.13.19 00.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.13.19 00.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.13.19 00.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.13.19 00.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	91	%	70-130	07.13.19 00.12		
4-Bromofluorobenzene	460-00-4	119	%	70-130	07.13.19 00.12		



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: AH 3 (3-3.5')

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-012

Date Collected: 07.09.19 00.00

Sample Depth: 3 - 3.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 07.10.19 15.45

Basis: Wet Weight

Seq Number: 3094965

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	902	5.03	mg/kg	07.10.19 18.19		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.11.19 16.00

Basis: Wet Weight

Seq Number: 3095160

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.12.19 10.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	47.4	15.0	mg/kg	07.12.19 10.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.12.19 10.13	U	1
Total TPH	PHC635	47.4	15.0	mg/kg	07.12.19 10.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.12.19 10.13	
o-Terphenyl	84-15-1	98	%	70-135	07.12.19 10.13	



Certificate of Analytical Results 630249

Tetra Tech- Midland, Midland, TX

EOG - Banjo BNO Fed #1

Sample Id: **AH 3 (3-3.5')**

Matrix: Soil

Date Received: 07.09.19 13.46

Lab Sample Id: 630249-012

Date Collected: 07.09.19 00.00

Sample Depth: 3 - 3.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALG

% Moisture:

Analyst: FOV

Date Prep: 07.11.19 11.30

Basis: Wet Weight

Seq Number: 3095240

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.13.19 00.35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.13.19 00.35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.13.19 00.35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.13.19 00.35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.13.19 00.35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.13.19 00.35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.13.19 00.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	07.13.19 00.35		
1,4-Difluorobenzene	540-36-3	92	%	70-130	07.13.19 00.35		



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



Tetra Tech- Midland
EOG - Banjo BNO Fed #1

Analytical Method: Chloride by EPA 300

Seq Number: 3094965

MB Sample Id: 7681735-1-BLK

Matrix: Solid

LCS Sample Id: 7681735-1-BKS

Prep Method: E300P

Date Prep: 07.10.19

LCSD Sample Id: 7681735-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	240	96	239	96	90-110	0	20	mg/kg	07.10.19 16:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3094965

Parent Sample Id: 630227-008

Matrix: Soil

MS Sample Id: 630227-008 S

Prep Method: E300P

Date Prep: 07.10.19

MSD Sample Id: 630227-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.05	253	253	100	252	100	90-110	0	20	mg/kg	07.10.19 16:38	

Analytical Method: Chloride by EPA 300

Seq Number: 3094965

Parent Sample Id: 630227-009

Matrix: Soil

MS Sample Id: 630227-009 S

Prep Method: E300P

Date Prep: 07.10.19

MSD Sample Id: 630227-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	252	101	253	101	90-110	0	20	mg/kg	07.10.19 17:45	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3095160

MB Sample Id: 7681864-1-BLK

Matrix: Solid

LCS Sample Id: 7681864-1-BKS

Prep Method: TX1005P

Date Prep: 07.11.19

LCSD Sample Id: 7681864-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1140	114	1140	114	70-135	0	20	mg/kg	07.11.19 23:33	
Diesel Range Organics (DRO)	<8.13	1000	1130	113	1080	108	70-135	5	20	mg/kg	07.11.19 23:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		122		126		70-135	%	07.11.19 23:33
o-Terphenyl	108		108		109		70-135	%	07.11.19 23:33

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Tetra Tech- Midland
EOG - Banjo BNO Fed #1

Analytical Method: TPH By SW8015 Mod

Seq Number: 3095160

Parent Sample Id: 630294-021

Matrix: Soil

MS Sample Id: 630294-021 S

Prep Method: TX1005P

Date Prep: 07.11.19

MSD Sample Id: 630294-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	1080	108	1100	110	70-135	2	20	mg/kg	07.12.19 00:58	
Diesel Range Organics (DRO)	16.6	999	1010	99	1010	100	70-135	0	20	mg/kg	07.12.19 00:58	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		122		70-135	%	07.12.19 00:58
o-Terphenyl	100		102		70-135	%	07.12.19 00:58

Analytical Method: BTEX by EPA 8021B

Seq Number: 3095240

MB Sample Id: 7681835-1-BLK

Matrix: Solid

LCS Sample Id: 7681835-1-BKS

Prep Method: SW5030B

Date Prep: 07.11.19

LCSD Sample Id: 7681835-1-BSL

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0878	88	0.0885	89	70-130	1	35	mg/kg	07.12.19 19:50	
Toluene	0.000680	0.100	0.0951	95	0.0977	98	70-130	3	35	mg/kg	07.12.19 19:50	
Ethylbenzene	<0.00200	0.100	0.100	100	0.108	108	70-130	8	35	mg/kg	07.12.19 19:50	
m,p-Xylenes	<0.00101	0.200	0.198	99	0.208	104	70-130	5	35	mg/kg	07.12.19 19:50	
o-Xylene	0.000610	0.100	0.0945	95	0.104	104	70-130	10	35	mg/kg	07.12.19 19:50	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		93		92		70-130	%	07.12.19 19:50
4-Bromofluorobenzene	108		98		100		70-130	%	07.12.19 19:50

Analytical Method: BTEX by EPA 8021B

Seq Number: 3095240

Parent Sample Id: 630249-001

Matrix: Soil

MS Sample Id: 630249-001 S

Prep Method: SW5030B

Date Prep: 07.11.19

MSD Sample Id: 630249-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000640	0.0996	0.0514	51	0.0467	46	70-130	10	35	mg/kg	07.12.19 20:36	X
Toluene	0.00361	0.0996	0.0500	47	0.0465	42	70-130	7	35	mg/kg	07.12.19 20:36	X
Ethylbenzene	0.00531	0.0996	0.0469	42	0.0624	57	70-130	28	35	mg/kg	07.12.19 20:36	X
m,p-Xylenes	0.0147	0.199	0.0836	35	0.0800	32	70-130	4	35	mg/kg	07.12.19 20:36	X
o-Xylene	0.0128	0.0996	0.0463	34	0.0464	33	70-130	0	35	mg/kg	07.12.19 20:36	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		86		70-130	%	07.12.19 20:36
4-Bromofluorobenzene	113		112		70-130	%	07.12.19 20:36

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Analysis Request of Custody Record



Tetra Tech, Inc.

 901W Wall Street, Ste 100
 Midland, Texas 79705
 Tel (432) 682-4559
 Fax (432) 682-3946

Page 1 of 2

Client Name:

E06

Site Manager:

Mike Carrona

Project Name:

Banjo BND Fed #1

Project Location:

Eddy Co, NM

Project #:

Pending

Invoice to:

E06 - Sam's Kennedy

Receiving Laboratory:

Xanco

Comments:

Sampler Signature:

Tony Legend

SAMPLE IDENTIFICATION

LAB #
(LAB USE ONLY)

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YEAR: 2019

DATE

TIME

SAMPLING

MATRIX

PRESERVATIVE METHOD

WATER

SOIL

HCL

HNO₃

ICE

None

CONTAINERS

FILTERED (Y/N)

BTX 8021B

BTX 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

BTX 8021B

BTX 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

ANALYSIS REQUEST
(Circle or Specify Method No.)

Inquired by:

Date: Time:

Received by:

Date: Time:

Inquired by:

Date: Time:

Received by:

Date: Time:

Inquired by:

Date: Time:

Received by:

Date: Time:

Inquired by:

Date: Time:

Received by:

Date: Time:

Inquired by:

Date: Time:

Received by:

Date: Time:

LAB USE ONLY

REMARKS:

STANDARD

RUSH: Same Day 24 hr 48 hr 72 hr

Rush Charges Authorized

Special Report Limits or TRRP Report

Sample Temperature

24.0

Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

901W Wall Street, Ste 100
Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

030249

Page

2

[illegible]

ORIGINAL COPY



Client: Tetra Tech- Midland

Date/ Time Received: 07/09/2019 01:46:00 PM

Work Order #: 630249

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	24	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	Chilling in Progress
#4 *Custody Seals intact on shipping container/ cooler?	No	
#5 Custody Seals intact on sample bottles?	No	
#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)?	Yes	Subbed to Xenco Midland
#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:

Elizabeth McClellan

Date: 07/09/2019

Checklist reviewed by:

Jessica Kramer

Date: 07/10/2019



Certificate of Analysis Summary 634052

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Banjo BNO Fed #1 Battery



Project Id: 212C-MD-01839
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Wed Aug-14-19 02:55 pm
Report Date: 22-AUG-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	634052-001	634052-002	634052-003	634052-004	634052-005	634052-006
	<i>Field Id:</i>	BH-1 (0'-1')	BH-1 (2'-3')	BH-1 (4'-5')	BH-1 (6'-7')	BH-1 (9'-10')	BH-1 (14'-15')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00
	<i>Analyzed:</i>	Aug-17-19 18:48	Aug-17-19 19:08	Aug-17-19 19:29	Aug-17-19 19:49	Aug-17-19 20:09	Aug-17-19 20:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		0.381 0.0500	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.0200 0.0200	<0.00199 0.00199
Toluene		13.6 D 0.200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	0.0591 D 0.0200	<0.00199 0.00199
Ethylbenzene		6.03 0.0500	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	0.0470 D 0.0200	<0.00199 0.00199
m,p-Xylenes		37.0 D 0.400	0.00768 0.00401	<0.00402 0.00402	<0.00398 0.00398	0.423 D 0.0399	<0.00398 0.00398
o-Xylene		14.0 D 0.200	0.00333 0.00200	<0.00201 0.00201	<0.00199 0.00199	0.147 D 0.0200	<0.00199 0.00199
Total Xylenes		51.0 0.200	0.0110 0.00200	<0.00201 0.00201	<0.00199 0.00199	0.570 0.0200	<0.00199 0.00199
Total BTEX		71.0 0.0500	0.0110 0.00200	<0.00201 0.00201	<0.00199 0.00199	0.676 0.0200	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	Aug-15-19 11:45	Aug-15-19 11:45	Aug-15-19 11:45	Aug-15-19 11:45	Aug-15-19 11:45	Aug-15-19 11:45
	<i>Analyzed:</i>	Aug-15-19 13:09	Aug-15-19 13:15	Aug-15-19 13:20	Aug-15-19 13:26	Aug-15-19 13:48	Aug-15-19 13:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		9030 49.5	7280 50.5	1070 4.98	1550 25.0	2020 25.0	1070 4.96
TPH By SW8015 Mod	<i>Extracted:</i>	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00
	<i>Analyzed:</i>	Aug-15-19 13:33	Aug-15-19 13:53	Aug-15-19 14:51	Aug-15-19 15:10	Aug-15-19 15:29	Aug-15-19 15:48
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		1810 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	115 50.0	<49.9 49.9
Diesel Range Organics (DRO)		5080 50.0	135 50.0	<49.9 49.9	<50.0 50.0	500 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		503 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	61.4 50.0	<49.9 49.9
Total TPH		7390 50.0	135 50.0	<49.9 49.9	<50.0 50.0	676 50.0	<49.9 49.9

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 634052

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Banjo BNO Fed #1 Battery



Project Id: 212C-MD-01839
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Wed Aug-14-19 02:55 pm
Report Date: 22-AUG-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	634052-007	634052-008	634052-009	634052-010	634052-011	634052-012
	<i>Field Id:</i>	BH-1 (19'-20')	BH-1 (24'-25')	BH-1 (29'-30')	BH-2 (0'-1')	BH-2 (2'-3')	BH-2 (4'-5')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00
	<i>Analyzed:</i>	Aug-17-19 20:49	Aug-17-19 21:09	Aug-17-19 21:29	Aug-17-19 22:48	Aug-17-19 23:08	Aug-17-19 23:28
	<i>Units/RL:</i>	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	<0.00201 0.00201	0.0136 0.00198	<0.0497 0.0497	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	0.383 0.00198	0.592 D 0.0497	0.0188 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	0.386 0.00198	0.725 D 0.0497	0.0277 0.00199
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00402 0.00402	5.02 D 0.0992	6.72 D 0.0994	0.303 0.00398
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	2.06 D 0.0496	2.66 D 0.0497	0.142 0.00199
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	7.08 0.0496	9.38 0.0497	0.445 0.00199
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	7.86 0.00198	10.7 0.0497	0.492 0.00199
Chloride by EPA 300	<i>Extracted:</i>	Aug-15-19 11:45	Aug-15-19 11:45	Aug-15-19 11:45	Aug-15-19 11:45	Aug-15-19 11:45	Aug-15-19 11:45
	<i>Analyzed:</i>	Aug-15-19 14:10	Aug-15-19 17:52	Aug-15-19 14:21	Aug-15-19 14:27	Aug-15-19 14:32	Aug-15-19 14:38
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1060 4.95	1520 25.2	595 4.98	3390 25.0	2820 25.1	3910 25.3
TPH By SW8015 Mod	<i>Extracted:</i>	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00
	<i>Analyzed:</i>	Aug-15-19 16:07	Aug-15-19 16:26	Aug-15-19 16:46	Aug-16-19 05:10	Aug-16-19 05:30	Aug-15-19 18:02
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	709 249	1020 250	<49.9 49.9
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	8400 249	8950 250	435 49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	403 249	393 250	<49.9 49.9
Total TPH		<49.9 49.9	<50.0 50.0	<49.9 49.9	9510 249	10400 250	435 49.9

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 634052

Tetra Tech- Midland, Midland, TX

Project Name: EOG-Banjo BNO Fed #1 Battery

Project Id: 212C-MD-01839
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Wed Aug-14-19 02:55 pm
Report Date: 22-AUG-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	634052-013	634052-014	634052-015	634052-016	634052-017	634052-018
	<i>Field Id:</i>	BH-2 (6'-7')	BH-2 (9'-10')	BH-2 (14'-15')	BH-2 (19'-20')	BH-2 (24'-25')	BH-2 (29'-30')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00	Aug-13-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00	Aug-16-19 16:00
	<i>Analyzed:</i>	Aug-17-19 23:48	Aug-18-19 00:08	Aug-18-19 00:28	Aug-18-19 00:48	Aug-18-19 01:08	Aug-18-19 01:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
m,p-Xylenes		0.00917 0.00398	<0.00400 0.00400	<0.00399 0.00399	<0.00401 0.00401	<0.00397 0.00397	<0.00399 0.00399
o-Xylene		0.00483 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Total Xylenes		0.0140 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Total BTEX		0.0140 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	Aug-15-19 11:45	Aug-15-19 12:10	Aug-15-19 12:10	Aug-15-19 12:10	Aug-15-19 12:10	Aug-15-19 12:10
	<i>Analyzed:</i>	Aug-15-19 14:43	Aug-15-19 15:33	Aug-15-19 15:39	Aug-15-19 15:44	Aug-15-19 15:50	Aug-15-19 15:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		2760 49.8	621 4.97	661 5.00	518 4.95	295 4.95	212 5.02
TPH By SW8015 Mod	<i>Extracted:</i>	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00	Aug-15-19 12:00
	<i>Analyzed:</i>	Aug-15-19 18:21	Aug-15-19 18:42	Aug-15-19 19:01	Aug-15-19 19:20	Aug-15-19 19:39	Aug-15-19 19:58
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	59.0 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Total TPH		<50.0 50.0	59.0 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Jessica Kramer
Project Assistant

Analytical Report 634052

for
Tetra Tech- Midland

Project Manager: Mike Carmona

EOG-Banjo BNO Fed #1 Battery

212C-MD-01839

22-AUG-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)



22-AUG-19

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **634052**

EOG-Banjo BNO Fed #1 Battery

Project Address: Eddy County, New Mexcio

Mike Carmona:

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) 634052. 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. 634052 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,

A handwritten signature in black ink that reads '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 634052

Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1 (0'-1')	S	08-13-19 00:00		634052-001
BH-1 (2'-3')	S	08-13-19 00:00		634052-002
BH-1 (4'-5')	S	08-13-19 00:00		634052-003
BH-1 (6'-7')	S	08-13-19 00:00		634052-004
BH-1 (9'-10')	S	08-13-19 00:00		634052-005
BH-1 (14'-15')	S	08-13-19 00:00		634052-006
BH-1 (19'-20')	S	08-13-19 00:00		634052-007
BH-1 (24'-25')	S	08-13-19 00:00		634052-008
BH-1 (29'-30')	S	08-13-19 00:00		634052-009
BH-2 (0'-1')	S	08-13-19 00:00		634052-010
BH-2 (2'-3')	S	08-13-19 00:00		634052-011
BH-2 (4'-5')	S	08-13-19 00:00		634052-012
BH-2 (6'-7')	S	08-13-19 00:00		634052-013
BH-2 (9'-10')	S	08-13-19 00:00		634052-014
BH-2 (14'-15')	S	08-13-19 00:00		634052-015
BH-2 (19'-20')	S	08-13-19 00:00		634052-016
BH-2 (24'-25')	S	08-13-19 00:00		634052-017
BH-2 (29'-30')	S	08-13-19 00:00		634052-018



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: EOG-Banjo BNO Fed #1 Battery

Project ID: 212C-MD-01839
Work Order Number(s): 634052

Report Date: 22-AUG-19
Date Received: 08/14/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099144 BTEX by EPA 8021B

Surrogate 1,4-Difluorobenzene, Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 634052-011.

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



Certificate of Analytical Results 634052

Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (0'-1')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-001

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9030	49.5	mg/kg	08.15.19 13.09		10

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1810	50.0	mg/kg	08.15.19 13.33		1
Diesel Range Organics (DRO)	C10C28DRO	5080	50.0	mg/kg	08.15.19 13.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	503	50.0	mg/kg	08.15.19 13.33		1
Total TPH	PHC635	7390	50.0	mg/kg	08.15.19 13.33		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	112	%	70-135	08.15.19 13.33		
o-Terphenyl	84-15-1	120	%	70-135	08.15.19 13.33		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (0'-1')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-001

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.381	0.0500	mg/kg	08.17.19 18.48		25
Toluene	108-88-3	13.6	0.200	mg/kg	08.21.19 06.10	D	100
Ethylbenzene	100-41-4	6.03	0.0500	mg/kg	08.17.19 18.48		25
m,p-Xylenes	179601-23-1	37.0	0.400	mg/kg	08.21.19 06.10	D	100
o-Xylene	95-47-6	14.0	0.200	mg/kg	08.21.19 06.10	D	100
Total Xylenes	1330-20-7	51.0	0.200	mg/kg	08.21.19 06.10		100
Total BTEX		71.0	0.0500	mg/kg	08.21.19 06.10		100
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	227	%	70-130	08.17.19 18.48	**	
1,4-Difluorobenzene	540-36-3	124	%	70-130	08.17.19 18.48		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (2'-3')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-002

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7280	50.5	mg/kg	08.15.19 13.15		10

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.15.19 13.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	135	50.0	mg/kg	08.15.19 13.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.15.19 13.53	U	1
Total TPH	PHC635	135	50.0	mg/kg	08.15.19 13.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.15.19 13.53	
o-Terphenyl	84-15-1	100	%	70-135	08.15.19 13.53	



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (2'-3')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-002

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.21.19 04.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.21.19 04.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.21.19 04.09	U	1
m,p-Xylenes	179601-23-1	0.00768	0.00401	mg/kg	08.21.19 04.09		1
o-Xylene	95-47-6	0.00333	0.00200	mg/kg	08.21.19 04.09		1
Total Xylenes	1330-20-7	0.0110	0.00200	mg/kg	08.21.19 04.09		1
Total BTEX		0.0110	0.00200	mg/kg	08.21.19 04.09		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.17.19 19.08		
4-Bromofluorobenzene	460-00-4	177	%	70-130	08.17.19 19.08	**	



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (4'-5')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-003

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1070	4.98	mg/kg	08.15.19 13.20		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.15.19 14.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.15.19 14.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.15.19 14.51	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.15.19 14.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	92	%	70-135	08.15.19 14.51		
o-Terphenyl	84-15-1	95	%	70-135	08.15.19 14.51		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (4'-5')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-003

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.21.19 04.29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.21.19 04.29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.21.19 04.29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.21.19 04.29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.21.19 04.29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.21.19 04.29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.21.19 04.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.17.19 19.29		
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.17.19 19.29		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (6'-7')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-004

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1550	25.0	mg/kg	08.15.19 13.26		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.15.19 15.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.15.19 15.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.15.19 15.10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.15.19 15.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.15.19 15.10	
o-Terphenyl	84-15-1	95	%	70-135	08.15.19 15.10	



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (6'-7')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-004

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.21.19 04.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.21.19 04.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.21.19 04.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.21.19 04.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.21.19 04.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.21.19 04.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.21.19 04.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.17.19 19.49		
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.17.19 19.49		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (9'-10')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-005

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2020	25.0	mg/kg	08.15.19 13.48		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	115	50.0	mg/kg	08.15.19 15.29		1
Diesel Range Organics (DRO)	C10C28DRO	500	50.0	mg/kg	08.15.19 15.29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	61.4	50.0	mg/kg	08.15.19 15.29		1
Total TPH	PHC635	676	50.0	mg/kg	08.15.19 15.29		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	98	%	70-135	08.15.19 15.29		
o-Terphenyl	84-15-1	100	%	70-135	08.15.19 15.29		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (9'-10')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-005

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	08.21.19 06.30	UD	10
Toluene	108-88-3	0.0591	0.0200	mg/kg	08.21.19 06.30	D	10
Ethylbenzene	100-41-4	0.0470	0.0200	mg/kg	08.21.19 06.30	D	10
m,p-Xylenes	179601-23-1	0.423	0.0399	mg/kg	08.21.19 06.30	D	10
o-Xylene	95-47-6	0.147	0.0200	mg/kg	08.21.19 06.30	D	10
Total Xylenes	1330-20-7	0.570	0.0200	mg/kg	08.21.19 06.30		10
Total BTEX		0.676	0.0200	mg/kg	08.21.19 06.30		10
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	156	%	70-130	08.17.19 20.09	**	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.17.19 20.09		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (14'-15')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-006

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1070	4.96	mg/kg	08.15.19 13.53		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.15.19 15.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.15.19 15.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.15.19 15.48	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.15.19 15.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	91	%	70-135	08.15.19 15.48		
o-Terphenyl	84-15-1	92	%	70-135	08.15.19 15.48		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (14'-15')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-006

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.17.19 20.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.17.19 20.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.17.19 20.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.17.19 20.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.17.19 20.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.17.19 20.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.17.19 20.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.17.19 20.29		
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.17.19 20.29		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (19'-20)**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-007

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1060	4.95	mg/kg	08.15.19 14.10		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.15.19 16.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.15.19 16.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.15.19 16.07	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.15.19 16.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	89	%	70-135	08.15.19 16.07		
o-Terphenyl	84-15-1	90	%	70-135	08.15.19 16.07		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (19'-20)**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-007

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.17.19 20.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.17.19 20.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.17.19 20.49	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.17.19 20.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.17.19 20.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.17.19 20.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.17.19 20.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.17.19 20.49		
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.17.19 20.49		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (24'-25')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-008

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1520	25.2	mg/kg	08.15.19 17.52		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.15.19 16.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.15.19 16.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.15.19 16.26	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.15.19 16.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	91	%	70-135	08.15.19 16.26		
o-Terphenyl	84-15-1	89	%	70-135	08.15.19 16.26		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (24'-25')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-008

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.17.19 21.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.17.19 21.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.17.19 21.09	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.17.19 21.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.17.19 21.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.17.19 21.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.17.19 21.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.17.19 21.09		
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.17.19 21.09		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (29'-30')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-009

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	595	4.98	mg/kg	08.15.19 14.21		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.15.19 16.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.15.19 16.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.15.19 16.46	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.15.19 16.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	90	%	70-135	08.15.19 16.46		
o-Terphenyl	84-15-1	87	%	70-135	08.15.19 16.46		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-1 (29'-30')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-009

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.17.19 21.29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.17.19 21.29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.17.19 21.29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.17.19 21.29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.17.19 21.29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.17.19 21.29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.17.19 21.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.17.19 21.29		
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.17.19 21.29		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (0'-1')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-010

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3390	25.0	mg/kg	08.15.19 14.27		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	709	249	mg/kg	08.16.19 05.10		5
Diesel Range Organics (DRO)	C10C28DRO	8400	249	mg/kg	08.16.19 05.10		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	403	249	mg/kg	08.16.19 05.10		5
Total TPH	PHC635	9510	249	mg/kg	08.16.19 05.10		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	08.16.19 05.10	
o-Terphenyl	84-15-1	98	%	70-135	08.16.19 05.10	



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (0'-1')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-010

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0136	0.00198	mg/kg	08.17.19 22.48		1
Toluene	108-88-3	0.383	0.00198	mg/kg	08.17.19 22.48		1
Ethylbenzene	100-41-4	0.386	0.00198	mg/kg	08.17.19 22.48		1
m,p-Xylenes	179601-23-1	5.02	0.0992	mg/kg	08.21.19 18.29	D	25
o-Xylene	95-47-6	2.06	0.0496	mg/kg	08.21.19 18.29	D	25
Total Xylenes	1330-20-7	7.08	0.0496	mg/kg	08.21.19 18.29		25
Total BTEX		7.86	0.00198	mg/kg	08.21.19 18.29		25
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	117	%	70-130	08.17.19 22.48		
4-Bromofluorobenzene	460-00-4	138	%	70-130	08.17.19 22.48	**	



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (2'-3')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-011

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2820	25.1	mg/kg	08.15.19 14.32		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1020	250	mg/kg	08.16.19 05.30		5
Diesel Range Organics (DRO)	C10C28DRO	8950	250	mg/kg	08.16.19 05.30		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	393	250	mg/kg	08.16.19 05.30		5
Total TPH	PHC635	10400	250	mg/kg	08.16.19 05.30		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	08.16.19 05.30	
o-Terphenyl	84-15-1	100	%	70-135	08.16.19 05.30	



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (2'-3')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-011

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0497	0.0497	mg/kg	08.21.19 05.29	UD	25
Toluene	108-88-3	0.592	0.0497	mg/kg	08.21.19 05.29	D	25
Ethylbenzene	100-41-4	0.725	0.0497	mg/kg	08.21.19 05.29	D	25
m,p-Xylenes	179601-23-1	6.72	0.0994	mg/kg	08.21.19 05.29	D	25
o-Xylene	95-47-6	2.66	0.0497	mg/kg	08.21.19 05.29	D	25
Total Xylenes	1330-20-7	9.38	0.0497	mg/kg	08.21.19 05.29		25
Total BTEX		10.7	0.0497	mg/kg	08.21.19 05.29		25
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	0	%	70-130	08.17.19 23.08	**	
4-Bromofluorobenzene	460-00-4	0	%	70-130	08.17.19 23.08	**	



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (4'-5')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-012

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3910	25.3	mg/kg	08.15.19 14.38		5

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.15.19 18.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	435	49.9	mg/kg	08.15.19 18.02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.15.19 18.02	U	1
Total TPH	PHC635	435	49.9	mg/kg	08.15.19 18.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.15.19 18.02	
o-Terphenyl	84-15-1	111	%	70-135	08.15.19 18.02	



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (4'-5')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-012

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.17.19 23.28	U	1
Toluene	108-88-3	0.0188	0.00199	mg/kg	08.17.19 23.28		1
Ethylbenzene	100-41-4	0.0277	0.00199	mg/kg	08.17.19 23.28		1
m,p-Xylenes	179601-23-1	0.303	0.00398	mg/kg	08.17.19 23.28		1
o-Xylene	95-47-6	0.142	0.00199	mg/kg	08.17.19 23.28		1
Total Xylenes	1330-20-7	0.445	0.00199	mg/kg	08.17.19 23.28		1
Total BTEX		0.492	0.00199	mg/kg	08.17.19 23.28		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	141	%	70-130	08.17.19 23.28	**	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.17.19 23.28		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (6'-7')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-013

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 11.45

Basis: Wet Weight

Seq Number: 3098688

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2760	49.8	mg/kg	08.15.19 14.43		10

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.15.19 18.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.15.19 18.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.15.19 18.21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.15.19 18.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	91	%	70-135	08.15.19 18.21		
o-Terphenyl	84-15-1	92	%	70-135	08.15.19 18.21		



Certificate of Analytical Results 634052

Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (6'-7')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-013

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.17.19 23.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.17.19 23.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.17.19 23.48	U	1
m,p-Xylenes	179601-23-1	0.00917	0.00398	mg/kg	08.17.19 23.48		1
o-Xylene	95-47-6	0.00483	0.00199	mg/kg	08.17.19 23.48		1
Total Xylenes	1330-20-7	0.0140	0.00199	mg/kg	08.17.19 23.48		1
Total BTEX		0.0140	0.00199	mg/kg	08.17.19 23.48		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	08.17.19 23.48		
4-Bromofluorobenzene	460-00-4	128	%	70-130	08.17.19 23.48		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (9'-10')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-014

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 12.10

Basis: Wet Weight

Seq Number: 3098690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	621	4.97	mg/kg	08.15.19 15.33		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.15.19 18.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	59.0	49.9	mg/kg	08.15.19 18.42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.15.19 18.42	U	1
Total TPH	PHC635	59.0	49.9	mg/kg	08.15.19 18.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	08.15.19 18.42	
o-Terphenyl	84-15-1	90	%	70-135	08.15.19 18.42	



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (9'-10')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-014

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.18.19 00.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.18.19 00.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.18.19 00.08	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.18.19 00.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.18.19 00.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.18.19 00.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.18.19 00.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	08.18.19 00.08		
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.18.19 00.08		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (14'-15')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-015

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 12.10

Basis: Wet Weight

Seq Number: 3098690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	661	5.00	mg/kg	08.15.19 15.39		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.15.19 19.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.15.19 19.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.15.19 19.01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.15.19 19.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	89	%	70-135	08.15.19 19.01		
o-Terphenyl	84-15-1	89	%	70-135	08.15.19 19.01		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (14'-15')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-015

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.18.19 00.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.18.19 00.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.18.19 00.28	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.18.19 00.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.18.19 00.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.18.19 00.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.18.19 00.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	08.18.19 00.28		
4-Bromofluorobenzene	460-00-4	121	%	70-130	08.18.19 00.28		



Certificate of Analytical Results 634052

Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (19'-20')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-016

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 12.10

Basis: Wet Weight

Seq Number: 3098690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	518	4.95	mg/kg	08.15.19 15.44		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.15.19 19.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.15.19 19.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.15.19 19.20	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.15.19 19.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	91	%	70-135	08.15.19 19.20		
o-Terphenyl	84-15-1	91	%	70-135	08.15.19 19.20		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (19'-20')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-016

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.18.19 00.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.18.19 00.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.18.19 00.48	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.18.19 00.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.18.19 00.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.18.19 00.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.18.19 00.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.18.19 00.48		
1,4-Difluorobenzene	540-36-3	112	%	70-130	08.18.19 00.48		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (24'-25')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-017

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 12.10

Basis: Wet Weight

Seq Number: 3098690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	295	4.95	mg/kg	08.15.19 15.50		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.15.19 19.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.15.19 19.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.15.19 19.39	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.15.19 19.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	89	%	70-135	08.15.19 19.39		
o-Terphenyl	84-15-1	88	%	70-135	08.15.19 19.39		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (24'-25')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-017

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.18.19 01.08	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.18.19 01.08	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.18.19 01.08	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.18.19 01.08	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.18.19 01.08	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.18.19 01.08	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.18.19 01.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	08.18.19 01.08		
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.18.19 01.08		



Certificate of Analytical Results 634052

Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (29'-30')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-018

Date Collected: 08.13.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.15.19 12.10

Basis: Wet Weight

Seq Number: 3098690

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	212	5.02	mg/kg	08.15.19 15.16		1

Analytical Method: TPH By SW8015 Mod

Prep Method: TX1005P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.15.19 12.00

Basis: Wet Weight

Seq Number: 3098695

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.15.19 19.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.15.19 19.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.15.19 19.58	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.15.19 19.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	90	%	70-135	08.15.19 19.58		
o-Terphenyl	84-15-1	88	%	70-135	08.15.19 19.58		



Certificate of Analytical Results 634052



Tetra Tech- Midland, Midland, TX

EOG-Banjo BNO Fed #1 Battery

Sample Id: **BH-2 (29'-30')**

Matrix: Soil

Date Received: 08.14.19 14.55

Lab Sample Id: 634052-018

Date Collected: 08.13.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: AMB

Date Prep: 08.16.19 16.00

Basis: Wet Weight

Seq Number: 3099144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.18.19 01.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.18.19 01.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.18.19 01.28	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.18.19 01.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.18.19 01.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.18.19 01.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.18.19 01.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	08.18.19 01.28		
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.18.19 01.28		



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



Tetra Tech- Midland
EOG-Banjo BNO Fed #1 Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3098688

MB Sample Id: 7684289-1-BLK

Matrix: Solid

LCS Sample Id: 7684289-1-BKS

Prep Method: E300P

Date Prep: 08.15.19

LCSD Sample Id: 7684289-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	240	96	238	95	90-110	1	20	mg/kg	08.15.19 12:03	

Analytical Method: Chloride by EPA 300

Seq Number: 3098690

MB Sample Id: 7684291-1-BLK

Matrix: Solid

LCS Sample Id: 7684291-1-BKS

Prep Method: E300P

Date Prep: 08.15.19

LCSD Sample Id: 7684291-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	245	98	242	97	90-110	1	20	mg/kg	08.15.19 15:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3098688

Parent Sample Id: 634050-006

Matrix: Soil

MS Sample Id: 634050-006 S

Prep Method: E300P

Date Prep: 08.15.19

MSD Sample Id: 634050-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	328	252	587	103	581	100	90-110	1	20	mg/kg	08.15.19 12:19	

Analytical Method: Chloride by EPA 300

Seq Number: 3098688

Parent Sample Id: 634050-007

Matrix: Soil

MS Sample Id: 634050-007 S

Prep Method: E300P

Date Prep: 08.15.19

MSD Sample Id: 634050-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	302	250	548	98	545	97	90-110	1	20	mg/kg	08.15.19 13:37	

Analytical Method: Chloride by EPA 300

Seq Number: 3098690

Parent Sample Id: 634052-018

Matrix: Soil

MS Sample Id: 634052-018 S

Prep Method: E300P

Date Prep: 08.15.19

MSD Sample Id: 634052-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	212	251	476	105	473	104	90-110	1	20	mg/kg	08.15.19 15:22	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Tetra Tech- Midland
EOG-Banjo BNO Fed #1 Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3098690

Parent Sample Id: 634105-002

Matrix: Soil

MS Sample Id: 634105-002 S

Prep Method: E300P

Date Prep: 08.15.19

MSD Sample Id: 634105-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	83.1	249	330	99	334	101	90-110	1	20	mg/kg	08.15.19 16:40	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3098695

MB Sample Id: 7684341-1-BLK

Matrix: Solid

LCS Sample Id: 7684341-1-BKS

Prep Method: TX1005P

Date Prep: 08.15.19

LCSD Sample Id: 7684341-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	935	94	1020	102	70-135	9	20	mg/kg	08.15.19 12:55	
Diesel Range Organics (DRO)	<25.0	1000	887	89	968	97	70-135	9	20	mg/kg	08.15.19 12:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	82		100		114		70-135	%	08.15.19 12:55
o-Terphenyl	83		89		99		70-135	%	08.15.19 12:55

Analytical Method: TPH By SW8015 Mod

Seq Number: 3098695

Parent Sample Id: 634052-002

Matrix: Solid

MS Sample Id: 634052-002 S

Prep Method: TX1005P

Date Prep: 08.15.19

MSD Sample Id: 634052-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	16.9	997	1060	105	1060	105	70-135	0	20	mg/kg	08.15.19 14:12	
Diesel Range Organics (DRO)	135	997	1090	96	1090	96	70-135	0	20	mg/kg	08.15.19 14:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		117		70-135	%	08.15.19 14:12
o-Terphenyl	102		103		70-135	%	08.15.19 14:12

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Tetra Tech- Midland
EOG-Banjo BNO Fed #1 Battery

Analytical Method: BTEX by EPA 8021B

Seq Number: 3099144

MB Sample Id: 7684427-1-BLK

Matrix: Solid

LCS Sample Id: 7684427-1-BKS

Prep Method: SW5030B

Date Prep: 08.16.19

LCSD Sample Id: 7684427-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0993	99	0.0910	91	70-130	9	35	mg/kg	08.17.19 14:57	
Toluene	<0.000456	0.100	0.0959	96	0.0959	96	70-130	0	35	mg/kg	08.17.19 14:57	
Ethylbenzene	<0.00200	0.100	0.0953	95	0.0982	98	70-130	3	35	mg/kg	08.17.19 14:57	
m,p-Xylenes	<0.00101	0.200	0.189	95	0.197	99	70-130	4	35	mg/kg	08.17.19 14:57	
o-Xylene	<0.000344	0.100	0.0963	96	0.102	102	70-130	6	35	mg/kg	08.17.19 14:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		101		97		70-130	%	08.17.19 14:57
4-Bromofluorobenzene	101		98		109		70-130	%	08.17.19 14:57

Analytical Method: BTEX by EPA 8021B

Seq Number: 3099144

Parent Sample Id: 634135-001

Matrix: Soil

MS Sample Id: 634135-001 S

Prep Method: SW5030B

Date Prep: 08.16.19

MSD Sample Id: 634135-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000418	0.0998	0.0745	74	0.0669	67	70-130	11	35	mg/kg	08.17.19 17:09	X
Toluene	<0.000455	0.0998	0.0673	67	0.0588	59	70-130	13	35	mg/kg	08.17.19 17:09	X
Ethylbenzene	<0.00200	0.0998	0.0619	62	0.0506	51	70-130	20	35	mg/kg	08.17.19 17:09	X
m,p-Xylenes	<0.00101	0.200	0.121	61	0.0974	49	70-130	22	35	mg/kg	08.17.19 17:09	X
o-Xylene	<0.00200	0.0998	0.0629	63	0.0507	51	70-130	21	35	mg/kg	08.17.19 17:09	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		70-130	%	08.17.19 17:09
4-Bromofluorobenzene	106		111		70-130	%	08.17.19 17:09

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Client: Tetra Tech- Midland

Date/ Time Received: 08/14/2019 02:55:00 PM

Work Order #: 634052

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: 08/14/2019

Checklist reviewed by:

Jessica Kramer

Date: 08/15/2019

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: _____ Title: _____

Signature: Todd Wells Date: _____

email: _____ Telephone: _____

OCD OnlyReceived by: Robert Hamlet Date: 1/7/2022☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral ApprovedSignature: Robert Hamlet Date: 1/7/2022

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 43953

CONDITIONS

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 43953
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	The Workplan/Remediation Plan is approved with the following conditions: Please make sure the floor confirmation samples are delineated/excavated to meet closure criteria standards for proven depth to water determination. If groundwater is proven to be less than 50' below surface, EOG will need to remediate the site to the most stringent standards. Sidewall samples should be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH to define the edge of the release. A deferral around critical infrastructure will need to be submitted after all possible contaminated soil is removed. Specifying exactly which sample points you are asking for a deferral on and the reason the contaminants cannot be removed. Only sample locations that are right adjacent to equipment and require a major deconstruction will be available for a deferral.	1/7/2022