Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	NAB1913546928
District RP	2RP-5416
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: Todd Wells Title: Environmental Specialist

Signature: Todd Wells Date: 12/21/21

email: todd_wells@eogresources.com Telephone: (432) 686-3613

OCD Only

Received by: Chad Hensley Date: 01/14/2022

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

Signature: Chad Hensley Date: 01/14/2022

SITE INFORMATION

Report Type: Work Plan 2RP-5416 / NAB1913546928

General Site Information:						
Site:	**Harkey 35 State #1**					
Company:	**EOG Resources**					
Section, Township and Range	**Unit J**	**Sec. 35**	**T 24S**	**R 27E**		
Lease Number:	**API No. 30-015-25812**					
County:	**Eddy County**					
GPS:	**32.172304°N**			**104.158979°W**		
Surface Owner:	State					
Mineral Owner:	State					
Directions:	From the intersection of US-285 and County Road 720 (Black River Village Rd), drive west on County Road 720 for 2.71 miles. Turn left and drive south/southwest for 4.68 miles. Turn right and drive northwest for 0.3 mile to battery					

Release Data:	
Date Released:	2/27/2019
Type Release:	Oil
Source of Contamination:	Hole in tank
Fluid Released:	32 bbls of oil
Fluids Recovered:	0 bbls oil

Official Communication:			
Name:	Todd Wells		Clair Gonzales
Company:	EOG Resources		Tetra Tech
Address:	5509 Champions Dr		901 West Wall St.
			Ste 100
City:	Midland Texas, 79706		Midland, Texas
Phone number:	(432) 686-3613		(432) 687-8123
Fax:			
Email:	Todd_Wells@eogresources.com		Clair.Gonzales@tetratech.com

Site Characterization	
Depth to Groundwater:	*>55'*
Karst Potential:	*Medium*

Recommended Remedial Action Levels (RRALs)				
Benzene	***Total BTEX***	***TPH (GRO+DRO)***	***TPH (GRO+DRO+MRO)***	***Chlorides***
10 mg/kg	*50 mg/kg*	*1,000 mg/kg*	*2,500 mg/kg*	*10,000 mg/kg*

TETRA TECH

December 21, 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, Harkey 35 State #1, Unit J, Section 35, Township 24 South, Range 27 East, Eddy County, New Mexico.
2RP-5416
NAB1913546928

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by EOG Resources to assess a release that occurred at the Harkey 35 State #1, Unit J, Section 35, Township 24 South, Range 27 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.172304º, W 104.158979º. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on February 27, 2019, and released approximately thirty-two (32) barrels of crude oil due to a hole in the bottom of the tank. The fluids were contained inside the lined facility and none of the fluids were recovered. The tank was removed from service. The initial 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, springs, private domestic water wells, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. The site is in a medium karst potential area. The nearest well is listed on the USGS National Water Information data base in Section 02, Township 25 South, Range 27 East, approximately 0.40 miles south of the site and has a reported depth to groundwater of less than 50’ below surface. Site characterization data is included in Appendix B.

Groundwater Determination Bore

Additionally, during the investigation activities, a groundwater determination bore hole was drilled at the site to a total depth of 55’ feet below surface, and no water was

Tetra Tech
4000 North Big Spring, Suite 401, Midland, TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

TETRA TECH

encountered during drilling. The groundwater determination bore was left open then inspected 72 hours following drilling and was no groundwater was detected. The drilling log is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and 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 depth to groundwater, beyond the top 4.0' of soil, the proposed RRAL for TPH is 1,000 mg/kg (GRO + DRO) and 2,500 mg/kg (GRO + DRO + ORO). Additionally, based on the reported depth to groundwater in the area, beyond the top 4.0' of soil, the proposed RRAL for chlorides is 10,000 mg/kg.

Soil Assessment and Analytical Results

2019 Sampling Events

On May 22, 2019, Tetra Tech personnel were onsite to evaluate and sample the release area. Using a hand auger, three (3) auger holes (AH-1 through AH-3) were installed inside the area of the removed tank to total depth of 4.5' below surface. Selected samples were analyzed 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 C. The results of the sampling are summarized in Table 1. The sample locations are shown on Figure 3.

Referring to Table 1, samples collected via hand auger (AH-1 through AH-3) showed TPH concentrations above the RRALs, with concentrations ranging from 7,340 mg/kg to 13,500 mg/kg, at depths ranging from surface to 4.5' below surface. Vertical delineation was not found in the collected hand auger samples.

On June 26, 2019, Tetra Tech personnel returned to the site to vertically define the hydrocarbon impacted the release area. One (1) bore hole (BH-1) was installed in the area of the removed tank to a total depth of 40.0' below surface. Selected soil 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 C. The results of the sampling are summarized in Table 1. The sample location is shown on Figure 3.

Referring to Table 1, the area of borehole (BH-1) showed elevated levels of total TPH above the RRAL in deeper soils, with concentrations highs of 11,000 mg/kg at 19'-20' below surface. The total TPH concentrations in this area gradually declined with depth to 75.0 mg/kg at 29-30' and showed bottom hole concentrations of 36.5 mg/kg below surface.

TETRA TECH

2021 Sampling Events

On June 26, 2021, Tetra Tech personnel were onsite to evaluate and resample the release area to collect current data of the impacted area. Using a hand auger, two (2) auger holes (AH-1 through AH-2) were installed inside the area of the removed tank to total depth of 1.5' below surface. Additionally, four (4) horizontal samples (H-1 through H-4) were collected to attempt to horizontally delineate the area. Selected samples were analyzed 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 C. The results of the sampling are summarized in Table 2. The sample locations are shown on Figure 3A.

Referring to Table 2, samples collected from the areas of auger holes (AH-1 through AH-2), showed benzene, total BTEX, and chloride concentrations below RRALs. However, samples collected from the area of auger hole (AH-1) showed TPH concentrations above RRALs, with concentrations ranging from 271 mg/kg to 2,680 mg/kg, at depths ranging from surface to 1.5' below surface. However, vertical delineation was not found in auger hole (AH-1). The horizontal samples (H-1, H-3, and H-4) showed TPH concentrations above RRALs, with concentrations ranging from 286 mg/kg to 1,350 mg/kg, at surface. Horizontal delineation will be found during remedial activities by collection of confirmation bottom hole and sidewall samples.

On July 13, 2021, Tetra Tech personnel returned to the site to vertically define and collect current data of the TPH concentrations of the impacted area. One (1) bore hole (BH-1) was installed in the area of the removed tank to a total depth of 40.0' below surface. Selected soil 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 C. The results of the sampling are summarized in Table 1. The sample location is shown on Figure 3A.

Referring to Table 1, samples collected from the area of borehole (BH-1), showed benzene, total BTEX, and chloride concentrations below RRALs. However, samples collected from the area of borehole (BH-1) showed TPH concentrations above RRALs, with concentrations ranging from 1,150 mg/kg to 2,730 mg/kg, at depths ranging from surface to 30' below surface.

Remediation and Analytical Results

Based on the laboratory data, Tetra Tech returned to the site on September 19-20, 2019, in order to excavate the release area to the maximum extent safely possible. The area was excavated to between 3.0' and 12.0' below surface and composite confirmation bottom hole and sidewall samples were collected (Bottom Hole #1 through Bottom Hole #3, North Sidewall1, South Sidewall 1, East Sidewall 1, East Sidewall 2, West Sidewall 1, and West Sidewall 2). All collected samples were analyzed 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 C. The results of the sampling are summarized in Table 3. The sample locations are shown on Figure 4.

TETRA TECH

Referring to Table 3, all confirmation samples showed TPH concentrations above the RRALs. Additionally, the area of sidewall (North Sidewall 1) showed a benzene concentration above the RRAL of 13.0 mg/kg, and samples (Bottom Hole #2, Bottom Hole #3, North Sidewall 1, South Sidewall 1, East Sidewall 1, East Sidewall 2, West Sidewall 1, and West Sidewall 2) showed BTEX concentrations above 50 mg/kg. The area of bottom hole (Bottom Hole #1) and sidewall (South Sidewall 1) showed a chloride concentration below the 600 mg/kg threshold, however the remaining samples showed chloride concentrations above RRALs, with concentrations ranging from 688 mg/kg to 1,600 mg/kg.

At the time, the excavation could not be expanded horizontally or be excavated deeper due to safety concerns that the soils would slough and cause the onsite tanks and equipment to collapse.

Work Plan

Based on the laboratory results EOG proposes to remediate the remaining impact to 30.0' below surface, Figure 5, horizontal delineation will be found during remedial activities by collection of confirmation bottom hole and sidewall samples. EOG will collect bottom hole and sidewall confirmation samples every 200 square feet to ensure concentrations are reported below the determined RRALs. The excavation plan, due to depth, will be prepared and approved by an engineer and will include sloping and step outs that will be included in the confirmation sampling. The 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

Brittany Long,
Project Manager

Clair Gonzales, P.G.
Senior Project Manager

cc: James Kennedy – EOG
Todd Wells – EOG

Figures

SITE LOCATION

N
W E
S

0 10,416.5 20,833

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

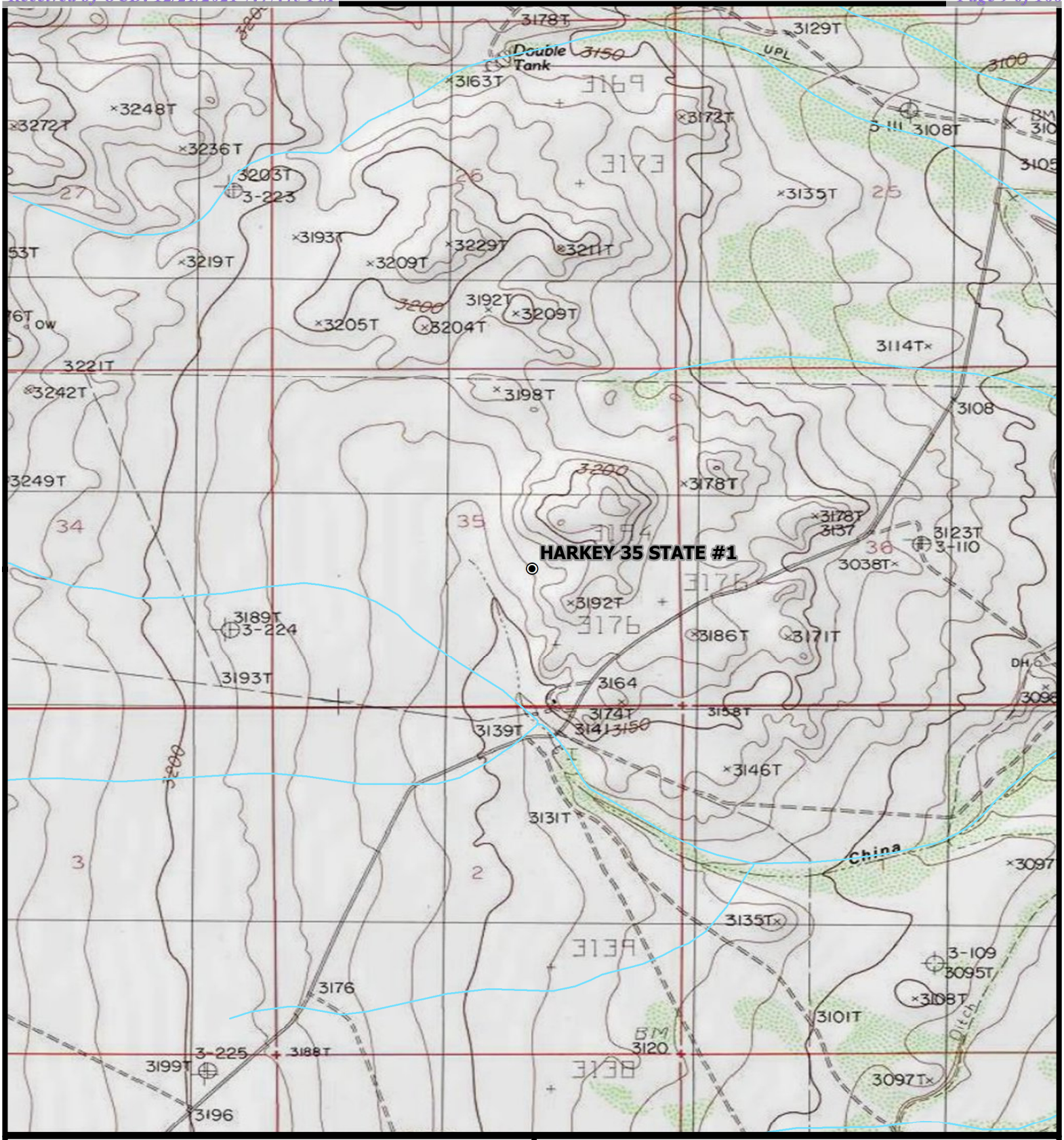
OVERVIEW MAP
HARKEY 35 STATE #1
PROPERTY LOCATED AT 32.172304°,-104.158979°
EDDY COUNTY, NEW MEXICO

eog resources

Project #:
212C-MD-01772

FIGURE
1

Document Path: C:\Users\MISTI.MORGAN\Desktop\project folder\212C-MD-01772 EOG HARKEY 35 STATE #1\MXD\212C-MD-01772 FIG 1.mxd



SITE LOCATION

TOPOGRAPHIC MAP
HARKEY 35 STATE #1
PROPERTY LOCATED AT 32.172304°,-104.158979°
EDDY COUNTY, NEW MEXICO

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

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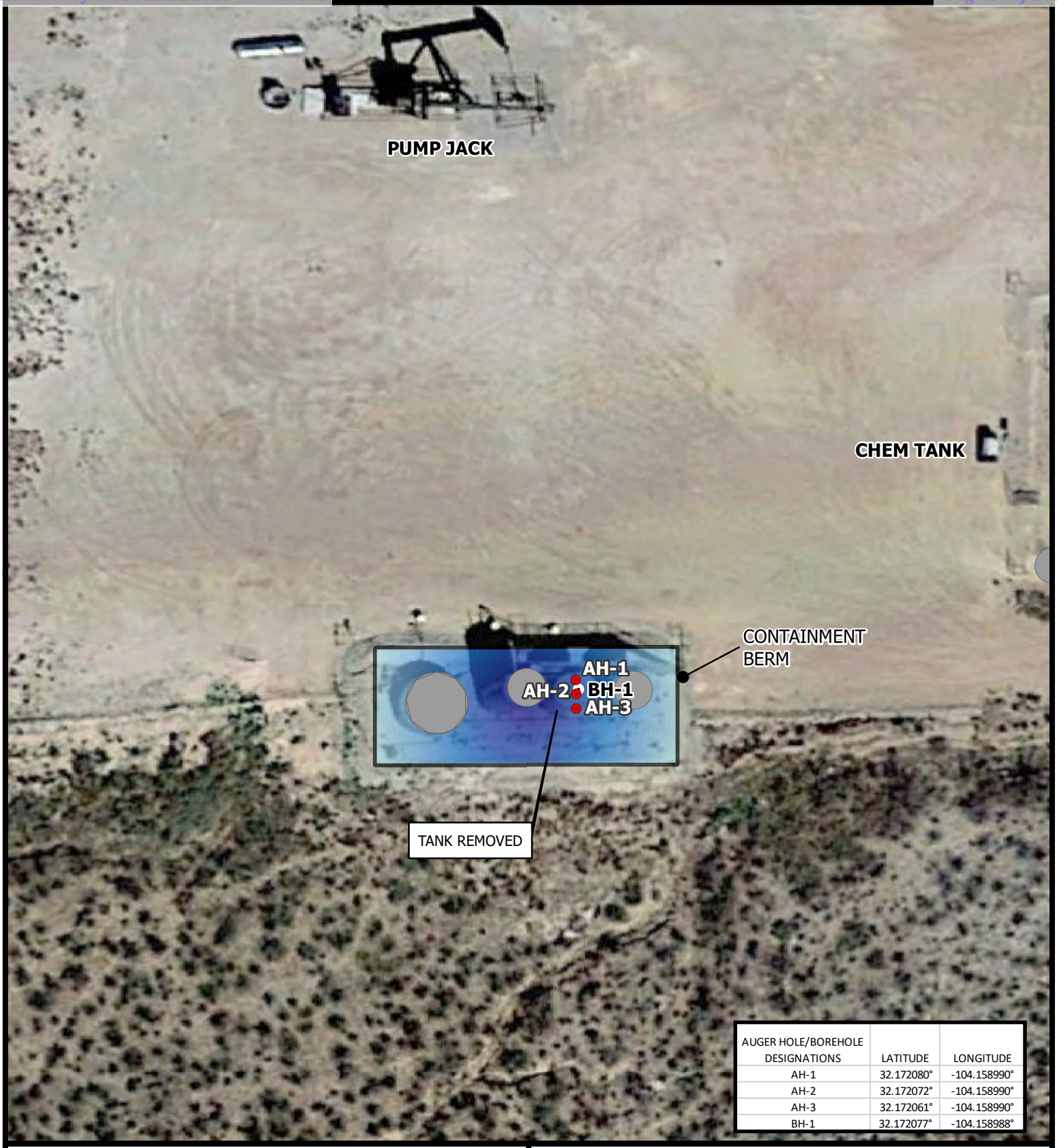
Project #:
212C-MD-01772

FIGURE
2

Document Path: C:\Users\MISTI.MORGAN\Desktop\project folder\212C-MD-01772 EOG HARKEY 35 STATE #1\MXD\212C-MD-01772 FIG 2.mxd



AUGER HOLE/BOREHOLE DESIGNATIONS	LATITUDE	LONGITUDE
AH-1	32.172080°	-104.158990°
AH-2	32.172072°	-104.158990°
AH-3	32.172061°	-104.158990°
BH-1	32.172077°	-104.158988°

AUGERHOLE SAMPLE LOCATIONS
BOREHOLE SAMPLE LOCATION

N
W E
S

0 17.5 35
Approximate Scale in Feet

Source: "New Mexico". 32°10'20.29"N, 104° 9'32.31"W. **Google Earth**. March 12, 2016. August 15,2019

SPILL ASSESSMENT MAP
HARKEY 35 STATE #1
Property Located at coordinates 32.172304°,-104.158979°
EDDY COUNTY, NEW MEXICO

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Project #: 212C-MD 01772

FIGURE 3

Date: 11/19/2019 Document Path: H:\GIS\EOG RESOURCES\212C-MD-01772 EOG HARKEY 35 STATE #1\MXD\212C-MD-01772 FIG. 3.mxd

SITE ASSESSMENT MAP
HARKEY 35 STATE #1-Y21
Property located at coordinates 32.17242, -104.15957
EDDY COUNTY, NEW MEXICO

- HORIZONTAL SAMPLE LOCATION
- AUGERHOLE SAMPLE LOCATION
- BOTTOMHOLE SAMPLE LOCATION
- GROUNDWATER DETERMINATION BOREHOLE

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Project: 212C-MD-02521

FIGURE 3A

0 10 20
Approximate Scale in Feet

N W E S

Source: Google Maps, 2020. ESRI Basemap - Imagery, 2020.

BOREHOLE SAMPLE LOCATIONS
3.0' EXCAVATED DEPTH
12.0' EXCAVATED DEPTH

N
W E
S

0 5 10
Approximate Scale in Feet

Source: "New Mexico". 32°10'20.29"N, 104° 9'32.31"W. Google Earth. March 12, 2016. August 15,2019

EXCAVATION AREA & DEPTH MAP
HARKEY 35 STATE #1
Property Located at coordinates 32.172304°,-104.158979°
EDDY COUNTY, NEW MEXICO

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Project #:
212C-MD 01772

FIGURE
4

Date: 11/20/2019 Document Path: H:\GIS\EOG RESOURCES\212C-MD-01772 EOG HARKEY 35 STATE #1\MXD\212C-MD-01772 FIG. 4.mxd

DELINEATED SEGMENTS

PENDING DELINEATION SEGMENTS

HORIZONTAL SAMPLE LOCATIONS

30' PROPOSED EXCAVATION AREA

N
W
E
S

0 10 20 Feet

Approximate Scale

Service Layer Credits: Google Maps, 2021.

PROPOSED EXCAVATION MAP
HARKEY 35 STATE #1-Y21
Property located at coordinates 32.17242°, -104.15957°
EDDY COUNTY, NEW MEXICO

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Project #:
212C-MD-02521

FIGURE
5

Document Path: C:\Users\E.MORENO\FLORES\Documents\Projects\EOG\EOG - 02521 Harkey 35 State #1-Y21\GIS\MXD\Spill .mxd

Tables

Table 1
EOG
Harkey 35 State #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	MRO	Total						
AH-1	5/22/2019	0-1	-	X		**5,660**	**7,180**	673	**13,500**	2.94	53.1	15.7	178	**224**	**7,500**
AH-2	5/22/2019	0-1	-	X		**5,160**	**5,050**	464	**10,700**	2.47	43.3	8.73	153	**207**	**2,370**
	"	1-1.5	-	X		**7,070**	**8,520**	728	**16,300**	3.26	58.0	15.4	194	**270**	**1,960**
	"	2-2.5	-	X		**3,260**	**3,740**	338	**7,340**	1.06	19.9	5.86	77.4	**104**	**1,480**
	"	3-3.5	-	X		**3,390**	**4,520**	414	**8,320**	1.06	21.8	6.87	90.4	**120**	**1,030**
	"	4-4.5	-	X		**3,520**	**4,860**	552	**8,930**	<0.998	4.16	1.81	28	34	**995**
BH-1	6/26/2019	0-1	-		X	700	4,870	233	**5,800**	0.331	2.40	1.67	39.5	43.9	**1,470**
	"	2-3	-		X	3,170	3,890	165	**7,230**	6.83	40.8	5.43	127	**180**	**1,770**
	"	4-5	-		X	2,080	2,910	99.7	**5,090**	6.37	52.3	11.0	135	**205**	**1,430**
	"	6-7	-		X	2,900	3,380	119	**6,400**	**11.3**	79.4	14.8	181	**286**	**1,440**
	"	9-10	-		X	1,610	2,770	105	**4,490**	2.30	28.0	7.09	89.6	**127**	547
	"	14-15	-		X	127	457	23.7	**608**	0.337	1.30	0.462	5.94	8.04	280
	"	19-20	-		X	2,820	7,840	292	**11,000**	2.64	22.1	6.89	97.5	**129**	252
	"	24-25	-		X	473	2,720	113	**3,310**	0.15	2.79	1.24	17.9	22.1	163
	"	29-30	-		X	<14.9	75.0	<14.9	75.0	<0.000380	<0.000449	<0.000557	<0.000340	<0.000340	90.6
	"	34-35	-		X	<15.0	66.2	<15.0	66.2	<0.000385	<0.000456	<0.000565	<0.000344	<0.000343	208
	"	39-40	-		X	<15.0	36.5	<15.0	36.5	<0.000383	<0.000454	<0.000563	<0.000343	<0.000343	355
BH-1	7/13/2021	0-1	-		X	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	10.1
	"	2-3	-		X	<49.8	<49.8	<49.8	<49.8	0.00219	<0.00200	<0.00200	<0.00399	<0.00399	18.7
	"	5	-		X	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	8.88
	"	7	-		X	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	463
	"	10	-		X	93.9	<49.8	<49.8	93.9	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	185
	"	15	-		X	**895**	**251**	<49.7	**1150**	0.109	1.70	0.770	10.9	13.5	579
	"	20	-		X	**2140**	**586**	<49.9	**2730**	<0.0400	2.61	1.08	15.3	19.0	450
	"	25	-		X	**1150**	**127**	<50.0	**1280**	0.107	0.847	0.268	3.84	5.07	303
	"	30	-		X	**2280**	89.3	<50.0	**2370**	0.0528	0.134	0.0993	1.30	1.58	200
	"	35	-		X	639	<49.9	<49.9	639	<0.0398	0.0794	0.109	0.936	1.12	196
	"	40	-		X	131	<50.0	<50.0	131	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	348

Table 1
EOG
Harkey 35 State #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	MRO	Total						
AH-3	5/22/2019	0-1	-	X		**3,720**	**4,910**	417	**9,050**	1.25	26.2	7.29	113	**147**	<25.2
	"	1-1.5	-	X		**3,160**	**4,560**	355	**8,080**	1.46	23.9	6.56	91.9	**124**	**2,040**
	"	2-2.5	-	X		**3,010**	**4,190**	360	**7,560**	1.36	27.7	7.29	94.9	131	**833**
	"	3-3.5	-	X		**3,030**	**4,700**	508	**8,240**	<0.992	17.8	4.95	68.2	91	**755**
	"	4-4.5	-	X		**2,530**	**4,860**	542	**7,930**	<1.01	12.0	3.64	51.5	67.1	**1,180**

- Not analyzed

Table 2
EOG Resources
Harkey 35 State 1
Eddy County, New Mexico

Sample ID	Sample Date	Excavtion 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	6/9/2021	0-1'	X	-	<49.9	**271**	<49.9	**271**	<0.00201	<0.00201	<0.00201	<0.00402	<0.00402	131
	6/9/2021	1-1.5'	X	-	**629**	**1,840**	**214**	**2,680**	0.0024	0.0143	0.0126	0.796	0.825	268
AH-2	6/9/2021	0-1'	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	0.0134	0.0134	55.6
	6/9/2021	1-1.5'	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00398	<0.00398	96.8
H-1	6/9/2021	0-6"	X	-	<49.8	**229**	57.2	**286**	<0.00200	<0.00200	<0.00200	<0.00401	<0.00401	12.4
H-2	6/9/2021	0-6"	X	-	<49.7	67.8	<49.7	67.8	<0.00202	<0.00202	<0.00202	<0.00404	<0.00404	41.3
H-3	6/9/2021	0-6"	X	-	<49.8	**1,110**	**180**	**1,290**	<0.00200	<0.00200	<0.00200	<0.00399	<0.00399	250
H-4	6/9/2021	0-6"	X	-	<50.0	**1,140**	**206**	**1,350**	<0.00202	<0.00202	<0.00202	<0.00403	<0.00403	24.9

(-) Not Analyzed
Exceeds Thresholds

Table 3
EOG
Harkey 35 St #1
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth (ft)	Excavation 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	MRO	Total						
Bottom Hole #1	9/19/2019	-	10		X	1,670	2,730	386	**4,786**	1.49	25.9	7.0	79.7	**114**	**784**
	9/20/2019	-	12	X		515	3,770	637	**4,922**	<0.050	0.527	1.31	9.6	11.4	112
Bottom Hole #2	9/19/2019	-	3.0	X		2,550	5,340	790	**8,680**	2.21	41.8	11.7	139	**195**	**848**
Bottom Hole #3	9/19/2019	-	3.0	X		3,900	7,200	1,020	**12,120**	3.50	70.8	18.3	212	**304**	**1,300**
North Sidewall 1	9/19/2019	-	-	X		6,170	8,250	1,210	**15,630**	**13.0**	145	27.4	305	**490**	**1,540**
South Sidewall 1	9/19/2019	-	-	X		2,060	4,710	766	**7,536**	<1.00	12.5	<1.00	137	**150**	80.0
East Sidewall 1	9/19/2019	-	-	X		3,770	6,740	958	**11,468**	4.76	78.2	18.00	216	**317**	**1,600**
East Sidewall 2	9/19/2019	-	-	X		2,480	5,200	715	**8,395**	2.74	51.1	13.6	159	**227**	**832**
West Sidewall 1	9/19/2019	-	-	X		4,740	8,010	1,100	**13,850**	3.26	71.8	17.9	213	**306**	**688**
West Sidewall 2	9/19/2019	-	-	X		2,310	4,390	648	**7,348**	2.35	38.2	10.90	131	**182**	**752**

-

Photos

EOG Resources
Harkey 35 State #1
Eddy County, New Mexico

TETRA TECH

View South – Area of BH-1

View South – Area of BH-1

EOG Resources
Harkey 35 State #1
Eddy County, New Mexico

View Northwest – Area of BH-1

View Southwest – Area of BH-1

EOG Resources
Harkey 35 State #1
Eddy County, New Mexico

TETRA TECH

View North – Excavated Area

View Southwest – Excavated 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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County

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)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) 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		

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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 not 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: _____ Title: _____

Signature: Todd Wells Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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: _____

State of New Mexico
Oil Conservation Division

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

TETRA TECH

Borehole ID:

Soil Drilling Log

Project Name : EOG Harkey 35 state 1
Project No. : 212C-MD - 02521
Location : Eddy County, NM
Coordinates : 32.172389°, -104.159538°
Elevation : N/A

Date : Monday, September 20, 2021
Sampler : John Thurston
Driller : Scarborough
Method : Air Rotary

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
0		Moist silty caliche	980	N/S, N/O
		Lt brown dry silty sand w/ caliche pebbles	865	N/S, N/O
5		Lt brown dry silty sand	915	N/S, N/O
		Lt tan caliche sand/silt	222	N/S, N/O
10		Lt tan/lt pink dry loose silty sand	245	N/S, N/O
15		Very lt tan dry loose silty sand		
20		Drk ylw/tan clay, lt tan silty sand		
25		Very lt green/ylw clay silt (dry)		
		Some rig chatter		
30		Pale ylw clay w/occ lt grey/tan l.s. pebbles		
35		Brown/brick red silty clay w/ some gypsum		
40		Brown/brick red silty clay w/ some gypsum		
45		Lt brick red silty clay w/ some white/clr/pink gypsum		
50				

Depth (ft.)	WL	Soil Description	Chloride Field Test (ppm)	Field Titration Test (ppm)
50		Lt brick red silty clay w/ some white/clr/pink		
		Total Depth = 55'		
55		White/lt grey gypsum, red silt brown silty clay		
60				
65				
70				
75				
80				
85				
90				
95				
100				

* *H.S. = Heavy Staining*
* *H.O. = Heavy Odor*
* *L.S. = Low Staining*
* *L.O. = Low Odor*

Water Well Data
Average Depth to Groundwater (ft)
EOG - Harkey 35 State #1

Carlsbad

23 South 26 East

6	5	4	3 220	2	1
7	8 267	9	10	11	12
18	17	16	15	14	13
19	20	21	22 224	23	24
30 99	29	28	27	26	25
31	32 223	33	34	35	36

23 South 27 East

6	5 83	4 90	3	2 70	1 17
7	8	9	10	11	12 40
18	17	16	15	14 75	13
19	20	21	22	23 23	24 90
30	29 103	28	27	26	25
31	32	33	34	35	36

23 South 28 East

6 16.5	5	4	3	2	1
7 26.5	8	9	10	11 30.5	12 20
18 63	17	16	15 14	14	13 12 33
19	20 56	21	22 39	23	24 36
30	29 28.7	28	27	26	25 44
31	32	33	34	35	36

24 South 26 East

6 63	5	4	3	2	1
7 250	8 450	9	10	11	12
18 650	17	16	15	14 30	13
19	20	21	22	23 38 37	24 28 30
30 70	29 46	28	27 30	26	25
31	32 111 109	33	34	35	36

24 South 27 East

6	5	4	3	2	1
7	8 17 26	9 43	10	11	12 27
18 30 34	17	16	15	14	13 30 31
19	20	21	22 70	23	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South 28 East

6 70	5 30	4 30	3	2 55	1 60
7	8 50	9	10 17	11 20	12 73
18	17 42	16 29	15 18	14 52	13 34
19	20 48	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South 26 East

6	5	4	3 45	2	1
7 60	8	9 45	10	11	12
18	17	16	15	14	13
19	20	21	22 118	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South 27 East

6	5	4	3	2 33	1
7	8	9	10	11	12 92
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33 19	34	35	36

25 South 28 East

6	5 59	4 35	3 32	2	1 Site
7	8	9	10	11	12
18 67	17	16	15 48 49	14	13
19	20 96	21	22	23	24
30	29 15	28 90	27	26 40	25
31	32	33	34	35	36 40

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)

USGS science for a changing world

National Water Information System: Mapper

Sites | Map

Search

Search by Street Address:
32.172304 -104.158979

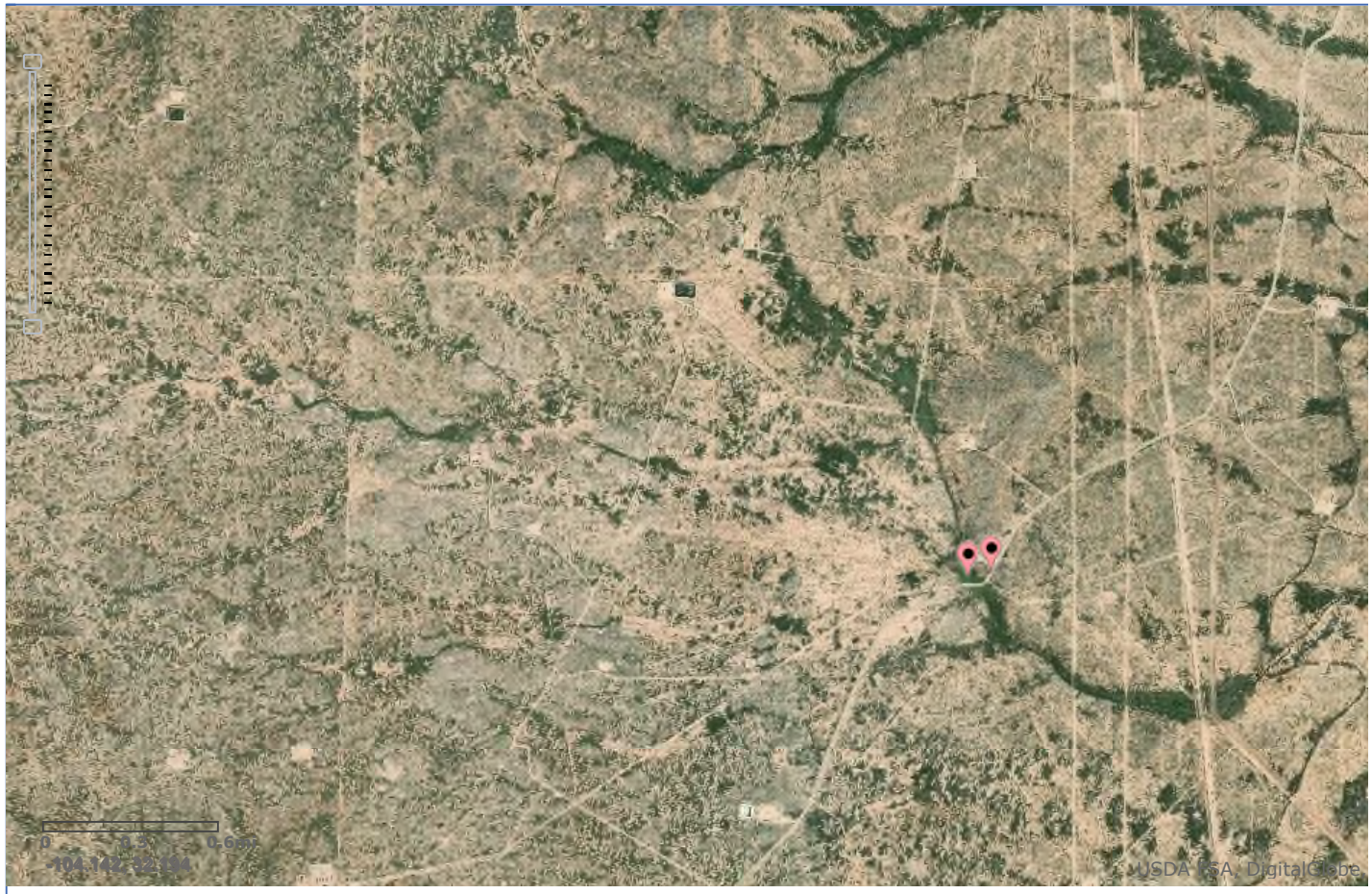
Search by Place Name:
Enter Place Name

Search by Site Number(s):
Enter Site Number(s)

Search by State/Territory:
Select an Area

Search by Watershed Region:
Select a Region

- Surface-Water Sites
- Groundwater Sites
- Springs
- Atmospheric Sites
- Other Sites



Site Information

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 00342	C	CUB	ED		4	1	13	24S	27E	580432	3565080*	2565		
C 00347		CUB	ED		1	1	13	24S	27E	580010	3565479*	60	30	30
C 00364	C	CUB	ED		1	2	09	24S	27E	575997	3567043*	2270		
C 00516		CUB	ED	1	3	4	08	24S	27E	574288	3565901*	105	36	69
C 00516 CLW201016	O	CUB	ED	1	3	4	08	24S	27E	574288	3565901*	62		
C 00516 CLW308590	O	CUB	ED	1	3	4	08	24S	27E	574288	3565901*	105	36	69
C 00516 POD10		CUB	ED	3	4	3	08	24S	27E	573875	3565722	160	45	115
C 00516 POD6		CUB	ED	1	4	3	08	24S	27E	573885	3565895*	78	17	61
C 00516 S		CUB	ED	1	3	4	08	24S	27E	574288	3565901	50	17	33
C 00631		C	ED	3	3	4	08	24S	27E	574288	3565701*	50	24	26
C 00683		C	ED		4	3	08	24S	27E	573986	3565796*	50	17	33
C 00821		C	ED		3	2	09	24S	27E	575996	3566635*	97	50	47
C 00850		C	ED		2	3	09	24S	27E	575595	3566223*	108	35	73
C 00929		C	ED		3	3	18	24S	27E	572013	3564159*	54	33	21
C 01169		C	ED	1	4	3	18	24S	27E	572282	3564261*	55	35	20
C 01187		C	ED		4	3	08	24S	27E	573986	3565796*	108	17	91
C 01366		CUB	ED			4	08	24S	27E	574590	3566003*	60	35	25
C 01452		C	ED				22	24S	27E	577435	3563175*	95	70	25
C 01721		C	ED			1	25	24S	27E	580271	3562033*	170		
C 01841		C	ED			1	29	24S	27E	573806	3561953*	150		
C 01943		C	ED			1	13	24S	27E	580221	3565275*	30	25	5
C 02976		C	ED	4	2	3	12	24S	27E	580519	3566195*	57	27	30
C 03037		C	ED	4	3	4	12	24S	27E	580930	3565795*	116	25	91
C 03092		C	ED	4	3	1	08	24S	27E	573678	3566501*	54	37	17
C 03145		C	ED	3	1	4	13	24S	27E	580749	3564579*	103	40	63
C 03147		C	ED	3	3	3	12	24S	27E	579885	3565715	140		

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

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 03260 POD1		C	ED	3	3	3	12	24S	27E	579995	3565935	80	56	24
C 03260 POD2	O	C	ED	1	3	3	12	24S	27E	580100	3565984	80	56	24
C 03489 POD1		CUB	ED	2	4	3	08	24S	27E	574153	3565939	200		
C 03490 POD1		CUB	ED	3	4	3	08	24S	27E	573812	3565709	140	23	117
C 03560 POD1		C	ED	2	3	3	18	24S	27E	572009	3564150	68	28	40
C 03740 POD1		C	ED	4	4	4	12	24S	27E	581283	3565795	340		
C 04147 POD1		CUB	ED	4	1	3	24	24S	27E	580101	3562969	35		

Average Depth to Water: **33 feet**

Minimum Depth: **17 feet**

Maximum Depth: **70 feet**

Record Count: 33

PLSS Search:

Township: 24S **Range:** 27E

National Water Information System: Web Interface

Click to hideNews 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 =

- 320959104093001

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

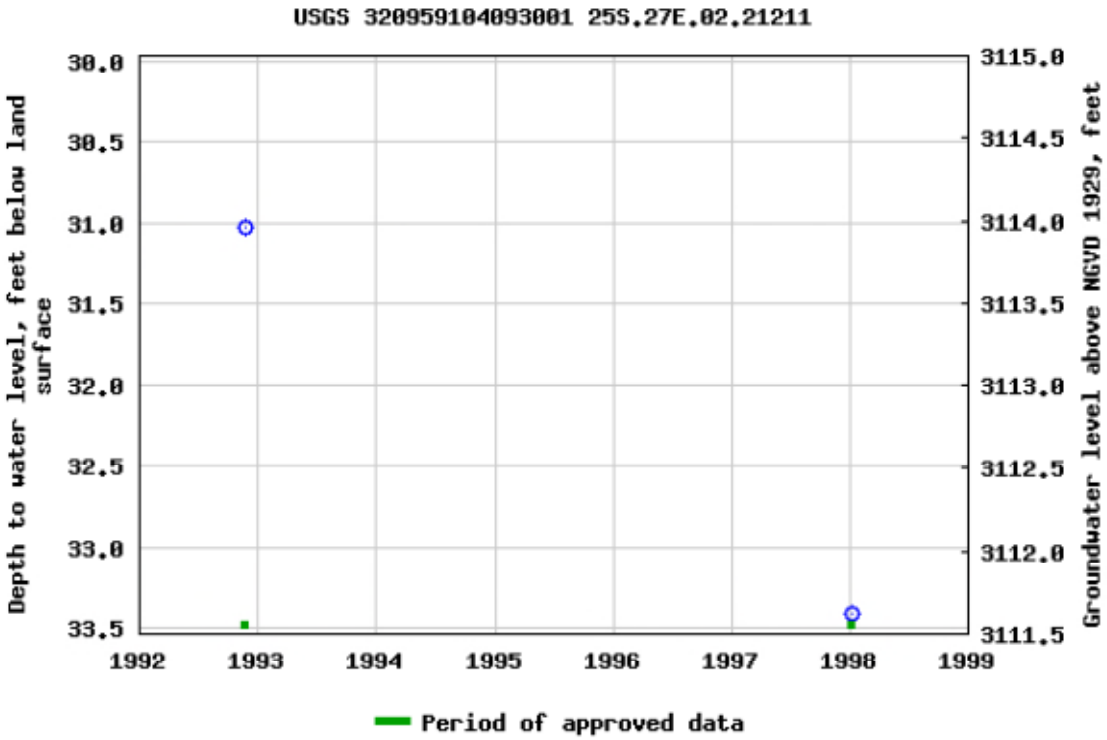
USGS 320959104093001 25S.27E.02.21211

Available data for this site Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°09'59", Longitude 104°09'30" NAD27
Land-surface elevation 3,145.0 feet above NGVD29
This well is completed in the Azotea Tongue of Seven Rivers Formation (313AZOT) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

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: 2019-07-26 12:45:30 EDT
1.03 0.92 nadww01

NFHL Web Mapping Application

Appendix C

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 20, 2019

MIKE CARMONA

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: HARKLEY 35 STATE 1

Enclosed are the results of analyses for samples received by the laboratory on 09/19/19 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
MIKE CARMONA
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HARKLEY 35 STATE 1	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01772	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

Sample ID: BOTTOM HOLE # 1 (10' BEB) (H903244-01)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**1.49**	1.00	09/20/2019	ND	1.83	91.4	2.00	0.640	QR-03
Toluene*	**25.9**	1.00	09/20/2019	ND	1.78	89.1	2.00	0.0127	QM-07
Ethylbenzene*	**6.96**	1.00	09/20/2019	ND	1.78	89.0	2.00	0.0676	QM-07, QR-03
Total Xylenes*	**79.7**	3.00	09/20/2019	ND	5.42	90.3	6.00	0.674	QM-07, QR-03
Total BTEX	**114**	6.00	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.1 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**784**	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**1670**	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	**2730**	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	**386**	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane *222 %* *41-142*

Surrogate: 1-Chlorooctadecane *138 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
MIKE CARMONA
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HARKLEY 35 STATE 1	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01772	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

Sample ID: BOTTOM HOLE # 2 (3' BEB) (H903244-02)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**2.21**	1.00	09/20/2019	ND	1.83	91.4	2.00	0.640	
Toluene*	**41.8**	1.00	09/20/2019	ND	1.78	89.1	2.00	0.0127	
Ethylbenzene*	**11.7**	1.00	09/20/2019	ND	1.78	89.0	2.00	0.0676	
Total Xylenes*	**139**	3.00	09/20/2019	ND	5.42	90.3	6.00	0.674	
Total BTEX	**195**	6.00	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**848**	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**2550**	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	**5340**	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	**790**	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane *201 %* *41-142*

Surrogate: 1-Chlorooctadecane *181 %* *37.6-147*

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
MIKE CARMONA
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HARKLEY 35 STATE 1	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01772	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

Sample ID: BOTTOM HOLE # 3 (3' BEB) (H903244-03)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**3.50**	1.00	09/20/2019	ND	1.83	91.4	2.00	0.640	
Toluene*	**70.8**	1.00	09/20/2019	ND	1.78	89.1	2.00	0.0127	
Ethylbenzene*	**18.3**	1.00	09/20/2019	ND	1.78	89.0	2.00	0.0676	
Total Xylenes*	**212**	3.00	09/20/2019	ND	5.42	90.3	6.00	0.674	
Total BTEX	**304**	6.00	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1300**	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**3900**	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	**7200**	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	**1020**	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane *261 %* *41-142*

Surrogate: 1-Chlorooctadecane *223 %* *37.6-147*

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CARDINAL Laboratories

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Analytical Results For:

TETRA TECH
MIKE CARMONA
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HARKLEY 35 STATE 1	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01772	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

Sample ID: NORTH 1 SIDEWALL (H903244-04)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**13.0**	1.00	09/20/2019	ND	1.83	91.4	2.00	0.640	
Toluene*	**145**	1.00	09/20/2019	ND	1.78	89.1	2.00	0.0127	
Ethylbenzene*	**27.4**	1.00	09/20/2019	ND	1.78	89.0	2.00	0.0676	
Total Xylenes*	**305**	3.00	09/20/2019	ND	5.42	90.3	6.00	0.674	
Total BTEX	**490**	6.00	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1540**	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**6170**	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	**8250**	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	**1210**	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane *653 %* *41-142*

Surrogate: 1-Chlorooctadecane *308 %* *37.6-147*

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
MIKE CARMONA
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HARKLEY 35 STATE 1	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01772	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

Sample ID: SOUTH 1 SIDEWALL (H903244-05)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	09/20/2019	ND	1.83	91.4	2.00	0.640	
Toluene*	**12.5**	1.00	09/20/2019	ND	1.78	89.1	2.00	0.0127	
Ethylbenzene*	<1.00	1.00	09/20/2019	ND	1.78	89.0	2.00	0.0676	
Total Xylenes*	**137**	3.00	09/20/2019	ND	5.42	90.3	6.00	0.674	
Total BTEX	**150**	6.00	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**2060**	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	**4710**	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	**766**	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane *205 %* *41-142*

Surrogate: 1-Chlorooctadecane *165 %* *37.6-147*

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
MIKE CARMONA
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HARKLEY 35 STATE 1	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01772	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

Sample ID: EAST 1 SIDEWALL (H903244-06)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**4.76**	1.00	09/20/2019	ND	1.83	91.4	2.00	0.640	
Toluene*	**78.2**	1.00	09/20/2019	ND	1.78	89.1	2.00	0.0127	
Ethylbenzene*	**18.0**	1.00	09/20/2019	ND	1.78	89.0	2.00	0.0676	
Total Xylenes*	**216**	3.00	09/20/2019	ND	5.42	90.3	6.00	0.674	
Total BTEX	**317**	6.00	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1600**	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**3770**	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	**6740**	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	**958**	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane *239 %* *41-142*

Surrogate: 1-Chlorooctadecane *206 %* *37.6-147*

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
MIKE CARMONA
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HARKLEY 35 STATE 1	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01772	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

Sample ID: EAST 2 SIDEWALL (H903244-07)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**2.74**	1.00	09/20/2019	ND	1.83	91.4	2.00	0.640	
Toluene*	**51.1**	1.00	09/20/2019	ND	1.78	89.1	2.00	0.0127	
Ethylbenzene*	**13.6**	1.00	09/20/2019	ND	1.78	89.0	2.00	0.0676	
Total Xylenes*	**159**	3.00	09/20/2019	ND	5.42	90.3	6.00	0.674	
Total BTEX	**227**	6.00	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**832**	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**2480**	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	**5200**	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	**715**	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane *399 %* *41-142*

Surrogate: 1-Chlorooctadecane *228 %* *37.6-147*

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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
MIKE CARMONA
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HARKLEY 35 STATE 1	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01772	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

Sample ID: WEST 1 SIDEWALL (H903244-08)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**3.26**	1.00	09/20/2019	ND	1.83	91.4	2.00	0.640	
Toluene*	**71.8**	1.00	09/20/2019	ND	1.78	89.1	2.00	0.0127	
Ethylbenzene*	**17.9**	1.00	09/20/2019	ND	1.78	89.0	2.00	0.0676	
Total Xylenes*	**213**	3.00	09/20/2019	ND	5.42	90.3	6.00	0.674	
Total BTEX	**306**	6.00	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**688**	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**4740**	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	**8010**	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	**1100**	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane *342 %* *41-142*

Surrogate: 1-Chlorooctadecane *235 %* *37.6-147*

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CARDINAL Laboratories

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Analytical Results For:

TETRA TECH
MIKE CARMONA
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/19/2019	Sampling Date:	09/19/2019
Reported:	09/20/2019	Sampling Type:	Soil
Project Name:	HARKLEY 35 STATE 1	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01772	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

Sample ID: WEST 2 SIDEWALL (H903244-09)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**2.35**	1.00	09/20/2019	ND	1.83	91.4	2.00	0.640	
Toluene*	**38.2**	1.00	09/20/2019	ND	1.78	89.1	2.00	0.0127	
Ethylbenzene*	**10.9**	1.00	09/20/2019	ND	1.78	89.0	2.00	0.0676	
Total Xylenes*	**131**	3.00	09/20/2019	ND	5.42	90.3	6.00	0.674	
Total BTEX	**182**	6.00	09/20/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**752**	16.0	09/20/2019	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**2310**	10.0	09/19/2019	ND	207	104	200	2.29	
DRO >C10-C28*	**4390**	10.0	09/19/2019	ND	200	100	200	1.97	
EXT DRO >C28-C36	**648**	10.0	09/19/2019	ND					

Surrogate: 1-Chlorooctane *191 %* *41-142*

Surrogate: 1-Chlorooctadecane *165 %* *37.6-147*

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CARDINAL Laboratories

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record

Page 1 of 1

Tetra Tech, Inc.

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

Client Name: EOG	Site Manager: Mike Carmona
Project Name: Harkley 35 State 1	
Project Location: (county, state) Eddy Co, NM	Project #: 212C-MD-01772
Invoice to: EOG - James Kennedy	
Receiving Laboratory: Cardinal	Sampler Signature: Conner Moehring
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)
H903244 1	Bottom Hole #1 (10' BEB)	9/19/19			X				X			1	N
2	Bottom Hole #2 (3' BEB)				X				X			1	N
3	Bottom Hole #3 (3' BEB)				X				X			1	N
4	North 1 Sidewall				X				X			1	N
5	South 1 Sidewall				X				X			1	N
6	East 1 Sidewall				X				X			1	N
7	East 2 Sidewall				X				X			1	N
8	West 1 Sidewall				X				X			1	N
9	West 2 Sidewall				X				X			1	N

ANALYSIS REQUEST (Circle or Specify Method No.)

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

Relinquished by: Conner Moehring Date: 9/19/19 Time:

Received by: Tamara Oldaker Date: 9-19-19 Time: 14:50

Relinquished by: Date: Time:

Received by: Date: Time:

Relinquished by: Date: Time:

Received by: Date: Time:

LAB USE ONLY

Sample Temperature 1.6c #97 Corrected 2.0c

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 23, 2019

MIKE CARMONA

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: HARKLEY 35 STATE 1

Enclosed are the results of analyses for samples received by the laboratory on 09/20/19 15:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TETRA TECH
MIKE CARMONA
901 WEST WALL STREET , STE 100
MIDLAND TX, 79701
Fax To: (432) 682-3946

Received:	09/20/2019	Sampling Date:	09/20/2019
Reported:	09/23/2019	Sampling Type:	Soil
Project Name:	HARKLEY 35 STATE 1	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01772	Sample Received By:	Tamara Oldaker
Project Location:	EOG - EDDY CO NM		

Sample ID: BOTTOM HOLE # 1 (12' BEB) (H903255-01)

BTEX 8021B mg/kg Analyzed By: BF

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/23/2019	ND	1.81	90.7	2.00	3.84	
Toluene*	**0.527**	0.050	09/23/2019	ND	1.77	88.4	2.00	3.35	
Ethylbenzene*	**1.31**	0.050	09/23/2019	ND	1.76	88.2	2.00	4.48	
Total Xylenes*	**9.60**	0.150	09/23/2019	ND	5.25	87.5	6.00	2.74	
Total BTEX	**11.4**	0.300	09/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *73.3-129*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	09/23/2019	ND	416	104	400	0.00	

TPH 8015M mg/kg Analyzed By: MS S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**515**	10.0	09/20/2019	ND	199	99.7	200	0.456	
DRO >C10-C28*	**3770**	10.0	09/20/2019	ND	177	88.5	200	0.973	
EXT DRO >C28-C36	**637**	10.0	09/20/2019	ND					

Surrogate: 1-Chlorooctane *139 %* *41-142*

Surrogate: 1-Chlorooctadecane *158 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record

Page 1 of 1

Tetra Tech, Inc.

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

Client Name: EOG	Site Manager: Mike Carmona
Project Name: Harkley 35 State 1	
Project Location: (county, state) Eddy Co, NM	Project #: 212C-MD-01772
Invoice to: EOG - James Kennedy	
Receiving Laboratory: Cardinal	Sampler Signature: Conner Moehring
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)
H903255		YEAR: 2019										
1	Bottom Hole #1 (12' BEB)	9/20/19			X				X		1	2

ANALYSIS REQUEST (Circle or Specify Method No.)

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

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Conner Moehring	9/20/19	1515	Tamara Oldaker	9-20-19	15:15
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

ORIGINAL COPY

LAB USE ONLY

Sample Temperature 4.0°C #97 Corrected 4.4°C

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

Certificate of Analysis Summary 625367

Tetra Tech- Midland, Midland, TX

Project Name: EOG Harkey 35 St. #1

Project Id: 212C-MD-01772
Contact: Clair Gonzales
Project Location: Eddy County, New Mexico

Date Received in Lab: Thu May-23-19 10:45 am
Report Date: 31-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	625367-001		625367-002		625367-003		625367-004		625367-005		625367-006	
	Field Id:	AH-1 (0-1')		AH-2 (0-1')		AH-2 (1-1.5')		AH-2 (2-2.5')		AH-2 (3-3.5')		AH-2 (4-4.5')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-22-19 00:00		May-22-19 00:00		May-22-19 00:00		May-22-19 00:00		May-22-19 00:00		May-22-19 00:00	
BTEX by EPA 8021B	*Extracted:*	May-29-19 08:45		May-29-19 08:45		May-29-19 08:45		May-29-19 08:45		May-29-19 08:45		May-29-19 08:45	
	Analyzed:	May-30-19 17:31		May-30-19 17:50		May-30-19 18:09		May-30-19 18:28		May-30-19 18:47		May-30-19 19:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		2.94	2.01	2.47	1.99	3.26	1.99	1.06	1.00	1.06	1.00	<0.998	0.998
Toluene		53.1	2.01	43.3	1.99	58.0	1.99	19.9	1.00	21.8	1.00	4.16	0.998
Ethylbenzene		15.7	2.01	8.73	1.99	15.4	1.99	5.86	1.00	6.87	1.00	1.81	0.998
m,p-Xylenes		178	4.02	122	3.98	155	3.98	61.8	2.00	72.3	2.00	22.1	2.00
o-Xylene		46.1	2.01	30.8	1.99	38.8	1.99	15.6	1.00	18.1	1.00	5.91	0.998
Total Xylenes		224	2.01	153	1.99	194	1.99	77.4	1.00	90.4	1.00	28.0	0.998
Total BTEX		296	2.01	207	1.99	270	1.99	104	1.00	120	1.00	34.0	0.998
Chloride by EPA 300	*Extracted:*	May-24-19 14:30		May-24-19 14:30		May-24-19 14:30		May-24-19 14:30		May-24-19 14:30		May-24-19 14:30	
	Analyzed:	May-24-19 18:28		May-24-19 18:33		May-24-19 18:54		May-24-19 18:59		May-24-19 19:14		May-24-19 19:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		7500	49.9	2370	25.2	1960	25.1	1480	25.1	1030	24.9	995	25.2
TPH By SW8015 Mod	*Extracted:*	May-26-19 13:00		May-26-19 13:00		May-26-19 13:00		May-26-19 13:00		May-26-19 13:00		May-26-19 13:00	
	Analyzed:	May-28-19 07:44		May-28-19 08:04		May-28-19 08:23		May-28-19 08:43		May-28-19 09:03		May-28-19 09:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		5660	74.8	5160	74.8	7070	74.9	3260	74.7	3390	74.9	3520	74.8
Diesel Range Organics (DRO)		7180	74.8	5050	74.8	8520	74.9	3740	74.7	4520	74.9	4860	74.8
Motor Oil Range Hydrocarbons (MRO)		673	74.8	464	74.8	728	74.9	338	74.7	414	74.9	552	74.8
Total TPH		13500	74.8	10700	74.8	16300	74.9	7340	74.7	8320	74.9	8930	74.8

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 625367

Tetra Tech- Midland, Midland, TX

Project Name: EOG Harkey 35 St. #1

Project Id: 212C-MD-01772
Contact: Clair Gonzales
Project Location: Eddy County, New Mexico

Date Received in Lab: Thu May-23-19 10:45 am
Report Date: 31-MAY-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	625367-007		625367-008		625367-009		625367-010		625367-011	
	Field Id:	AH-3 (0-1')		AH-3 (1-1.5')		AH-3 (2-2.5')		AH-3 (3-3.5')		AH-3 (4-4.5')	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-22-19 00:00		May-22-19 00:00		May-22-19 00:00		May-22-19 00:00		May-22-19 00:00	
BTEX by EPA 8021B	*Extracted:*	May-29-19 08:45		May-29-19 08:45		May-29-19 08:45		May-30-19 16:30		May-30-19 16:30	
	Analyzed:	May-30-19 19:25		May-30-19 19:44		May-30-19 20:03		May-31-19 12:24		May-31-19 12:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		1.25	1.00	1.46	1.01	1.36	0.998	<0.992	0.992	<1.01	1.01
Toluene		26.2	1.00	23.9	1.01	27.7	0.998	17.8	0.992	12.0	1.01
Ethylbenzene		7.29	1.00	6.56	1.01	7.29	0.998	4.95	0.992	3.64	1.01
m,p-Xylenes		89.6	2.00	73.7	2.02	76.7	2.00	54.3	1.98	40.5	2.02
o-Xylene		22.9	1.00	18.2	1.01	18.2	0.998	13.9	0.992	11.0	1.01
Total Xylenes		113	1.00	91.9	1.01	94.9	0.998	68.2	0.992	51.5	1.01
Total BTEX		147	1.00	124	1.01	131	0.998	91.0	0.992	67.1	1.01
Chloride by EPA 300	*Extracted:*	May-24-19 14:30		May-24-19 14:30		May-24-19 14:30		May-24-19 14:30		May-24-19 14:30	
	Analyzed:	May-24-19 19:25		May-24-19 19:30		May-24-19 19:35		May-24-19 19:40		May-24-19 19:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<25.2	25.2	2040	25.0	833	25.0	755	24.9	1180	24.9
TPH By SW8015 Mod	*Extracted:*	May-26-19 13:00		May-26-19 13:00		May-26-19 13:00		May-26-19 13:00		May-26-19 13:00	
	Analyzed:	May-28-19 04:10		May-28-19 04:30		May-28-19 04:50		May-28-19 09:43		May-28-19 10:04	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		3720	15.0	3160	15.0	3010	14.9	3030	74.8	2530	74.8
Diesel Range Organics (DRO)		4910	15.0	4560	15.0	4190	14.9	4700	74.8	4860	74.8
Motor Oil Range Hydrocarbons (MRO)		417	15.0	355	15.0	360	14.9	508	74.8	542	74.8
Total TPH		9050	15.0	8080	15.0	7560	14.9	8240	74.8	7930	74.8

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant

Final 1.000

Analytical Report 625367

for

Tetra Tech- Midland

Project Manager: Clair Gonzales

EOG Harkey 35 St. #1

212C-MD-01772

31-MAY-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)

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)

31-MAY-19

Project Manager: **Clair Gonzales**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: XENCO Report No(s): **625367**
EOG Harkey 35 St. #1
Project Address: Eddy County, New Mexico

Clair Gonzales:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 625367. 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. 625367 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 625367

Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 (0-1')	S	05-22-19 00:00		625367-001
AH-2 (0-1')	S	05-22-19 00:00		625367-002
AH-2 (1-1.5')	S	05-22-19 00:00		625367-003
AH-2 (2-2.5')	S	05-22-19 00:00		625367-004
AH-2 (3-3.5')	S	05-22-19 00:00		625367-005
AH-2 (4-4.5')	S	05-22-19 00:00		625367-006
AH-3 (0-1')	S	05-22-19 00:00		625367-007
AH-3 (1-1.5')	S	05-22-19 00:00		625367-008
AH-3 (2-2.5')	S	05-22-19 00:00		625367-009
AH-3 (3-3.5')	S	05-22-19 00:00		625367-010
AH-3 (4-4.5')	S	05-22-19 00:00		625367-011

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: EOG Harkey 35 St. #1

Project ID: *212C-MD-01772*
Work Order Number(s): *625367*

Report Date: *31-MAY-19*
Date Received: *05/23/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3090677 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3090687 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 625367

Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-1 (0-1')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-001	Date Collected:	05.22.19 00.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.24.19 14.30	Basis:	Wet Weight
Seq Number:	3090213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7500**	49.9	mg/kg	05.24.19 18.28		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.26.19 13.00	Basis:	Wet Weight
Seq Number:	3090436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**5660**	74.8	mg/kg	05.28.19 07.44		5
Diesel Range Organics (DRO)	C10C28DRO	**7180**	74.8	mg/kg	05.28.19 07.44		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**673**	74.8	mg/kg	05.28.19 07.44		5
Total TPH	PHC635	**13500**	74.8	mg/kg	05.28.19 07.44		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	05.28.19 07.44	
o-Terphenyl	84-15-1	122	%	70-135	05.28.19 07.44	

Certificate of Analytical Results 625367

Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-1 (0-1')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-001	Date Collected:	05.22.19 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 08.45	Basis:	Wet Weight
Seq Number:	3090677				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**2.94**	2.01	mg/kg	05.30.19 17.31		1000
Toluene	108-88-3	**53.1**	2.01	mg/kg	05.30.19 17.31		1000
Ethylbenzene	100-41-4	**15.7**	2.01	mg/kg	05.30.19 17.31		1000
m,p-Xylenes	179601-23-1	**178**	4.02	mg/kg	05.30.19 17.31		1000
o-Xylene	95-47-6	**46.1**	2.01	mg/kg	05.30.19 17.31		1000
Total Xylenes	1330-20-7	**224**	2.01	mg/kg	05.30.19 17.31		1000
Total BTEX		**296**	2.01	mg/kg	05.30.19 17.31		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	70-130	05.30.19 17.31	
1,4-Difluorobenzene	540-36-3	97	%	70-130	05.30.19 17.31	

Certificate of Analytical Results 625367

Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-2 (0-1')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-002	Date Collected:	05.22.19 00.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.24.19 14.30	Basis:	Wet Weight
Seq Number:	3090213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2370**	25.2	mg/kg	05.24.19 18.33		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.26.19 13.00	Basis:	Wet Weight
Seq Number:	3090436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**5160**	74.8	mg/kg	05.28.19 08.04		5
Diesel Range Organics (DRO)	C10C28DRO	**5050**	74.8	mg/kg	05.28.19 08.04		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**464**	74.8	mg/kg	05.28.19 08.04		5
Total TPH	PHC635	**10700**	74.8	mg/kg	05.28.19 08.04		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	05.28.19 08.04	
o-Terphenyl	84-15-1	99	%	70-135	05.28.19 08.04	

Certificate of Analytical Results 625367

Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-2 (0-1')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-002	Date Collected:	05.22.19 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 08.45	Basis:	Wet Weight
Seq Number:	3090677				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**2.47**	1.99	mg/kg	05.30.19 17.50		1000
Toluene	108-88-3	**43.3**	1.99	mg/kg	05.30.19 17.50		1000
Ethylbenzene	100-41-4	**8.73**	1.99	mg/kg	05.30.19 17.50		1000
m,p-Xylenes	179601-23-1	**122**	3.98	mg/kg	05.30.19 17.50		1000
o-Xylene	95-47-6	**30.8**	1.99	mg/kg	05.30.19 17.50		1000
Total Xylenes	1330-20-7	**153**	1.99	mg/kg	05.30.19 17.50		1000
Total BTEX		**207**	1.99	mg/kg	05.30.19 17.50		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	05.30.19 17.50	
4-Bromofluorobenzene	460-00-4	116	%	70-130	05.30.19 17.50	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-2 (1-1.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-003	Date Collected:	05.22.19 00.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.24.19 14.30	Basis:	Wet Weight
Seq Number:	3090213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1960**	25.1	mg/kg	05.24.19 18.54		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.26.19 13.00	Basis:	Wet Weight
Seq Number:	3090436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**7070**	74.9	mg/kg	05.28.19 08.23		5
Diesel Range Organics (DRO)	C10C28DRO	**8520**	74.9	mg/kg	05.28.19 08.23		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**728**	74.9	mg/kg	05.28.19 08.23		5
Total TPH	PHC635	**16300**	74.9	mg/kg	05.28.19 08.23		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	05.28.19 08.23	
o-Terphenyl	84-15-1	105	%	70-135	05.28.19 08.23	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-2 (1-1.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-003	Date Collected:	05.22.19 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 08.45	Basis:	Wet Weight
Seq Number:	3090677				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**3.26**	1.99	mg/kg	05.30.19 18.09		1000
Toluene	108-88-3	**58.0**	1.99	mg/kg	05.30.19 18.09		1000
Ethylbenzene	100-41-4	**15.4**	1.99	mg/kg	05.30.19 18.09		1000
m,p-Xylenes	179601-23-1	**155**	3.98	mg/kg	05.30.19 18.09		1000
o-Xylene	95-47-6	**38.8**	1.99	mg/kg	05.30.19 18.09		1000
Total Xylenes	1330-20-7	**194**	1.99	mg/kg	05.30.19 18.09		1000
Total BTEX		**270**	1.99	mg/kg	05.30.19 18.09		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	05.30.19 18.09	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.30.19 18.09	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-2 (2-2.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-004	Date Collected:	05.22.19 00.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.24.19 14.30	Basis:	Wet Weight
Seq Number:	3090213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1480**	25.1	mg/kg	05.24.19 18.59		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.26.19 13.00	Basis:	Wet Weight
Seq Number:	3090436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3260**	74.7	mg/kg	05.28.19 08.43		5
Diesel Range Organics (DRO)	C10C28DRO	**3740**	74.7	mg/kg	05.28.19 08.43		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**338**	74.7	mg/kg	05.28.19 08.43		5
Total TPH	PHC635	**7340**	74.7	mg/kg	05.28.19 08.43		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	05.28.19 08.43	
o-Terphenyl	84-15-1	124	%	70-135	05.28.19 08.43	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-2 (2-2.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-004	Date Collected:	05.22.19 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 08.45	Basis:	Wet Weight
Seq Number:	3090677				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**1.06**	1.00	mg/kg	05.30.19 18.28		500
Toluene	108-88-3	**19.9**	1.00	mg/kg	05.30.19 18.28		500
Ethylbenzene	100-41-4	**5.86**	1.00	mg/kg	05.30.19 18.28		500
m,p-Xylenes	179601-23-1	**61.8**	2.00	mg/kg	05.30.19 18.28		500
o-Xylene	95-47-6	**15.6**	1.00	mg/kg	05.30.19 18.28		500
Total Xylenes	1330-20-7	**77.4**	1.00	mg/kg	05.30.19 18.28		500
Total BTEX		**104**	1.00	mg/kg	05.30.19 18.28		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.30.19 18.28	
4-Bromofluorobenzene	460-00-4	121	%	70-130	05.30.19 18.28	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-2 (3-3.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-005	Date Collected:	05.22.19 00.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.24.19 14.30	Basis:	Wet Weight
Seq Number:	3090213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1030**	24.9	mg/kg	05.24.19 19.14		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.26.19 13.00	Basis:	Wet Weight
Seq Number:	3090436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3390**	74.9	mg/kg	05.28.19 09.03		5
Diesel Range Organics (DRO)	C10C28DRO	**4520**	74.9	mg/kg	05.28.19 09.03		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**414**	74.9	mg/kg	05.28.19 09.03		5
Total TPH	PHC635	**8320**	74.9	mg/kg	05.28.19 09.03		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	05.28.19 09.03	
o-Terphenyl	84-15-1	125	%	70-135	05.28.19 09.03	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-2 (3-3.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-005	Date Collected:	05.22.19 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 08.45	Basis:	Wet Weight
Seq Number:	3090677				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**1.06**	1.00	mg/kg	05.30.19 18.47		500
Toluene	108-88-3	**21.8**	1.00	mg/kg	05.30.19 18.47		500
Ethylbenzene	100-41-4	**6.87**	1.00	mg/kg	05.30.19 18.47		500
m,p-Xylenes	179601-23-1	**72.3**	2.00	mg/kg	05.30.19 18.47		500
o-Xylene	95-47-6	**18.1**	1.00	mg/kg	05.30.19 18.47		500
Total Xylenes	1330-20-7	**90.4**	1.00	mg/kg	05.30.19 18.47		500
Total BTEX		**120**	1.00	mg/kg	05.30.19 18.47		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	128	%	70-130	05.30.19 18.47	
1,4-Difluorobenzene	540-36-3	97	%	70-130	05.30.19 18.47	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-2 (4-4.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-006	Date Collected:	05.22.19 00.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.24.19 14.30	Basis:	Wet Weight
Seq Number:	3090213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**995**	25.2	mg/kg	05.24.19 19.20		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.26.19 13.00	Basis:	Wet Weight
Seq Number:	3090436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3520**	74.8	mg/kg	05.28.19 09.23		5
Diesel Range Organics (DRO)	C10C28DRO	**4860**	74.8	mg/kg	05.28.19 09.23		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**552**	74.8	mg/kg	05.28.19 09.23		5
Total TPH	PHC635	**8930**	74.8	mg/kg	05.28.19 09.23		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	05.28.19 09.23	
o-Terphenyl	84-15-1	103	%	70-135	05.28.19 09.23	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-2 (4-4.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-006	Date Collected:	05.22.19 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 08.45	Basis:	Wet Weight
Seq Number:	3090677				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.998	0.998	mg/kg	05.30.19 19.06	U	500
Toluene	108-88-3	**4.16**	0.998	mg/kg	05.30.19 19.06		500
Ethylbenzene	100-41-4	**1.81**	0.998	mg/kg	05.30.19 19.06		500
m,p-Xylenes	179601-23-1	**22.1**	2.00	mg/kg	05.30.19 19.06		500
o-Xylene	95-47-6	**5.91**	0.998	mg/kg	05.30.19 19.06		500
Total Xylenes	1330-20-7	**28.0**	0.998	mg/kg	05.30.19 19.06		500
Total BTEX		**34.0**	0.998	mg/kg	05.30.19 19.06		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	05.30.19 19.06	
4-Bromofluorobenzene	460-00-4	115	%	70-130	05.30.19 19.06	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-3 (0-1')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-007	Date Collected:	05.22.19 00.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.24.19 14.30	Basis:	Wet Weight
Seq Number:	3090213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<25.2	25.2	mg/kg	05.24.19 19.25	U	5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.26.19 13.00	Basis:	Wet Weight
Seq Number:	3090436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3720**	15.0	mg/kg	05.28.19 04.10		1
Diesel Range Organics (DRO)	C10C28DRO	**4910**	15.0	mg/kg	05.28.19 04.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**417**	15.0	mg/kg	05.28.19 04.10		1
Total TPH	PHC635	**9050**	15.0	mg/kg	05.28.19 04.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.28.19 04.10	
o-Terphenyl	84-15-1	98	%	70-135	05.28.19 04.10	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-3 (0-1')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-007	Date Collected:	05.22.19 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 08.45	Basis:	Wet Weight
Seq Number:	3090677				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**1.25**	1.00	mg/kg	05.30.19 19.25		500
Toluene	108-88-3	**26.2**	1.00	mg/kg	05.30.19 19.25		500
Ethylbenzene	100-41-4	**7.29**	1.00	mg/kg	05.30.19 19.25		500
m,p-Xylenes	179601-23-1	**89.6**	2.00	mg/kg	05.30.19 19.25		500
o-Xylene	95-47-6	**22.9**	1.00	mg/kg	05.30.19 19.25		500
Total Xylenes	1330-20-7	**113**	1.00	mg/kg	05.30.19 19.25		500
Total BTEX		**147**	1.00	mg/kg	05.30.19 19.25		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	05.30.19 19.25	
1,4-Difluorobenzene	540-36-3	98	%	70-130	05.30.19 19.25	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id: **AH-3 (1-1.5')** Matrix: Soil Date Received:05.23.19 10.45

Lab Sample Id: 625367-008 Date Collected: 05.22.19 00.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 05.24.19 14.30 Basis: Wet Weight

Seq Number: 3090213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2040**	25.0	mg/kg	05.24.19 19.30		5

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 05.26.19 13.00 Basis: Wet Weight

Seq Number: 3090436

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3160**	15.0	mg/kg	05.28.19 04.30		1
Diesel Range Organics (DRO)	C10C28DRO	**4560**	15.0	mg/kg	05.28.19 04.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**355**	15.0	mg/kg	05.28.19 04.30		1
Total TPH	PHC635	**8080**	15.0	mg/kg	05.28.19 04.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	05.28.19 04.30	
o-Terphenyl	84-15-1	125	%	70-135	05.28.19 04.30	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-3 (1-1.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-008	Date Collected:	05.22.19 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 08.45	Basis:	Wet Weight
Seq Number:	3090677				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**1.46**	1.01	mg/kg	05.30.19 19.44		500
Toluene	108-88-3	**23.9**	1.01	mg/kg	05.30.19 19.44		500
Ethylbenzene	100-41-4	**6.56**	1.01	mg/kg	05.30.19 19.44		500
m,p-Xylenes	179601-23-1	**73.7**	2.02	mg/kg	05.30.19 19.44		500
o-Xylene	95-47-6	**18.2**	1.01	mg/kg	05.30.19 19.44		500
Total Xylenes	1330-20-7	**91.9**	1.01	mg/kg	05.30.19 19.44		500
Total BTEX		**124**	1.01	mg/kg	05.30.19 19.44		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	05.30.19 19.44	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.30.19 19.44	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-3 (2-2.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-009	Date Collected:	05.22.19 00.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.24.19 14.30	Basis:	Wet Weight
Seq Number:	3090213				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**833**	25.0	mg/kg	05.24.19 19.35		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.26.19 13.00	Basis:	Wet Weight
Seq Number:	3090436				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3010**	14.9	mg/kg	05.28.19 04.50		1
Diesel Range Organics (DRO)	C10C28DRO	**4190**	14.9	mg/kg	05.28.19 04.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**360**	14.9	mg/kg	05.28.19 04.50		1
Total TPH	PHC635	**7560**	14.9	mg/kg	05.28.19 04.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	05.28.19 04.50	
o-Terphenyl	84-15-1	84	%	70-135	05.28.19 04.50	

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Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-3 (2-2.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-009	Date Collected:	05.22.19 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 08.45	Basis:	Wet Weight
Seq Number:	3090677				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**1.36**	0.998	mg/kg	05.30.19 20.03		500
Toluene	108-88-3	**27.7**	0.998	mg/kg	05.30.19 20.03		500
Ethylbenzene	100-41-4	**7.29**	0.998	mg/kg	05.30.19 20.03		500
m,p-Xylenes	179601-23-1	**76.7**	2.00	mg/kg	05.30.19 20.03		500
o-Xylene	95-47-6	**18.2**	0.998	mg/kg	05.30.19 20.03		500
Total Xylenes	1330-20-7	**94.9**	0.998	mg/kg	05.30.19 20.03		500
Total BTEX		**131**	0.998	mg/kg	05.30.19 20.03		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	05.30.19 20.03	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.30.19 20.03	

Certificate of Analytical Results 625367

Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id: **AH-3 (3-3.5')** Matrix: Soil Date Received:05.23.19 10.45

Lab Sample Id: 625367-010 Date Collected: 05.22.19 00.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 05.24.19 14.30 Basis: Wet Weight

Seq Number: 3090213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**755**	24.9	mg/kg	05.24.19 19.40		5

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 05.26.19 13.00 Basis: Wet Weight

Seq Number: 3090436

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3030**	74.8	mg/kg	05.28.19 09.43		5
Diesel Range Organics (DRO)	C10C28DRO	**4700**	74.8	mg/kg	05.28.19 09.43		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**508**	74.8	mg/kg	05.28.19 09.43		5
Total TPH	PHC635	**8240**	74.8	mg/kg	05.28.19 09.43		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	05.28.19 09.43	
o-Terphenyl	84-15-1	81	%	70-135	05.28.19 09.43	

Certificate of Analytical Results 625367

Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-3 (3-3.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-010	Date Collected:	05.22.19 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.30.19 16.30	Basis:	Wet Weight
Seq Number:	3090687				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.992	0.992	mg/kg	05.31.19 12.24	U	500
Toluene	108-88-3	**17.8**	0.992	mg/kg	05.31.19 12.24		500
Ethylbenzene	100-41-4	**4.95**	0.992	mg/kg	05.31.19 12.24		500
m,p-Xylenes	179601-23-1	**54.3**	1.98	mg/kg	05.31.19 12.24		500
o-Xylene	95-47-6	**13.9**	0.992	mg/kg	05.31.19 12.24		500
Total Xylenes	1330-20-7	**68.2**	0.992	mg/kg	05.31.19 12.24		500
Total BTEX		**91.0**	0.992	mg/kg	05.31.19 12.24		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	05.31.19 12.24	
1,4-Difluorobenzene	540-36-3	96	%	70-130	05.31.19 12.24	

Certificate of Analytical Results 625367

Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id: **AH-3 (4-4.5')** Matrix: Soil Date Received:05.23.19 10.45

Lab Sample Id: 625367-011 Date Collected: 05.22.19 00.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 05.24.19 14.30 Basis: Wet Weight

Seq Number: 3090213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1180**	24.9	mg/kg	05.24.19 19.45		5

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 05.26.19 13.00 Basis: Wet Weight

Seq Number: 3090436

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**2530**	74.8	mg/kg	05.28.19 10.04		5
Diesel Range Organics (DRO)	C10C28DRO	**4860**	74.8	mg/kg	05.28.19 10.04		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**542**	74.8	mg/kg	05.28.19 10.04		5
Total TPH	PHC635	**7930**	74.8	mg/kg	05.28.19 10.04		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	05.28.19 10.04	
o-Terphenyl	84-15-1	118	%	70-135	05.28.19 10.04	

Certificate of Analytical Results 625367

Tetra Tech- Midland, Midland, TX

EOG Harkey 35 St. #1

Sample Id:	**AH-3 (4-4.5')**	Matrix:	Soil	Date Received:	05.23.19 10.45
Lab Sample Id:	625367-011	Date Collected:	05.22.19 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.30.19 16.30	Basis:	Wet Weight
Seq Number:	3090687				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<1.01	1.01	mg/kg	05.31.19 12.43	U	500
Toluene	108-88-3	**12.0**	1.01	mg/kg	05.31.19 12.43		500
Ethylbenzene	100-41-4	**3.64**	1.01	mg/kg	05.31.19 12.43		500
m,p-Xylenes	179601-23-1	**40.5**	2.02	mg/kg	05.31.19 12.43		500
o-Xylene	95-47-6	**11.0**	1.01	mg/kg	05.31.19 12.43		500
Total Xylenes	1330-20-7	**51.5**	1.01	mg/kg	05.31.19 12.43		500
Total BTEX		**67.1**	1.01	mg/kg	05.31.19 12.43		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	05.31.19 12.43	
1,4-Difluorobenzene	540-36-3	94	%	70-130	05.31.19 12.43	

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

QC Summary 625367

Tetra Tech- Midland

EOG Harkey 35 St. #1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3090213 — Matrix: Solid — Date Prep: 05.24.19
MB Sample Id: 7678579-1-BLK — LCS Sample Id: 7678579-1-BKS — LCSD Sample Id: 7678579-1-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	261	104	261	104	90-110	0	20	mg/kg	05.24.19 17:16	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3090213 — Matrix: Soil — Date Prep: 05.24.19
Parent Sample Id: 625044-001 — MS Sample Id: 625044-001 S — MSD Sample Id: 625044-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	303	252	569	106	552	99	90-110	3	20	mg/kg	05.24.19 18:44	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3090213 — Matrix: Soil — Date Prep: 05.24.19
Parent Sample Id: 625044-004 — MS Sample Id: 625044-004 S — MSD Sample Id: 625044-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	153	249	433	112	428	110	90-110	1	20	mg/kg	05.24.19 17:32	X

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3090436 — Matrix: Solid — Date Prep: 05.26.19
MB Sample Id: 7678728-1-BLK — LCS Sample Id: 7678728-1-BKS — LCSD Sample Id: 7678728-1-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	1200	120	1180	118	70-135	2	20	mg/kg	05.27.19 21:33	
Diesel Range Organics (DRO)	<8.13	1000	1150	115	1130	113	70-135	2	20	mg/kg	05.27.19 21:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		123		126		70-135	%	05.27.19 21:33
o-Terphenyl	94		112		118		70-135	%	05.27.19 21:33

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 625367

Tetra Tech- Midland

EOG Harkey 35 St. #1

Analytical Method: TPH By SW8015 Mod | Prep Method: TX1005P
Seq Number: 3090436 | Matrix: Soil | Date Prep: 05.26.19
Parent Sample Id: 625373-021 | MS Sample Id: 625373-021 S | MSD Sample Id: 625373-021 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)	10.1	998	1100	109	1120	111	70-135	2	20	mg/kg	05.27.19 22:32	
Diesel Range Organics (DRO)	<8.11	998	1070	107	1100	110	70-135	3	20	mg/kg	05.27.19 22:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		121		70-135	%	05.27.19 22:32
o-Terphenyl	118		105		70-135	%	05.27.19 22:32

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3090677 | Matrix: Solid | Date Prep: 05.29.19
MB Sample Id: 7678881-1-BLK | LCS Sample Id: 7678881-1-BKS | LCSD Sample Id: 7678881-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0954	95	0.0974	98	70-130	2	35	mg/kg	05.30.19 10:34	
Toluene	<0.00201	0.100	0.0995	100	0.101	101	70-130	1	35	mg/kg	05.30.19 10:34	
Ethylbenzene	<0.00201	0.100	0.112	112	0.114	114	70-130	2	35	mg/kg	05.30.19 10:34	
m,p-Xylenes	<0.00402	0.201	0.240	119	0.243	122	70-130	1	35	mg/kg	05.30.19 10:34	
o-Xylene	<0.00201	0.100	0.115	115	0.117	117	70-130	2	35	mg/kg	05.30.19 10:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		89		89		70-130	%	05.30.19 10:34
4-Bromofluorobenzene	106		103		105		70-130	%	05.30.19 10:34

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3090687 | Matrix: Solid | Date Prep: 05.30.19
MB Sample Id: 7678919-1-BLK | LCS Sample Id: 7678919-1-BKS | LCSD Sample Id: 7678919-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0924	93	0.0891	89	70-130	4	35	mg/kg	05.31.19 08:00	
Toluene	<0.00200	0.0998	0.0919	92	0.0930	93	70-130	1	35	mg/kg	05.31.19 08:00	
Ethylbenzene	<0.00200	0.0998	0.103	103	0.103	103	70-130	0	35	mg/kg	05.31.19 08:00	
m,p-Xylenes	<0.00399	0.200	0.213	107	0.219	110	70-130	3	35	mg/kg	05.31.19 08:00	
o-Xylene	<0.00200	0.0998	0.104	104	0.107	107	70-130	3	35	mg/kg	05.31.19 08:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		90		89		70-130	%	05.31.19 08:00
4-Bromofluorobenzene	105		102		104		70-130	%	05.31.19 08:00

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

Final 1.000

QC Summary 625367

Tetra Tech- Midland

EOG Harkey 35 St. #1

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3090677 | Matrix: Soil | Date Prep: 05.29.19
Parent Sample Id: 625044-004 | MS Sample Id: 625044-004 S | MSD Sample Id: 625044-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0843	85	0.0881	88	70-130	4	35	mg/kg	05.30.19 11:12	
Toluene	<0.00198	0.0992	0.0911	92	0.0884	88	70-130	3	35	mg/kg	05.30.19 11:12	
Ethylbenzene	<0.00198	0.0992	0.100	101	0.0940	94	70-130	6	35	mg/kg	05.30.19 11:12	
m,p-Xylenes	<0.00397	0.198	0.215	109	0.196	98	70-130	9	35	mg/kg	05.30.19 11:12	
o-Xylene	<0.00198	0.0992	0.105	106	0.0963	96	70-130	9	35	mg/kg	05.30.19 11:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		90		70-130	%	05.30.19 11:12
4-Bromofluorobenzene	111		108		70-130	%	05.30.19 11:12

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3090687 | Matrix: Soil | Date Prep: 05.30.19
Parent Sample Id: 625912-001 | MS Sample Id: 625912-001 S | MSD Sample Id: 625912-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0511	51	0.0518	51	70-130	1	35	mg/kg	05.31.19 08:38	X
Toluene	<0.00199	0.0996	0.0301	30	0.0282	28	70-130	7	35	mg/kg	05.31.19 08:38	X
Ethylbenzene	0.00260	0.0996	0.0174	15	0.0179	15	70-130	3	35	mg/kg	05.31.19 08:38	X
m,p-Xylenes	0.00425	0.199	0.0356	16	0.0361	16	70-130	1	35	mg/kg	05.31.19 08:38	X
o-Xylene	0.00219	0.0996	0.0176	15	0.0171	15	70-130	3	35	mg/kg	05.31.19 08:38	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		95		70-130	%	05.31.19 08:38
4-Bromofluorobenzene	103		103		70-130	%	05.31.19 08:38

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

Final 1.000

Analysis Request of Chain of Custody Record

625367

Tetra Tech, Inc.

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

Client Name: EOG	**Site Manager:** Clair Gonzales
Project Name: Harkey 35 St. #1	
Project Location: (county, state) Eddy County, New Mexico	**Project #:** 212C-MD-01772
Invoice to: EOG (attn: Todd Wells)	
Receiving Laboratory: Xenco Midland, TX	**Sampler Signature:** Stephen Reyes
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2018 DATE	TIME	MATRIX WATER	SOIL	PRESERVATIVE METHOD HCL	HNO_3	ICE	None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride	Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance			Hold
	~~AH-1 (0-1')~~	5/22/2019			X			X		1	N	X		X												X							
	AH-2 (0-1')	5/22/2019			X			X		1	N	X		X												X							
	AH-2 (1-1.5')	5/22/2019			X			X		1	N	X		X												X							
	AH-2 (2-2.5')	5/22/2019			X			X		1	N	X		X												X							
	AH-2 (3-3.5')	5/22/2019			X			X		1	N	X		X												X							
	AH-2 (4-4.5')	5/22/2019			X			X		1	N	X		X												X							
	AH-3 (0-1')	5/22/2019			X			X		1	N	X		X												X							
	AH-3 (1-1.5')	5/22/2019			X			X		1	N	X		X												X							
	AH-3 (2-2.5')	5/22/2019			X			X		1	N	X		X												X							
	AH-3 (3-3.5')	5/22/2019			X			X		1	N	X		X												X							

Relinquished by:	Date:	Time:	Received by: Date: 5/23/19 Time: 1145
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY

Sample Temperature 3.3/3.1

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

1025367

Tetra Tech, Inc.

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

Client Name: EOG	**Site Manager:** Clair Gonzales
Project Name: Harkey 35 St. #1	
Project Location: (county, state) Eddy County, New Mexico	**Project #:** 212C-MD-01772
Invoice to: EOG (attn: Todd Wells)	
Receiving Laboratory: Xenco Midland, TX	**Sampler Signature:** Stephen Reyes
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2018 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Sulfate	TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	Hold
	AH-2 (4-4.5')	5/22/2019			X			X		1	N	X			X												X						

Relinquished by: Date: Time:

Received by: Date: 5/23/19 Time: 1445

Relinquished by: Date: Time:

Received by: Date: Time:

Relinquished by: Date: Time:

Received by: Date: Time:

ORIGINAL COPY

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB USE ONLY
Sample Temperature
3.3/3.1

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 05/23/2019 10:45:00 AM

Work Order #: 625367

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**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: 05/23/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/28/2019

Jessica Kramer

Analytical Report 629301

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Harkey 35 State #1

212C-MD-01772

05-JUL-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)

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)

05-JUL-19

Project Manager: **Mike Carmona**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: XENCO Report No(s): **629301**
Harkey 35 State #1
Project Address: Eddy County, New Mexico

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) 629301. 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. 629301 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,

Kalei Stout
Midland Laboratory Director

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 629301

Tetra Tech- Midland, Midland, TX

Harkey 35 State #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1 0-1'	S	06-26-19 14:20		629301-001
BH-1 2'-3'	S	06-26-19 14:25		629301-002
BH-1 4'-5'	S	06-26-19 14:30		629301-003
BH-1 6'-7'	S	06-26-19 14:35		629301-004
BH-1 9'-10'	S	06-26-19 14:40		629301-005
BH-1 14'-15'	S	06-26-19 14:45		629301-006
BH-1 19'-20'	S	06-26-19 14:48		629301-007
BH-1 24'-25'	S	06-26-19 14:50		629301-008
BH-1 29'-30'	S	06-26-19 14:53		629301-009
BH-1 34'-25'	S	06-26-19 14:57		629301-010
BH-1 39'-40'	S	06-26-19 15:00		629301-011

Version: 1.%

CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Harkey 35 State #1

Project ID: *212C-MD-01772*
Work Order Number(s): *629301*

Report Date: *05-JUL-19*
Date Received: *06/27/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3094023 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 629301-009.

Batch: LBA-3094217 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 629301-004,629301-005,629301-006,629301-007.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3094305 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 629301-002,629301-001,629301-008,629301-003.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 629301

Tetra Tech- Midland, Midland, TX

Project Name: Harkey 35 State #1

Project Id: 212C-MD-01772
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Thu Jun-27-19 12:27 pm
Report Date: 05-JUL-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	629301-001		629301-002		629301-003		629301-004		629301-005		629301-006	
	Field Id:	BH-1 0-1'		BH-1 2'-3'		BH-1 4'-5'		BH-1 6'-7'		BH-1 9'-10'		BH-1 14'-15'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-26-19 14:20		Jun-26-19 14:25		Jun-26-19 14:30		Jun-26-19 14:35		Jun-26-19 14:40		Jun-26-19 14:45	
BTEX by EPA 8021B	*Extracted:*	Jul-02-19 18:00		Jul-02-19 18:00		Jul-02-19 18:00		Jul-01-19 17:00		Jul-01-19 17:00		Jul-01-19 17:00	
	Analyzed:	Jul-03-19 14:05		Jul-03-19 12:34		Jul-03-19 12:56		Jul-02-19 21:11		Jul-02-19 16:57		Jul-02-19 23:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.331	0.0191	6.83	0.0765	6.37	0.0761	11.3	0.0765	2.30	0.0382	0.337	0.00385
Toluene		2.40	0.0226	40.8	0.0906	52.3	0.0900	79.4	0.0906	28.0	0.0452	1.30	0.00456
Ethylbenzene		1.67	0.0280	5.43	0.112	11.0	0.112	14.8	0.112	7.09	0.0560	0.462	0.00565
m,p-Xylenes		25.9	0.0503	96.6	0.202	109	0.200	147	0.202	72.7	0.101	4.76	0.0101
o-Xylene		13.6	0.0171	30.6	0.0685	26.1	0.0681	33.6	0.0685	16.9	0.0342	1.18	0.00344
Total Xylenes		39.5	0.0171	127	0.0685	135	0.0681	181	0.0685	89.6	0.0342	5.94	0.00344
Total BTEX		43.9	0.0171	180	0.0685	205	0.0681	286	0.0685	127	0.0342	8.04	0.00344
Chloride by EPA 300	*Extracted:*	Jun-27-19 16:45		Jun-27-19 16:45		Jun-27-19 16:45		Jun-27-19 16:45		Jun-27-19 16:45		Jun-27-19 16:45	
	Analyzed:	Jun-28-19 08:27		Jun-28-19 08:35		Jun-28-19 09:04		Jun-28-19 09:11		Jun-28-19 09:33		Jun-28-19 08:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1470	4.29	1770	4.29	1430	0.858	1440	0.858	547	0.858	280	0.858
TPH by SW8015 Mod	*Extracted:*	Jun-28-19 11:00		Jun-28-19 11:00		Jun-28-19 11:00		Jun-28-19 11:00		Jun-28-19 11:00		Jun-28-19 11:00	
	Analyzed:	Jun-28-19 18:27		Jun-28-19 18:52		Jun-28-19 19:43		Jun-28-19 20:08		Jun-28-19 20:33		Jun-28-19 20:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		700	7.97	3170	7.99	2080	7.99	2900	8.00	1610	7.97	127	7.98
Diesel Range Organics (DRO)		4870	8.10	3890	8.12	2910	8.11	3380	8.13	2770	8.10	457	8.10
Motor Oil Range Hydrocarbons (MRO)		233	8.10	165	8.12	99.7	8.11	119	8.13	105	8.10	23.7	8.10
Total TPH		5800	7.97	7230	7.99	5090	7.99	6400	8.00	4490	7.97	608	7.98

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Version: 1.%

Kalei Stout
Midland Laboratory Director

Final 1.000

Certificate of Analysis Summary 629301

Tetra Tech- Midland, Midland, TX

Project Name: Harkey 35 State #1

Project Id: 212C-MD-01772
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Thu Jun-27-19 12:27 pm
Report Date: 05-JUL-19
Project Manager: Jessica Kramer

Analysis Requested		Lab Id:	629301-007		629301-008		629301-009		629301-010		629301-011	
		Field Id:	BH-1 19'-20'		BH-1 24'-25'		BH-1 29'-30'		BH-1 34'-25'		BH-1 39'-40'	
		Depth:										
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
		Sampled:	Jun-26-19 14:48		Jun-26-19 14:50		Jun-26-19 14:53		Jun-26-19 14:57		Jun-26-19 15:00	
BTEX by EPA 8021B		Extracted:	Jul-01-19 17:00		Jul-02-19 18:00		Jul-01-19 17:00		Jul-01-19 17:00		Jul-01-19 17:00	
		Analyzed:	Jul-02-19 21:33		Jul-03-19 13:42		Jul-02-19 08:18		Jul-02-19 08:40		Jul-02-19 09:02	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene			2.64	0.0762	0.150	0.00768	<0.000380	0.000380	<0.000385	0.000385	<0.000383	0.000383
Toluene			22.1	0.0902	2.79	0.00909	<0.000449	0.000449	<0.000456	0.000456	<0.000454	0.000454
Ethylbenzene			6.89	0.112	1.24	0.0113	<0.000557	0.000557	<0.000565	0.000565	<0.000563	0.000563
m,p-Xylenes			77.8	0.201	14.2	0.0202	<0.00100	0.00100	<0.00101	0.00101	<0.00101	0.00101
o-Xylene			19.7	0.0682	3.70	0.00687	<0.000340	0.000340	<0.000344	0.000344	<0.000343	0.000343
Total Xylenes			97.5	0.0682	17.9	0.00687	<0.000340	0.000340	<0.000344	0.000344	<0.000343	0.000343
Total BTEX			129	0.0682	22.1	0.00687	<0.000340	0.000340	<0.000344	0.000344	<0.000343	0.000343
Chloride by EPA 300		Extracted:	Jun-27-19 16:45		Jun-27-19 16:45		Jun-27-19 16:45		Jun-27-19 16:45		Jun-27-19 16:45	
		Analyzed:	Jun-28-19 09:40		Jun-28-19 09:47		Jun-28-19 09:55		Jun-28-19 10:02		Jun-28-19 10:09	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride			252	0.858	163	0.858	90.6	0.858	208	4.29	355	0.858
TPH by SW8015 Mod		Extracted:	Jun-28-19 11:00		Jun-28-19 11:00		Jun-28-19 11:00		Jun-28-19 11:00		Jun-28-19 11:00	
		Analyzed:	Jun-29-19 10:59		Jun-28-19 21:49		Jun-28-19 22:14		Jun-28-19 22:39		Jun-28-19 23:04	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)			2820	40.0	473	7.99	<14.9	7.97	<15.0	8.00	<15.0	7.99
Diesel Range Organics (DRO)			7840	40.6	2720	8.12	75.0	8.10	66.2	8.13	36.5	8.11
Motor Oil Range Hydrocarbons (MRO)			292	40.6	113	8.12	<14.9	8.10	<15.0	8.13	<15.0	8.11
Total TPH			11000	40.0	3310	7.99	75.0	7.97	66.2	8.00	36.5	7.99

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Version: 1.%

Kalei Stout
Midland Laboratory Director

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Harkey 35 State #1

Work Orders : 629301,

Project ID: 212C-MD-01772

Lab Batch #: 3094023 **Sample:** 629301-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 18:27

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.6	104	70-135	
o-Terphenyl	56.8	49.8	114	70-135	

Lab Batch #: 3094023 **Sample:** 629301-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 18:52

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.9	115	70-135	
o-Terphenyl	57.7	50.0	115	70-135	

Lab Batch #: 3094023 **Sample:** 629301-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 19:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.8	115	70-135	
o-Terphenyl	51.5	49.9	103	70-135	

Lab Batch #: 3094023 **Sample:** 629301-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 20:08

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	53.9	50.0	108	70-135	

Lab Batch #: 3094023 **Sample:** 629301-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 20:33

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.6	108	70-135	
o-Terphenyl	48.1	49.8	97	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Harkey 35 State #1

Work Orders : 629301,

Project ID: 212C-MD-01772

Lab Batch #: 3094023 **Sample:** 629301-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 20:58

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.6	99.7	89	70-135	
o-Terphenyl	37.4	49.9	75	70-135	

Lab Batch #: 3094023 **Sample:** 629301-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 21:49

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.3	99.9	98	70-135	
o-Terphenyl	50.9	50.0	102	70-135	

Lab Batch #: 3094023 **Sample:** 629301-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 22:14

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.1	99.6	86	70-135	
o-Terphenyl	33.8	49.8	68	70-135	**

Lab Batch #: 3094023 **Sample:** 629301-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 22:39

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.4	100	86	70-135	
o-Terphenyl	35.0	50.0	70	70-135	

Lab Batch #: 3094023 **Sample:** 629301-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 23:04

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.2	99.8	91	70-135	
o-Terphenyl	36.4	49.9	73	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Harkey 35 State #1

Work Orders : 629301,

Project ID: 212C-MD-01772

Lab Batch #: 3094023 **Sample:** 629301-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/29/19 10:59

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	62.3	50.0	125	70-135	

Lab Batch #: 3094217 **Sample:** 629301-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/02/19 08:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0361	0.0300	120	70-130	

Lab Batch #: 3094217 **Sample:** 629301-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/02/19 08:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0344	0.0300	115	70-130	

Lab Batch #: 3094217 **Sample:** 629301-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/02/19 09:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0340	0.0300	113	70-130	

Lab Batch #: 3094217 **Sample:** 629301-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/02/19 16:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	70-130	
4-Bromofluorobenzene	0.0585	0.0300	195	70-130	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Harkey 35 State #1

Work Orders : 629301,

Project ID: 212C-MD-01772

Lab Batch #: 3094217 **Sample:** 629301-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/02/19 21:11

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	70-130	
4-Bromofluorobenzene	0.0591	0.0300	197	70-130	**

Lab Batch #: 3094217 **Sample:** 629301-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/02/19 21:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	70-130	
4-Bromofluorobenzene	0.0497	0.0300	166	70-130	**

Lab Batch #: 3094217 **Sample:** 629301-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/02/19 23:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	70-130	
4-Bromofluorobenzene	0.0646	0.0300	215	70-130	**

Lab Batch #: 3094305 **Sample:** 629301-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/03/19 12:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	70-130	
4-Bromofluorobenzene	0.0484	0.0300	161	70-130	**

Lab Batch #: 3094305 **Sample:** 629301-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/03/19 12:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	70-130	
4-Bromofluorobenzene	0.0520	0.0300	173	70-130	**

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Harkey 35 State #1

Work Orders : 629301,

Project ID: 212C-MD-01772

Lab Batch #: 3094305 **Sample:** 629301-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/03/19 13:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	70-130	
4-Bromofluorobenzene	0.0682	0.0300	227	70-130	**

Lab Batch #: 3094305 **Sample:** 629301-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/03/19 14:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	70-130	
4-Bromofluorobenzene	0.0727	0.0300	242	70-130	**

Lab Batch #: 3094023 **Sample:** 7681081-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/19 12:53

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.7	99.9	86	70-135	
o-Terphenyl	35.0	50.0	70	70-135	

Lab Batch #: 3094217 **Sample:** 7681230-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/02/19 06:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	70-130	
4-Bromofluorobenzene	0.0280	0.0300	93	70-130	

Lab Batch #: 3094305 **Sample:** 7681305-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/03/19 02:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	70-130	
4-Bromofluorobenzene	0.0290	0.0300	97	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Harkey 35 State #1

Work Orders : 629301,

Project ID: 212C-MD-01772

Lab Batch #: 3094023 **Sample:** 7681081-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/19 13:18

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.9	100	85	70-135	
o-Terphenyl	44.1	50.0	88	70-135	

Lab Batch #: 3094217 **Sample:** 7681230-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/02/19 04:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	70-130	
4-Bromofluorobenzene	0.0298	0.0300	99	70-130	

Lab Batch #: 3094305 **Sample:** 7681305-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/03/19 00:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	70-130	
4-Bromofluorobenzene	0.0334	0.0300	111	70-130	

Lab Batch #: 3094023 **Sample:** 7681081-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/19 13:44

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.7	99.6	86	70-135	
o-Terphenyl	44.7	49.8	90	70-135	

Lab Batch #: 3094217 **Sample:** 7681230-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/02/19 04:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	70-130	
4-Bromofluorobenzene	0.0342	0.0300	114	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Harkey 35 State #1

Work Orders : 629301,

Project ID: 212C-MD-01772

Lab Batch #: 3094305 **Sample:** 7681305-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/03/19 01:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0322	0.0300	107	70-130	

Lab Batch #: 3094023 **Sample:** 629135-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 14:35

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.6	99.7	94	70-135	
o-Terphenyl	43.3	49.9	87	70-135	

Lab Batch #: 3094217 **Sample:** 629137-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/02/19 05:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	70-130	
4-Bromofluorobenzene	0.0338	0.0300	113	70-130	

Lab Batch #: 3094305 **Sample:** 629696-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/03/19 01:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	70-130	
4-Bromofluorobenzene	0.0350	0.0300	117	70-130	

Lab Batch #: 3094023 **Sample:** 629135-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/19 15:01

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	47.5	50.0	95	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Harkey 35 State #1

Work Orders : 629301,

Project ID: 212C-MD-01772

Lab Batch #: 3094217 **Sample:** 629137-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/02/19 05:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	70-130	
4-Bromofluorobenzene	0.0345	0.0300	115	70-130	

Lab Batch #: 3094305 **Sample:** 629696-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/03/19 09:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0355	0.0300	118	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Version: 1.%

BS / BSD Recoveries

Project Name: Harkey 35 State #1

Work Order #: 629301 **Project ID:** 212C-MD-01772

Analyst: FOV **Date Prepared:** 07/01/2019 **Date Analyzed:** 07/02/2019

Lab Batch ID: 3094217 **Sample:** 7681230-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000380	0.0988	0.0792	80	0.0996	0.0900	90	13	70-130	35	
Toluene	<0.000450	0.0988	0.0781	79	0.0996	0.0880	88	12	70-130	35	
Ethylbenzene	<0.000558	0.0988	0.0856	87	0.0996	0.0961	96	12	70-130	35	
m,p-Xylenes	<0.00100	0.198	0.172	87	0.199	0.195	98	13	70-130	35	
o-Xylene	<0.000340	0.0988	0.0821	83	0.0996	0.0952	96	15	70-130	35	

Analyst: FOV **Date Prepared:** 07/02/2019 **Date Analyzed:** 07/03/2019

Lab Batch ID: 3094305 **Sample:** 7681305-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000384	0.0998	0.0909	91	0.0990	0.0923	93	2	70-130	35	
Toluene	<0.000455	0.0998	0.0896	90	0.0990	0.0892	90	0	70-130	35	
Ethylbenzene	<0.000564	0.0998	0.100	100	0.0990	0.102	103	2	70-130	35	
m,p-Xylenes	<0.00101	0.200	0.203	102	0.198	0.203	103	0	70-130	35	
o-Xylene	<0.000344	0.0998	0.0953	95	0.0990	0.0963	97	1	70-130	35	

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

Version: 1.%

BS / BSD Recoveries

Project Name: Harkey 35 State #1

Work Order #: 629301 **Project ID:** 212C-MD-01772

Analyst: CHE **Date Prepared:** 06/27/2019 **Date Analyzed:** 06/28/2019

Lab Batch ID: 3093837 **Sample:** 7680926-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	244	98	250	244	98	0	90-110	20	

Analyst: ARM **Date Prepared:** 06/28/2019 **Date Analyzed:** 06/28/2019

Lab Batch ID: 3094023 **Sample:** 7681081-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	935	94	996	970	97	4	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1010	101	996	1060	106	5	70-135	20	

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

Version: 1.%

Form 3 - MS / MSD Recoveries

Project Name: Harkey 35 State #1

Work Order # : 629301 **Project ID:** 212C-MD-01772

Lab Batch ID: 3094217 **QC- Sample ID:** 629137-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/02/2019 **Date Prepared:** 07/01/2019 **Analyst:** FOV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000381	0.0990	0.0815	82	0.0996	0.0810	81	1	70-130	35	
Toluene	<0.000451	0.0990	0.0784	79	0.0996	0.0776	78	1	70-130	35	
Ethylbenzene	<0.000559	0.0990	0.0848	86	0.0996	0.0830	83	2	70-130	35	
m,p-Xylenes	<0.00100	0.198	0.169	85	0.199	0.165	83	2	70-130	35	
o-Xylene	<0.000341	0.0990	0.0833	84	0.0996	0.0810	81	3	70-130	35	

Lab Batch ID: 3094305 **QC- Sample ID:** 629696-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/03/2019 **Date Prepared:** 07/02/2019 **Analyst:** FOV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000380	0.0986	0.0789	80	0.0988	0.0875	89	10	70-130	35	
Toluene	<0.000449	0.0986	0.0758	77	0.0988	0.0868	88	14	70-130	35	
Ethylbenzene	<0.000557	0.0986	0.0861	87	0.0988	0.0988	100	14	70-130	35	
m,p-Xylenes	<0.00100	0.197	0.172	87	0.198	0.201	102	16	70-130	35	
o-Xylene	<0.000340	0.0986	0.0841	85	0.0988	0.0933	94	10	70-130	35	

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

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

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

Form 3 - MS / MSD Recoveries

Project Name: Harkey 35 State #1

Work Order # : 629301 **Project ID:** 212C-MD-01772

Lab Batch ID: 3093837 **QC- Sample ID:** 628954-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/28/2019 **Date Prepared:** 06/27/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	176	250	435	104	250	435	104	0	90-110	20	

Lab Batch ID: 3093837 **QC- Sample ID:** 629301-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/28/2019 **Date Prepared:** 06/27/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	280	250	536	102	250	534	102	0	90-110	20	

Lab Batch ID: 3094023 **QC- Sample ID:** 629135-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/28/2019 **Date Prepared:** 06/28/2019 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	10.3	997	1020	101	1000	1090	108	7	70-135	20	
Diesel Range Organics (DRO)	8.50	997	1070	106	1000	1190	118	11	70-135	20	

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

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

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

Analysis Request of Chain of Custody Record

6J9301

Tetra Tech, Inc.

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

Client Name:	EOG Resources	**Site Manager:**	Mike Carmona
Project Name:	Harkey 35 State #1		
Project Location: (county, state)	Eddy County, New Mexico	**Project #:**	212C-MD-01772
Invoice to:	EOG - Attn: James Kennedy		
Receiving Laboratory:	Xenco	**Sampler Signature:**	Joe Tyler
Comments:			

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO)	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	Asbestos			Hold
	BH-1 0-1'	6/26/2019	1420		X				X			1		X		X												X							
	BH-1 2'-3'	6/26/2019	1425		X				X			1		X		X												X							
	BH-1 4'-5'	6/26/2019	1430		X				X			1		X		X												X							
	BH-1 6'-7'	6/26/2019	1435		X				X			1		X		X												X							
	BH-1 9'-10'	6/26/2019	1440		X				X			1		X		X												X							
	BH-1 14'-15'	6/26/2019	1445		X				X			1		X		X												X							
	BH-1 19'-20'	6/26/2019	1448		X				X			1		X		X												X							
	BH-1 24'-25'	6/26/2019	1450		X				X			1		X		X												X							
	BH-1 29'-30'	6/26/2019	1453		X				X			1		X		X												X							
	BH-1 34'-35'	6/26/2019	1457		X				X			1		X		X												X							

Relinquished by: Dan Camacho	Date: 6/27/19	Time: 1226	Received by: [illegible] 6/27/19 1227
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY

Sample Temperature
5.3|S1
-0.2|26

REMARKS:

[X] RUSH: Same Day 24 hr 48 hr (72 hr)

[ ] Rush Charges Authorized

[ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

629301

Page 2 of 2

Tetra Tech, Inc.

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

Client Name: EOG Resources	**Site Manager:** Mike Carmona
Project Name: Harkey 35 State #1	
Project Location: (county, state) Eddy County, New Mexico	**Project #:** 212C-MD-01772
Invoice to: EOG - Attn: James Kennedy	
Receiving Laboratory: Xenco	**Sampler Signature:** Joe Tyler
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO)	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	Asbestos			Hold
	BH-1 39'-40'	6/26/2019	1500		X				X			1	N	X	X													X							

Relinquished by: Ivan Gonzales	Date: 6/27/19	Time: 1220	Received by: [illegible]
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:

Received by: Date: 6/27/19 Time: 1227

LAB USE ONLY

Sample Temperature

5.3/5.1 -a2R8

REMARKS:

[X] RUSH: Same Day 24 hr 48 hr (72 hr)

[ ] Rush Charges Authorized

[ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 06/27/2019 12:27:00 PM

Work Order #: 629301

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)?	5.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**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: 06/27/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/28/2019

Jessica Kramer

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-2943-1
Laboratory Sample Delivery Group: Eddy County, NM
Client Project/Site: Harkey 35 State 1

For:
Tetra Tech, Inc.
901 W Wall
Ste 100
Midland, Texas 79701

Attn: Clair Gonzales

JKramer

Authorized for release by:
6/14/2021 4:35:17 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

Table of Contents

Definitions/Glossary

Client: Tetra Tech, Inc. Job ID: 880-2943-1
Project/Site: Harkey 35 State 1 SDG: Eddy County, NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Job ID: 880-2943-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-2943-1

Comments
No additional comments.

Receipt
The samples were received on 6/10/2021 12:09 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.4º C.

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: H-4 (0"-6") (880-2943-4) and AH-1 (1'-1.5') (880-2943-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-3975 and analytical batch 880-3977 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Client Sample ID: H-1 (0"-6")

Date Collected: 06/09/21 00:00
Date Received: 06/10/21 12:09

Lab Sample ID: 880-2943-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/10/21 23:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/10/21 23:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/10/21 23:29	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		06/10/21 13:04	06/10/21 23:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/10/21 23:29	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		06/10/21 13:04	06/10/21 23:29	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		06/10/21 13:04	06/10/21 23:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*06/10/21 13:04*	*06/10/21 23:29*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*06/10/21 13:04*	*06/10/21 23:29*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		06/10/21 14:13	06/13/21 20:15	1
Diesel Range Organics (Over C10-C28)	**229**		49.8		mg/Kg		06/10/21 14:13	06/13/21 20:15	1
Oil Range Organics (Over C28-C36)	**57.2**		49.8		mg/Kg		06/10/21 14:13	06/13/21 20:15	1
Total TPH	**286**		49.8		mg/Kg		06/10/21 14:13	06/13/21 20:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*06/10/21 14:13*	*06/13/21 20:15*	*1*
o-Terphenyl	*98*		*70 - 130*	*06/10/21 14:13*	*06/13/21 20:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.4**		5.04		mg/Kg			06/14/21 08:59	1

Client Sample ID: H-2 (0"-6")

Date Collected: 06/09/21 00:00
Date Received: 06/10/21 12:09

Lab Sample ID: 880-2943-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		06/10/21 13:04	06/10/21 23:54	1
Toluene	<0.00202	U	0.00202		mg/Kg		06/10/21 13:04	06/10/21 23:54	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/10/21 13:04	06/10/21 23:54	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		06/10/21 13:04	06/10/21 23:54	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/10/21 13:04	06/10/21 23:54	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		06/10/21 13:04	06/10/21 23:54	1
Total BTEX	<0.00404	U	0.00404		mg/Kg		06/10/21 13:04	06/10/21 23:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*06/10/21 13:04*	*06/10/21 23:54*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*06/10/21 13:04*	*06/10/21 23:54*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		06/10/21 14:13	06/13/21 20:36	1

Eurofins Xenco, Midland

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Client Sample ID: H-2 (0"-6")

Lab Sample ID: 880-2943-2
Matrix: Solid
Date Collected: 06/09/21 00:00
Date Received: 06/10/21 12:09

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**67.8**		49.7		mg/Kg		06/10/21 14:13	06/13/21 20:36	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		06/10/21 14:13	06/13/21 20:36	1
Total TPH	**67.8**		49.7		mg/Kg		06/10/21 14:13	06/13/21 20:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*06/10/21 14:13*	*06/13/21 20:36*	*1*
o-Terphenyl	*100*		*70 - 130*	*06/10/21 14:13*	*06/13/21 20:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**41.3**		5.01		mg/Kg			06/14/21 09:14	1

Client Sample ID: H-3 (0"-6")

Lab Sample ID: 880-2943-3
Matrix: Solid
Date Collected: 06/09/21 00:00
Date Received: 06/10/21 12:09

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/11/21 00:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/11/21 00:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/11/21 00:19	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		06/10/21 13:04	06/11/21 00:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/11/21 00:19	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		06/10/21 13:04	06/11/21 00:19	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		06/10/21 13:04	06/11/21 00:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*06/10/21 13:04*	*06/11/21 00:19*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*06/10/21 13:04*	*06/11/21 00:19*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		06/10/21 14:13	06/13/21 20:57	1
Diesel Range Organics (Over C10-C28)	**1110**		49.8		mg/Kg		06/10/21 14:13	06/13/21 20:57	1
Oil Range Organics (Over C28-C36)	**180**		49.8		mg/Kg		06/10/21 14:13	06/13/21 20:57	1
Total TPH	**1290**		49.8		mg/Kg		06/10/21 14:13	06/13/21 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*06/10/21 14:13*	*06/13/21 20:57*	*1*
o-Terphenyl	*111*		*70 - 130*	*06/10/21 14:13*	*06/13/21 20:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**250**		5.04		mg/Kg			06/14/21 09:19	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Client Sample ID: H-4 (0"-6")

Lab Sample ID: 880-2943-4
Matrix: Solid
Date Collected: 06/09/21 00:00
Date Received: 06/10/21 12:09

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		06/10/21 13:04	06/11/21 00:44	1
Toluene	<0.00202	U	0.00202		mg/Kg		06/10/21 13:04	06/11/21 00:44	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/10/21 13:04	06/11/21 00:44	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		06/10/21 13:04	06/11/21 00:44	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/10/21 13:04	06/11/21 00:44	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		06/10/21 13:04	06/11/21 00:44	1
Total BTEX	<0.00403	U	0.00403		mg/Kg		06/10/21 13:04	06/11/21 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*168*	*S1+*	*70 - 130*	*06/10/21 13:04*	*06/11/21 00:44*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*06/10/21 13:04*	*06/11/21 00:44*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 21:18	1
Diesel Range Organics (Over C10-C28)	**1140**		50.0		mg/Kg		06/10/21 14:13	06/13/21 21:18	1
Oil Range Organics (Over C28-C36)	**206**		50.0		mg/Kg		06/10/21 14:13	06/13/21 21:18	1
Total TPH	**1350**		50.0		mg/Kg		06/10/21 14:13	06/13/21 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*06/10/21 14:13*	*06/13/21 21:18*	*1*
o-Terphenyl	*100*		*70 - 130*	*06/10/21 14:13*	*06/13/21 21:18*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24.9**		5.03		mg/Kg			06/14/21 09:24	1

Client Sample ID: AH-1 (0'-1')

Lab Sample ID: 880-2943-5
Matrix: Solid
Date Collected: 06/09/21 00:00
Date Received: 06/10/21 12:09

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		06/10/21 13:04	06/11/21 01:09	1
Toluene	<0.00201	U	0.00201		mg/Kg		06/10/21 13:04	06/11/21 01:09	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		06/10/21 13:04	06/11/21 01:09	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		06/10/21 13:04	06/11/21 01:09	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		06/10/21 13:04	06/11/21 01:09	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		06/10/21 13:04	06/11/21 01:09	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		06/10/21 13:04	06/11/21 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*06/10/21 13:04*	*06/11/21 01:09*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*06/10/21 13:04*	*06/11/21 01:09*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/10/21 14:13	06/13/21 21:39	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Client Sample ID: AH-1 (0'-1')

Lab Sample ID: 880-2943-5
Matrix: Solid
Date Collected: 06/09/21 00:00
Date Received: 06/10/21 12:09

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	271		49.9		mg/Kg		06/10/21 14:13	06/13/21 21:39	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/10/21 14:13	06/13/21 21:39	1
Total TPH	271		49.9		mg/Kg		06/10/21 14:13	06/13/21 21:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*06/10/21 14:13*	*06/13/21 21:39*	*1*
o-Terphenyl	*113*		*70 - 130*	*06/10/21 14:13*	*06/13/21 21:39*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	131		5.02		mg/Kg			06/14/21 09:29	1

Client Sample ID: AH-1 (1'-1.5')

Lab Sample ID: 880-2943-6
Matrix: Solid
Date Collected: 06/09/21 00:00
Date Received: 06/10/21 12:09

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00240		0.00200		mg/Kg		06/10/21 13:04	06/11/21 01:34	1
Toluene	0.0143		0.00200		mg/Kg		06/10/21 13:04	06/11/21 01:34	1
Ethylbenzene	0.0126		0.00200		mg/Kg		06/10/21 13:04	06/11/21 01:34	1
m-Xylene & p-Xylene	0.657		0.00400		mg/Kg		06/10/21 13:04	06/11/21 01:34	1
o-Xylene	0.139		0.00200		mg/Kg		06/10/21 13:04	06/11/21 01:34	1
Xylenes, Total	0.796		0.00400		mg/Kg		06/10/21 13:04	06/11/21 01:34	1
Total BTEX	0.825		0.00400		mg/Kg		06/10/21 13:04	06/11/21 01:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*293*	*S1+*	*70 - 130*	*06/10/21 13:04*	*06/11/21 01:34*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*06/10/21 13:04*	*06/11/21 01:34*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	629		49.9		mg/Kg		06/10/21 14:13	06/13/21 21:59	1
Diesel Range Organics (Over C10-C28)	1840		49.9		mg/Kg		06/10/21 14:13	06/13/21 21:59	1
Oil Range Organics (Over C28-C36)	214		49.9		mg/Kg		06/10/21 14:13	06/13/21 21:59	1
Total TPH	2680		49.9		mg/Kg		06/10/21 14:13	06/13/21 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*06/10/21 14:13*	*06/13/21 21:59*	*1*
o-Terphenyl	*98*		*70 - 130*	*06/10/21 14:13*	*06/13/21 21:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	268		4.95		mg/Kg			06/14/21 09:43	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Client Sample ID: AH-2 (0'-1')

Lab Sample ID: 880-2943-7
Matrix: Solid
Date Collected: 06/09/21 00:00
Date Received: 06/10/21 12:09

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/10/21 13:04	06/11/21 02:00	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/10/21 13:04	06/11/21 02:00	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/10/21 13:04	06/11/21 02:00	1
m-Xylene & p-Xylene	**0.0134**		0.00398		mg/Kg		06/10/21 13:04	06/11/21 02:00	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/10/21 13:04	06/11/21 02:00	1
Xylenes, Total	**0.0134**		0.00398		mg/Kg		06/10/21 13:04	06/11/21 02:00	1
Total BTEX	**0.0134**		0.00398		mg/Kg		06/10/21 13:04	06/11/21 02:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*06/10/21 13:04*	*06/11/21 02:00*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*06/10/21 13:04*	*06/11/21 02:00*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 22:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 22:20	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 22:20	1
Total TPH	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*06/10/21 14:13*	*06/13/21 22:20*	*1*
o-Terphenyl	*103*		*70 - 130*	*06/10/21 14:13*	*06/13/21 22:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**55.6**		4.99		mg/Kg			06/14/21 09:48	1

Client Sample ID: AH-2 (1'-1.5')

Lab Sample ID: 880-2943-8
Matrix: Solid
Date Collected: 06/09/21 00:00
Date Received: 06/10/21 12:09

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/10/21 13:04	06/11/21 02:25	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/10/21 13:04	06/11/21 02:25	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/10/21 13:04	06/11/21 02:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/10/21 13:04	06/11/21 02:25	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/10/21 13:04	06/11/21 02:25	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/10/21 13:04	06/11/21 02:25	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		06/10/21 13:04	06/11/21 02:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*06/10/21 13:04*	*06/11/21 02:25*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*06/10/21 13:04*	*06/11/21 02:25*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 22:41	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Client Sample ID: AH-2 (1'-1.5')

Date Collected: 06/09/21 00:00
Date Received: 06/10/21 12:09

Lab Sample ID: 880-2943-8

Matrix: Solid

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 22:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 22:41	1
Total TPH	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*06/10/21 14:13*	*06/13/21 22:41*	*1*
o-Terphenyl	*93*		*70 - 130*	*06/10/21 14:13*	*06/13/21 22:41*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**96.8**		5.00		mg/Kg			06/14/21 09:53	1

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-2943-1	H-1 (0"-6")	96	98
880-2943-2	H-2 (0"-6")	93	97
880-2943-3	H-3 (0"-6")	117	87
880-2943-4	H-4 (0"-6")	168 S1+	90
880-2943-5	AH-1 (0'-1')	101	100
880-2943-6	AH-1 (1'-1.5')	293 S1+	71
880-2943-7	AH-2 (0'-1')	102	104
880-2943-8	AH-2 (1'-1.5')	100	104
LCS 880-3975/1-A	Lab Control Sample	90	103
LCSD 880-3975/2-A	Lab Control Sample Dup	93	103
MB 880-3975/5-A	Method Blank	66 S1-	82

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-2943-1	H-1 (0"-6")	98	98
880-2943-2	H-2 (0"-6")	106	100
880-2943-3	H-3 (0"-6")	114	111
880-2943-4	H-4 (0"-6")	106	100
880-2943-5	AH-1 (0'-1')	113	113
880-2943-6	AH-1 (1'-1.5')	124	98
880-2943-7	AH-2 (0'-1')	105	103
880-2943-8	AH-2 (1'-1.5')	96	93
LCS 880-3985/2-A	Lab Control Sample	84	82
LCSD 880-3985/3-A	Lab Control Sample Dup	90	83
MB 880-3985/1-A	Method Blank	98	103

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3975/5-A
Matrix: Solid
Analysis Batch: 3977

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3975

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/10/21 16:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/10/21 16:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/10/21 16:47	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/10/21 13:04	06/10/21 16:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/10/21 13:04	06/10/21 16:47	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/10/21 13:04	06/10/21 16:47	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		06/10/21 13:04	06/10/21 16:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*06/10/21 13:04*	*06/10/21 16:47*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*06/10/21 13:04*	*06/10/21 16:47*	*1*

Lab Sample ID: LCS 880-3975/1-A
Matrix: Solid
Analysis Batch: 3977

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3975

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09431		mg/Kg		94	70 - 130		
Toluene			0.100	0.09645		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.1067		mg/Kg		107	70 - 130		
m-Xylene & p-Xylene			0.200	0.1918		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09653		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-3975/2-A
Matrix: Solid
Analysis Batch: 3977

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3975

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09340		mg/Kg		93	70 - 130	1	35
Toluene			0.100	0.08747		mg/Kg		87	70 - 130	10	35
Ethylbenzene			0.100	0.1053		mg/Kg		105	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1895		mg/Kg		95	70 - 130	1	35
o-Xylene			0.100	0.09521		mg/Kg		95	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3985/1-A
Matrix: Solid
Analysis Batch: 4069

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 13:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 13:58	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 13:58	1
Total TPH	<50.0	U	50.0		mg/Kg		06/10/21 14:13	06/13/21 13:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*06/10/21 14:13*	*06/13/21 13:58*	*1*
o-Terphenyl	*103*		*70 - 130*	*06/10/21 14:13*	*06/13/21 13:58*	*1*

Lab Sample ID: LCS 880-3985/2-A
Matrix: Solid
Analysis Batch: 4069

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3985

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	752.2		mg/Kg		75	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	909.2		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*
o-Terphenyl	*82*		*70 - 130*

Lab Sample ID: LCSD 880-3985/3-A
Matrix: Solid
Analysis Batch: 4069

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3985

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	788.9		mg/Kg		79	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	961.9		mg/Kg		96	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-4049/1-A
Matrix: Solid
Analysis Batch: 4075

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/14/21 08:45	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-4049/2-A
Matrix: Solid
Analysis Batch: 4075

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	247.6		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 880-4049/3-A
Matrix: Solid
Analysis Batch: 4075

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	248.0		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 880-2943-1 MS
Matrix: Solid
Analysis Batch: 4075

Client Sample ID: H-1 (0"-6")
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.4		250	250.4		mg/Kg		95	90 - 110

Lab Sample ID: 880-2943-1 MSD
Matrix: Solid
Analysis Batch: 4075

Client Sample ID: H-1 (0"-6")
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12.4		250	250.4		mg/Kg		95	90 - 110	0	20

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

GC VOA

Prep Batch: 3975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2943-1	H-1 (0"-6")	Total/NA	Solid	5035	
880-2943-2	H-2 (0"-6")	Total/NA	Solid	5035	
880-2943-3	H-3 (0"-6")	Total/NA	Solid	5035	
880-2943-4	H-4 (0"-6")	Total/NA	Solid	5035	
880-2943-5	AH-1 (0'-1')	Total/NA	Solid	5035	
880-2943-6	AH-1 (1'-1.5')	Total/NA	Solid	5035	
880-2943-7	AH-2 (0'-1')	Total/NA	Solid	5035	
880-2943-8	AH-2 (1'-1.5')	Total/NA	Solid	5035	
MB 880-3975/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3975/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3975/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2943-1	H-1 (0"-6")	Total/NA	Solid	8021B	3975
880-2943-2	H-2 (0"-6")	Total/NA	Solid	8021B	3975
880-2943-3	H-3 (0"-6")	Total/NA	Solid	8021B	3975
880-2943-4	H-4 (0"-6")	Total/NA	Solid	8021B	3975
880-2943-5	AH-1 (0'-1')	Total/NA	Solid	8021B	3975
880-2943-6	AH-1 (1'-1.5')	Total/NA	Solid	8021B	3975
880-2943-7	AH-2 (0'-1')	Total/NA	Solid	8021B	3975
880-2943-8	AH-2 (1'-1.5')	Total/NA	Solid	8021B	3975
MB 880-3975/5-A	Method Blank	Total/NA	Solid	8021B	3975
LCS 880-3975/1-A	Lab Control Sample	Total/NA	Solid	8021B	3975
LCSD 880-3975/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3975

GC Semi VOA

Prep Batch: 3985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2943-1	H-1 (0"-6")	Total/NA	Solid	8015NM Prep	
880-2943-2	H-2 (0"-6")	Total/NA	Solid	8015NM Prep	
880-2943-3	H-3 (0"-6")	Total/NA	Solid	8015NM Prep	
880-2943-4	H-4 (0"-6")	Total/NA	Solid	8015NM Prep	
880-2943-5	AH-1 (0'-1')	Total/NA	Solid	8015NM Prep	
880-2943-6	AH-1 (1'-1.5')	Total/NA	Solid	8015NM Prep	
880-2943-7	AH-2 (0'-1')	Total/NA	Solid	8015NM Prep	
880-2943-8	AH-2 (1'-1.5')	Total/NA	Solid	8015NM Prep	
MB 880-3985/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3985/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3985/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 4069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2943-1	H-1 (0"-6")	Total/NA	Solid	8015B NM	3985
880-2943-2	H-2 (0"-6")	Total/NA	Solid	8015B NM	3985
880-2943-3	H-3 (0"-6")	Total/NA	Solid	8015B NM	3985
880-2943-4	H-4 (0"-6")	Total/NA	Solid	8015B NM	3985
880-2943-5	AH-1 (0'-1')	Total/NA	Solid	8015B NM	3985
880-2943-6	AH-1 (1'-1.5')	Total/NA	Solid	8015B NM	3985
880-2943-7	AH-2 (0'-1')	Total/NA	Solid	8015B NM	3985

QC Association Summary

Client: Tetra Tech, Inc. Job ID: 880-2943-1
Project/Site: Harkey 35 State 1 SDG: Eddy County, NM

GC Semi VOA (Continued)

Analysis Batch: 4069 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2943-8	AH-2 (1'-1.5')	Total/NA	Solid	8015B NM	3985
MB 880-3985/1-A	Method Blank	Total/NA	Solid	8015B NM	3985
LCS 880-3985/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3985
LCSD 880-3985/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3985

HPLC/IC

Leach Batch: 4049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2943-1	H-1 (0"-6")	Soluble	Solid	DI Leach	
880-2943-2	H-2 (0"-6")	Soluble	Solid	DI Leach	
880-2943-3	H-3 (0"-6")	Soluble	Solid	DI Leach	
880-2943-4	H-4 (0"-6")	Soluble	Solid	DI Leach	
880-2943-5	AH-1 (0'-1')	Soluble	Solid	DI Leach	
880-2943-6	AH-1 (1'-1.5')	Soluble	Solid	DI Leach	
880-2943-7	AH-2 (0'-1')	Soluble	Solid	DI Leach	
880-2943-8	AH-2 (1'-1.5')	Soluble	Solid	DI Leach	
MB 880-4049/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-4049/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-4049/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-2943-1 MS	H-1 (0"-6")	Soluble	Solid	DI Leach	
880-2943-1 MSD	H-1 (0"-6")	Soluble	Solid	DI Leach	

Analysis Batch: 4075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-2943-1	H-1 (0"-6")	Soluble	Solid	300.0	4049
880-2943-2	H-2 (0"-6")	Soluble	Solid	300.0	4049
880-2943-3	H-3 (0"-6")	Soluble	Solid	300.0	4049
880-2943-4	H-4 (0"-6")	Soluble	Solid	300.0	4049
880-2943-5	AH-1 (0'-1')	Soluble	Solid	300.0	4049
880-2943-6	AH-1 (1'-1.5')	Soluble	Solid	300.0	4049
880-2943-7	AH-2 (0'-1')	Soluble	Solid	300.0	4049
880-2943-8	AH-2 (1'-1.5')	Soluble	Solid	300.0	4049
MB 880-4049/1-A	Method Blank	Soluble	Solid	300.0	4049
LCS 880-4049/2-A	Lab Control Sample	Soluble	Solid	300.0	4049
LCSD 880-4049/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	4049
880-2943-1 MS	H-1 (0"-6")	Soluble	Solid	300.0	4049
880-2943-1 MSD	H-1 (0"-6")	Soluble	Solid	300.0	4049

Lab Chronicle

Client: Tetra Tech, Inc. Job ID: 880-2943-1
Project/Site: Harkey 35 State 1 SDG: Eddy County, NM

Client Sample ID: H-1 (0"-6") Lab Sample ID: 880-2943-1

Date Collected: 06/09/21 00:00 **Matrix: Solid**
Date Received: 06/10/21 12:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	3975	06/10/21 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3977	06/10/21 23:29	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	3985	06/10/21 14:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4069	06/13/21 20:15	AM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	4049	06/11/21 16:33	CH	XEN MID
Soluble	Analysis	300.0		1			4075	06/14/21 08:59	CH	XEN MID

Client Sample ID: H-2 (0"-6") Lab Sample ID: 880-2943-2

Date Collected: 06/09/21 00:00 **Matrix: Solid**
Date Received: 06/10/21 12:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	3975	06/10/21 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3977	06/10/21 23:54	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	3985	06/10/21 14:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4069	06/13/21 20:36	AM	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	4049	06/11/21 16:33	CH	XEN MID
Soluble	Analysis	300.0		1			4075	06/14/21 09:14	CH	XEN MID

Client Sample ID: H-3 (0"-6") Lab Sample ID: 880-2943-3

Date Collected: 06/09/21 00:00 **Matrix: Solid**
Date Received: 06/10/21 12:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3975	06/10/21 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3977	06/11/21 00:19	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3985	06/10/21 14:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4069	06/13/21 20:57	AM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	4049	06/11/21 16:33	CH	XEN MID
Soluble	Analysis	300.0		1			4075	06/14/21 09:19	CH	XEN MID

Client Sample ID: H-4 (0"-6") Lab Sample ID: 880-2943-4

Date Collected: 06/09/21 00:00 **Matrix: Solid**
Date Received: 06/10/21 12:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	3975	06/10/21 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3977	06/11/21 00:44	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3985	06/10/21 14:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4069	06/13/21 21:18	AM	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	4049	06/11/21 16:33	CH	XEN MID
Soluble	Analysis	300.0		1			4075	06/14/21 09:24	CH	XEN MID

Lab Chronicle

Client: Tetra Tech, Inc. Job ID: 880-2943-1
Project/Site: Harkey 35 State 1 SDG: Eddy County, NM

Client Sample ID: AH-1 (0'-1') Lab Sample ID: 880-2943-5

Date Collected: 06/09/21 00:00 **Matrix: Solid**
Date Received: 06/10/21 12:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	3975	06/10/21 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3977	06/11/21 01:09	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3985	06/10/21 14:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4069	06/13/21 21:39	AM	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	4049	06/11/21 16:33	CH	XEN MID
Soluble	Analysis	300.0		1			4075	06/14/21 09:29	CH	XEN MID

Client Sample ID: AH-1 (1'-1.5') Lab Sample ID: 880-2943-6

Date Collected: 06/09/21 00:00 **Matrix: Solid**
Date Received: 06/10/21 12:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	3975	06/10/21 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3977	06/11/21 01:34	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3985	06/10/21 14:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4069	06/13/21 21:59	AM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	4049	06/11/21 16:33	CH	XEN MID
Soluble	Analysis	300.0		1			4075	06/14/21 09:43	CH	XEN MID

Client Sample ID: AH-2 (0'-1') Lab Sample ID: 880-2943-7

Date Collected: 06/09/21 00:00 **Matrix: Solid**
Date Received: 06/10/21 12:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	3975	06/10/21 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3977	06/11/21 02:00	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3985	06/10/21 14:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4069	06/13/21 22:20	AM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	4049	06/11/21 16:33	CH	XEN MID
Soluble	Analysis	300.0		1			4075	06/14/21 09:48	CH	XEN MID

Client Sample ID: AH-2 (1'-1.5') Lab Sample ID: 880-2943-8

Date Collected: 06/09/21 00:00 **Matrix: Solid**
Date Received: 06/10/21 12:09

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	3975	06/10/21 13:04	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3977	06/11/21 02:25	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3985	06/10/21 14:13	DM	XEN MID
Total/NA	Analysis	8015B NM		1			4069	06/13/21 22:41	AM	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	4049	06/11/21 16:33	CH	XEN MID
Soluble	Analysis	300.0		1			4075	06/14/21 09:53	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: Tetra Tech, Inc. Job ID: 880-2943-1
Project/Site: Harkey 35 State 1 SDG: Eddy County, NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State 1

Job ID: 880-2943-1
SDG: Eddy County, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
880-2943-1	H-1 (0"-6")	Solid	06/09/21 00:00	06/10/21 12:09	
880-2943-2	H-2 (0"-6")	Solid	06/09/21 00:00	06/10/21 12:09	
880-2943-3	H-3 (0"-6")	Solid	06/09/21 00:00	06/10/21 12:09	
880-2943-4	H-4 (0"-6")	Solid	06/09/21 00:00	06/10/21 12:09	
880-2943-5	AH-1 (0'-1')	Solid	06/09/21 00:00	06/10/21 12:09	
880-2943-6	AH-1 (1'-1.5')	Solid	06/09/21 00:00	06/10/21 12:09	
880-2943-7	AH-2 (0'-1')	Solid	06/09/21 00:00	06/10/21 12:09	
880-2943-8	AH-2 (1'-1.5')	Solid	06/09/21 00:00	06/10/21 12:09	

Analysis Request of Chain of Custody Record

Tetra Tech, Inc.

901 West Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

880-2943 Chain of Custody

Page 1 of 1

880-2943

Client Name	EOG
Site Manager	Brittany Long
Project Name	Harkey 35 State 1
Project Location (county, state)	Eddy County, New Mexico
Project #	212C-MD-02521
Invoice to	EOG, Attention Todd Wells
Receiving Laboratory	Eurofins Xenco
Sampler Signature	Colton Bickerstaff
Comments	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	# CONTAINERS	FILTERED (Y/N)
	H-1 (0"-6")	6/9/2021			X			X	1	N
	H-2 (0"-6")	6/9/2021			X			X	1	N
	H-3 (0"-6")	6/9/2021			X			X	1	N
	H-4 (0"-6")	6/9/2021			X			X	1	N
	AH-1 (0'-1')	6/9/2021			X			X	1	N
	AH-1 (1'-1 5')	6/9/2021			X			X	1	N
	AH-2 (0'-1')	6/9/2021			X			X	1	N
	AH-2 (1'-1 5')	6/9/2021			X			X	1	N

ANALYSIS REQUEST
(Circle or Specify Method No.)

BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO)	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	Asbestos			Hold
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							
X		X												X							

Relinquished by: Colton Bickerstaff — Date: 6/10/21 — Time:

Received by: [signature] — Date: 6/10/21 — Time: 1209

Relinquished by: — Date: — Time:

Received by: — Date: — Time:

Relinquished by: — Date: — Time:

Received by: — Date: — Time:

LAB USE ONLY

Sample Temperature: 3.9/4.4 +0.5

REMARKS

[X] RUSH Same Day 24 hr 48 hr (72 hr)

[ ] Rush Charges Authorized

[ ] Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 880-2943-1
SDG Number: Eddy County, NM

Login Number: 2943
List Number: 1
Creator: Phillips, Kerianna

List Source: Eurofins Xenco, Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	No time on COC or sample containers
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

Eurofins Xenco, Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-4047-1
Laboratory Sample Delivery Group: Eddy Co, NM
Client Project/Site: Harkey 35 State #1

For:
Tetra Tech, Inc.
901 W Wall
Ste 100
Midland, Texas 79701

Attn: Clair Gonzales

JKramer

Authorized for release by:
7/19/2021 2:06:18 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Laboratory Job ID: 880-4047-1
SDG: Eddy Co, NM

Table of Contents

Definitions/Glossary

Client: Tetra Tech, Inc. Job ID: 880-4047-1
Project/Site: Harkey 35 State #1 SDG: Eddy Co, NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Job ID: 880-4047-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-4047-1

Receipt
The samples were received on 7/15/2021 4:14 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 6.0°C

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Client Sample ID: BH-1 (0-1')

Lab Sample ID: 880-4047-1
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		07/16/21 09:44	07/16/21 17:48	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/16/21 09:44	07/16/21 17:48	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/16/21 09:44	07/16/21 17:48	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/16/21 09:44	07/16/21 17:48	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/16/21 09:44	07/16/21 17:48	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/16/21 09:44	07/16/21 17:48	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		07/16/21 09:44	07/16/21 17:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*07/16/21 09:44*	*07/16/21 17:48*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/16/21 09:44*	*07/16/21 17:48*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 13:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 13:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 13:10	1
Total TPH	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 13:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*07/16/21 09:00*	*07/18/21 13:10*	*1*
o-Terphenyl	*94*		*70 - 130*	*07/16/21 09:00*	*07/18/21 13:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.1**		5.00		mg/Kg			07/19/21 09:39	1

Client Sample ID: BH-1 (2-3')

Lab Sample ID: 880-4047-2
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00219**		0.00200		mg/Kg		07/16/21 09:44	07/16/21 18:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/16/21 09:44	07/16/21 18:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/16/21 09:44	07/16/21 18:09	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/16/21 09:44	07/16/21 18:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/16/21 09:44	07/16/21 18:09	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/16/21 09:44	07/16/21 18:09	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		07/16/21 09:44	07/16/21 18:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/16/21 09:44*	*07/16/21 18:09*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/16/21 09:44*	*07/16/21 18:09*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/16/21 09:00	07/18/21 14:12	1

Eurofins Xenco, Midland

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Client Sample ID: BH-1 (2-3')

Lab Sample ID: 880-4047-2
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/16/21 09:00	07/18/21 14:12	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/16/21 09:00	07/18/21 14:12	1
Total TPH	<49.8	U	49.8		mg/Kg		07/16/21 09:00	07/18/21 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*07/16/21 09:00*	*07/18/21 14:12*	*1*
o-Terphenyl	*121*		*70 - 130*	*07/16/21 09:00*	*07/18/21 14:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**18.7**		5.02		mg/Kg			07/19/21 09:55	1

Client Sample ID: BH-1 (5')

Lab Sample ID: 880-4047-3
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/16/21 09:44	07/16/21 18:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/16/21 09:44	07/16/21 18:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/16/21 09:44	07/16/21 18:29	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/16/21 09:44	07/16/21 18:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/16/21 09:44	07/16/21 18:29	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/16/21 09:44	07/16/21 18:29	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		07/16/21 09:44	07/16/21 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/16/21 09:44*	*07/16/21 18:29*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*07/16/21 09:44*	*07/16/21 18:29*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 14:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 14:33	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 14:33	1
Total TPH	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 14:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*07/16/21 09:00*	*07/18/21 14:33*	*1*
o-Terphenyl	*97*		*70 - 130*	*07/16/21 09:00*	*07/18/21 14:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.88**		4.98		mg/Kg			07/19/21 10:00	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Client Sample ID: BH-1 (7')

Lab Sample ID: 880-4047-4
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/16/21 09:44	07/16/21 18:50	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/16/21 09:44	07/16/21 18:50	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/16/21 09:44	07/16/21 18:50	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/16/21 09:44	07/16/21 18:50	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/16/21 09:44	07/16/21 18:50	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/16/21 09:44	07/16/21 18:50	1
Total BTEX	<0.00403	U	0.00403		mg/Kg		07/16/21 09:44	07/16/21 18:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*07/16/21 09:44*	*07/16/21 18:50*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*07/16/21 09:44*	*07/16/21 18:50*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 14:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 14:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 14:54	1
Total TPH	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*07/16/21 09:00*	*07/18/21 14:54*	*1*
o-Terphenyl	*127*		*70 - 130*	*07/16/21 09:00*	*07/18/21 14:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**463**		4.97		mg/Kg			07/17/21 21:33	1

Client Sample ID: BH-1 (10')

Lab Sample ID: 880-4047-5
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		07/16/21 09:44	07/16/21 19:11	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/16/21 09:44	07/16/21 19:11	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/16/21 09:44	07/16/21 19:11	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/16/21 09:44	07/16/21 19:11	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/16/21 09:44	07/16/21 19:11	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/16/21 09:44	07/16/21 19:11	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		07/16/21 09:44	07/16/21 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/16/21 09:44*	*07/16/21 19:11*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*07/16/21 09:44*	*07/16/21 19:11*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		07/16/21 09:00	07/18/21 15:15	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Client Sample ID: BH-1 (10')

Lab Sample ID: 880-4047-5
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	93.9		49.8		mg/Kg		07/16/21 09:00	07/18/21 15:15	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/16/21 09:00	07/18/21 15:15	1
Total TPH	93.9		49.8		mg/Kg		07/16/21 09:00	07/18/21 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*07/16/21 09:00*	*07/18/21 15:15*	*1*
o-Terphenyl	*108*		*70 - 130*	*07/16/21 09:00*	*07/18/21 15:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	185		4.95		mg/Kg			07/17/21 21:49	1

Client Sample ID: BH-1 (15')

Lab Sample ID: 880-4047-6
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.109		0.0402		mg/Kg		07/16/21 09:44	07/16/21 19:32	20
Toluene	1.70		0.0402		mg/Kg		07/16/21 09:44	07/16/21 19:32	20
Ethylbenzene	0.770		0.0402		mg/Kg		07/16/21 09:44	07/16/21 19:32	20
m-Xylene & p-Xylene	8.84		0.0805		mg/Kg		07/16/21 09:44	07/16/21 19:32	20
o-Xylene	2.06		0.0402		mg/Kg		07/16/21 09:44	07/16/21 19:32	20
Xylenes, Total	10.9		0.0805		mg/Kg		07/16/21 09:44	07/16/21 19:32	20
Total BTEX	13.5		0.0805		mg/Kg		07/16/21 09:44	07/16/21 19:32	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*189*	*S1+*	*70 - 130*	*07/16/21 09:44*	*07/16/21 19:32*	*20*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*07/16/21 09:44*	*07/16/21 19:32*	*20*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	251		49.7		mg/Kg		07/16/21 09:00	07/18/21 15:35	1
Diesel Range Organics (Over C10-C28)	895		49.7		mg/Kg		07/16/21 09:00	07/18/21 15:35	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/16/21 09:00	07/18/21 15:35	1
Total TPH	1150		49.7		mg/Kg		07/16/21 09:00	07/18/21 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*07/16/21 09:00*	*07/18/21 15:35*	*1*
o-Terphenyl	*115*		*70 - 130*	*07/16/21 09:00*	*07/18/21 15:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	579		4.95		mg/Kg			07/17/21 21:55	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Client Sample ID: BH-1 (20')

Lab Sample ID: 880-4047-7
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0400	U	0.0400		mg/Kg		07/16/21 09:44	07/16/21 19:52	20
Toluene	**2.61**		0.0400		mg/Kg		07/16/21 09:44	07/16/21 19:52	20
Ethylbenzene	**1.08**		0.0400		mg/Kg		07/16/21 09:44	07/16/21 19:52	20
m-Xylene & p-Xylene	**12.4**		0.0800		mg/Kg		07/16/21 09:44	07/16/21 19:52	20
o-Xylene	**2.89**		0.0400		mg/Kg		07/16/21 09:44	07/16/21 19:52	20
Xylenes, Total	**15.3**		0.0800		mg/Kg		07/16/21 09:44	07/16/21 19:52	20
Total BTEX	**19.0**		0.0800		mg/Kg		07/16/21 09:44	07/16/21 19:52	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*175*	*S1+*	*70 - 130*	*07/16/21 09:44*	*07/16/21 19:52*	*20*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/16/21 09:44*	*07/16/21 19:52*	*20*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**586**		49.9		mg/Kg		07/16/21 09:00	07/18/21 15:56	1
Diesel Range Organics (Over C10-C28)	**2140**		49.9		mg/Kg		07/16/21 09:00	07/18/21 15:56	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/16/21 09:00	07/18/21 15:56	1
Total TPH	**2730**		49.9		mg/Kg		07/16/21 09:00	07/18/21 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*07/16/21 09:00*	*07/18/21 15:56*	*1*
o-Terphenyl	*96*		*70 - 130*	*07/16/21 09:00*	*07/18/21 15:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**450**		5.05		mg/Kg			07/17/21 22:00	1

Client Sample ID: BH-1 (25')

Lab Sample ID: 880-4047-8
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.107**		0.0399		mg/Kg		07/16/21 09:44	07/16/21 20:13	20
Toluene	**0.847**		0.0399		mg/Kg		07/16/21 09:44	07/16/21 20:13	20
Ethylbenzene	**0.268**		0.0399		mg/Kg		07/16/21 09:44	07/16/21 20:13	20
m-Xylene & p-Xylene	**3.08**		0.0798		mg/Kg		07/16/21 09:44	07/16/21 20:13	20
o-Xylene	**0.763**		0.0399		mg/Kg		07/16/21 09:44	07/16/21 20:13	20
Xylenes, Total	**3.84**		0.0798		mg/Kg		07/16/21 09:44	07/16/21 20:13	20
Total BTEX	**5.07**		0.0798		mg/Kg		07/16/21 09:44	07/16/21 20:13	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*07/16/21 09:44*	*07/16/21 20:13*	*20*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*07/16/21 09:44*	*07/16/21 20:13*	*20*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**127**		50.0		mg/Kg		07/16/21 09:00	07/18/21 16:20	1

Eurofins Xenco, Midland

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Client Sample ID: BH-1 (25')

Lab Sample ID: 880-4047-8
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	1150		50.0		mg/Kg		07/16/21 09:00	07/18/21 16:20	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 16:20	1
Total TPH	1280		50.0		mg/Kg		07/16/21 09:00	07/18/21 16:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*07/16/21 09:00*	*07/18/21 16:20*	*1*
o-Terphenyl	*98*		*70 - 130*	*07/16/21 09:00*	*07/18/21 16:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	303		4.99		mg/Kg			07/17/21 22:05	1

Client Sample ID: BH-1 (30')

Lab Sample ID: 880-4047-9
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0528		0.0398		mg/Kg		07/16/21 09:44	07/16/21 20:34	20
Toluene	0.134		0.0398		mg/Kg		07/16/21 09:44	07/16/21 20:34	20
Ethylbenzene	0.0993		0.0398		mg/Kg		07/16/21 09:44	07/16/21 20:34	20
m-Xylene & p-Xylene	1.03		0.0795		mg/Kg		07/16/21 09:44	07/16/21 20:34	20
o-Xylene	0.265		0.0398		mg/Kg		07/16/21 09:44	07/16/21 20:34	20
Xylenes, Total	1.30		0.0795		mg/Kg		07/16/21 09:44	07/16/21 20:34	20
Total BTEX	1.58		0.0795		mg/Kg		07/16/21 09:44	07/16/21 20:34	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*07/16/21 09:44*	*07/16/21 20:34*	*20*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/16/21 09:44*	*07/16/21 20:34*	*20*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	89.3		50.0		mg/Kg		07/16/21 09:00	07/18/21 16:40	1
Diesel Range Organics (Over C10-C28)	2280		50.0		mg/Kg		07/16/21 09:00	07/18/21 16:40	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 16:40	1
Total TPH	2370		50.0		mg/Kg		07/16/21 09:00	07/18/21 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*07/16/21 09:00*	*07/18/21 16:40*	*1*
o-Terphenyl	*115*		*70 - 130*	*07/16/21 09:00*	*07/18/21 16:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	200		5.04		mg/Kg			07/17/21 22:11	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Client Sample ID: BH-1 (35')

Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Lab Sample ID: 880-4047-10
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U	0.0398		mg/Kg		07/15/21 17:00	07/16/21 22:42	20
Toluene	**0.0794**		0.0398		mg/Kg		07/15/21 17:00	07/16/21 22:42	20
Ethylbenzene	**0.109**		0.0398		mg/Kg		07/15/21 17:00	07/16/21 22:42	20
m-Xylene & p-Xylene	**0.752**		0.0797		mg/Kg		07/15/21 17:00	07/16/21 22:42	20
o-Xylene	**0.184**		0.0398		mg/Kg		07/15/21 17:00	07/16/21 22:42	20
Xylenes, Total	**0.936**		0.0797		mg/Kg		07/15/21 17:00	07/16/21 22:42	20
Total BTEX	**1.12**		0.0797		mg/Kg		07/15/21 17:00	07/16/21 22:42	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*07/15/21 17:00*	*07/16/21 22:42*	*20*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*07/15/21 17:00*	*07/16/21 22:42*	*20*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		07/16/21 09:00	07/18/21 17:02	1
Diesel Range Organics (Over C10-C28)	**639**		49.9		mg/Kg		07/16/21 09:00	07/18/21 17:02	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/16/21 09:00	07/18/21 17:02	1
Total TPH	**639**		49.9		mg/Kg		07/16/21 09:00	07/18/21 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*07/16/21 09:00*	*07/18/21 17:02*	*1*
o-Terphenyl	*102*		*70 - 130*	*07/16/21 09:00*	*07/18/21 17:02*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**196**		25.0		mg/Kg			07/17/21 22:16	5

Client Sample ID: BH-1 (40')

Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Lab Sample ID: 880-4047-11
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/16/21 11:59	07/17/21 03:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/16/21 11:59	07/17/21 03:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/16/21 11:59	07/17/21 03:32	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/16/21 11:59	07/17/21 03:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/16/21 11:59	07/17/21 03:32	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/16/21 11:59	07/17/21 03:32	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		07/16/21 11:59	07/17/21 03:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*07/16/21 11:59*	*07/17/21 03:32*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*07/16/21 11:59*	*07/17/21 03:32*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 17:44	1

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Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Client Sample ID: BH-1 (40')

Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Lab Sample ID: 880-4047-11

Matrix: Solid

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**131**		50.0		mg/Kg		07/16/21 09:00	07/18/21 17:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 17:44	1
Total TPH	**131**		50.0		mg/Kg		07/16/21 09:00	07/18/21 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*07/16/21 09:00*	*07/18/21 17:44*	*1*
o-Terphenyl	*141*	*S1+*	*70 - 130*	*07/16/21 09:00*	*07/18/21 17:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**348**		24.8		mg/Kg			07/17/21 22:32	5

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-4047-1	BH-1 (0-1')	98	91
880-4047-2	BH-1 (2-3')	96	94
880-4047-3	BH-1 (5')	101	100
880-4047-4	BH-1 (7')	112	100
880-4047-5	BH-1 (10')	106	98
880-4047-6	BH-1 (15')	189 S1+	101
880-4047-7	BH-1 (20')	175 S1+	95
880-4047-8	BH-1 (25')	132 S1+	112
880-4047-9	BH-1 (30')	118	92
880-4047-10	BH-1 (35')	83	78
880-4047-11	BH-1 (40')	122	112
LCS 880-5237/1-A	Lab Control Sample	99	97
LCS 880-5271/1-A	Lab Control Sample	99	104
LCS 880-5278/1-A	Lab Control Sample	107	104
LCSD 880-5237/2-A	Lab Control Sample Dup	98	99
LCSD 880-5271/2-A	Lab Control Sample Dup	98	96
LCSD 880-5278/2-A	Lab Control Sample Dup	103	104
MB 880-5237/5-A	Method Blank	106	98
MB 880-5264/5-A	Method Blank	99	99
MB 880-5271/5-A	Method Blank	106	94
MB 880-5278/5-A	Method Blank	89	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-4047-1	BH-1 (0-1')	92	94
880-4047-1 MS	BH-1 (0-1')	88	86
880-4047-1 MSD	BH-1 (0-1')	91	82
880-4047-2	BH-1 (2-3')	114	121
880-4047-3	BH-1 (5')	94	97
880-4047-4	BH-1 (7')	99	127
880-4047-5	BH-1 (10')	104	108
880-4047-6	BH-1 (15')	111	115
880-4047-7	BH-1 (20')	117	96
880-4047-8	BH-1 (25')	100	98
880-4047-9	BH-1 (30')	117	115
880-4047-10	BH-1 (35')	100	102
880-4047-11	BH-1 (40')	97	141 S1+
LCS 880-5268/2-A	Lab Control Sample	92	89
LCSD 880-5268/3-A	Lab Control Sample Dup	104	97
MB 880-5268/1-A	Method Blank	92	96

Surrogate Legend

1CO = 1-Chlorooctane

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

OTPH = o-Terphenyl

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-5237/5-A
Matrix: Solid
Analysis Batch: 5272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5237

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/15/21 15:04	07/16/21 14:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/15/21 15:04	07/16/21 14:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/15/21 15:04	07/16/21 14:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/15/21 15:04	07/16/21 14:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/15/21 15:04	07/16/21 14:16	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/15/21 15:04	07/16/21 14:16	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		07/15/21 15:04	07/16/21 14:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/15/21 15:04*	*07/16/21 14:16*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*07/15/21 15:04*	*07/16/21 14:16*	*1*

Lab Sample ID: LCS 880-5237/1-A
Matrix: Solid
Analysis Batch: 5272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5237

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09791		mg/Kg		98	70 - 130		
Toluene			0.100	0.09407		mg/Kg		94	70 - 130		
Ethylbenzene			0.100	0.09966		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			0.200	0.1968		mg/Kg		98	70 - 130		
o-Xylene			0.100	0.09447		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 880-5237/2-A
Matrix: Solid
Analysis Batch: 5272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5237

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09598		mg/Kg		96	70 - 130	2	35
Toluene			0.100	0.08951		mg/Kg		90	70 - 130	5	35
Ethylbenzene			0.100	0.09230		mg/Kg		92	70 - 130	8	35
m-Xylene & p-Xylene			0.200	0.1824		mg/Kg		91	70 - 130	8	35
o-Xylene			0.100	0.08976		mg/Kg		90	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 880-5264/5-A
Matrix: Solid
Analysis Batch: 5266

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5264

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/16/21 08:35	07/16/21 13:17	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-5264/5-A
Matrix: Solid
Analysis Batch: 5266

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5264

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200		mg/Kg		07/16/21 08:35	07/16/21 13:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/16/21 08:35	07/16/21 13:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/16/21 08:35	07/16/21 13:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/16/21 08:35	07/16/21 13:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/16/21 08:35	07/16/21 13:17	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		07/16/21 08:35	07/16/21 13:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*07/16/21 08:35*	*07/16/21 13:17*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*07/16/21 08:35*	*07/16/21 13:17*	*1*

Lab Sample ID: MB 880-5271/5-A
Matrix: Solid
Analysis Batch: 5270

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5271

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/16/21 09:44	07/16/21 12:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/16/21 09:44	07/16/21 12:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/16/21 09:44	07/16/21 12:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/16/21 09:44	07/16/21 12:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/16/21 09:44	07/16/21 12:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/16/21 09:44	07/16/21 12:36	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		07/16/21 09:44	07/16/21 12:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*07/16/21 09:44*	*07/16/21 12:36*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/16/21 09:44*	*07/16/21 12:36*	*1*

Lab Sample ID: LCS 880-5271/1-A
Matrix: Solid
Analysis Batch: 5270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5271

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1190		mg/Kg		119	70 - 130
Toluene	0.100	0.1072		mg/Kg		107	70 - 130
Ethylbenzene	0.100	0.1043		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	0.200	0.2244		mg/Kg		112	70 - 130
o-Xylene	0.100	0.1020		mg/Kg		102	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-5271/2-A
Matrix: Solid
Analysis Batch: 5270

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5271

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1085		mg/Kg		109	70 - 130	9	35
Toluene			0.100	0.09997		mg/Kg		100	70 - 130	7	35
Ethylbenzene			0.100	0.09789		mg/Kg		98	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2059		mg/Kg		103	70 - 130	9	35
o-Xylene			0.100	0.09449		mg/Kg		94	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: MB 880-5278/5-A
Matrix: Solid
Analysis Batch: 5266

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5278

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/16/21 11:59	07/17/21 00:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/16/21 11:59	07/17/21 00:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/16/21 11:59	07/17/21 00:07	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/16/21 11:59	07/17/21 00:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/16/21 11:59	07/17/21 00:07	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/16/21 11:59	07/17/21 00:07	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		07/16/21 11:59	07/17/21 00:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*07/16/21 11:59*	*07/17/21 00:07*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*07/16/21 11:59*	*07/17/21 00:07*	*1*

Lab Sample ID: LCS 880-5278/1-A
Matrix: Solid
Analysis Batch: 5266

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5278

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene			0.100	0.09218		mg/Kg		92	70 - 130
Toluene			0.100	0.08426		mg/Kg		84	70 - 130
Ethylbenzene			0.100	0.08191		mg/Kg		82	70 - 130
m-Xylene & p-Xylene			0.200	0.1626		mg/Kg		81	70 - 130
o-Xylene			0.100	0.08437		mg/Kg		84	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-5278/2-A
Matrix: Solid
Analysis Batch: 5266

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5278

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09313		mg/Kg		93	70 - 130	1	35

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-5278/2-A
Matrix: Solid
Analysis Batch: 5266

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5278

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.08476		mg/Kg		85	70 - 130	1	35
Ethylbenzene			0.100	0.08152		mg/Kg		82	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.1642		mg/Kg		82	70 - 130	1	35
o-Xylene			0.100	0.08370		mg/Kg		84	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-5268/1-A
Matrix: Solid
Analysis Batch: 5327

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5268

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 12:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 12:08	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 12:08	1
Total TPH	<50.0	U	50.0		mg/Kg		07/16/21 09:00	07/18/21 12:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*07/16/21 09:00*	*07/18/21 12:08*	*1*
o-Terphenyl	*96*		*70 - 130*	*07/16/21 09:00*	*07/18/21 12:08*	*1*

Lab Sample ID: LCS 880-5268/2-A
Matrix: Solid
Analysis Batch: 5327

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5268

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10			1000	774.4		mg/Kg		77	70 - 130
Diesel Range Organics (Over C10-C28)			1000	837.3		mg/Kg		84	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*89*		*70 - 130*

Lab Sample ID: LCSD 880-5268/3-A
Matrix: Solid
Analysis Batch: 5327

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 5268

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	855.6		mg/Kg		86	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	942.6		mg/Kg		94	70 - 130	12	20

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	97		70 - 130

Lab Sample ID: 880-4047-1 MS — **Client Sample ID: BH-1 (0-1')**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5327 — **Prep Batch: 5268**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	996	824.9		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	996	950.7		mg/Kg		93	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: 880-4047-1 MSD — **Client Sample ID: BH-1 (0-1')**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 5327 — **Prep Batch: 5268**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	996	902.9		mg/Kg		91	70 - 130	9	20
Diesel Range Organics (Over C10-C28)	<50.0	U	996	937.4		mg/Kg		91	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	91		70 - 130
o-Terphenyl	82		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-5285/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 5333

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/17/21 20:44	1

Lab Sample ID: LCS 880-5285/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 5333

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	250.4		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-5285/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 5333

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	250.6		mg/Kg		100	90 - 110	0	20

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QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-4047-10 MS
Matrix: Solid
Analysis Batch: 5333

Client Sample ID: BH-1 (35')
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	196		1250	1443		mg/Kg		100	90 - 110

Lab Sample ID: 880-4047-10 MSD
Matrix: Solid
Analysis Batch: 5333

Client Sample ID: BH-1 (35')
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	196		1250	1442		mg/Kg		100	90 - 110	0	20

Lab Sample ID: MB 880-5347/1-A
Matrix: Solid
Analysis Batch: 5348

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/19/21 09:22	1

Lab Sample ID: LCS 880-5347/2-A
Matrix: Solid
Analysis Batch: 5348

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	247.5		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 880-5347/3-A
Matrix: Solid
Analysis Batch: 5348

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	252	250.3		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 880-4047-1 MS
Matrix: Solid
Analysis Batch: 5348

Client Sample ID: BH-1 (0-1')
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.1		250	275.3		mg/Kg		106	90 - 110

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

GC VOA

Prep Batch: 5237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-10	BH-1 (35')	Total/NA	Solid	5035	
MB 880-5237/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-5237/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-5237/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 5264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-5264/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 5266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-11	BH-1 (40')	Total/NA	Solid	8021B	5278
MB 880-5264/5-A	Method Blank	Total/NA	Solid	8021B	5264
MB 880-5278/5-A	Method Blank	Total/NA	Solid	8021B	5278
LCS 880-5278/1-A	Lab Control Sample	Total/NA	Solid	8021B	5278
LCSD 880-5278/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	5278

Analysis Batch: 5270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-1	BH-1 (0-1')	Total/NA	Solid	8021B	5271
880-4047-2	BH-1 (2-3')	Total/NA	Solid	8021B	5271
880-4047-3	BH-1 (5')	Total/NA	Solid	8021B	5271
880-4047-4	BH-1 (7')	Total/NA	Solid	8021B	5271
880-4047-5	BH-1 (10')	Total/NA	Solid	8021B	5271
880-4047-6	BH-1 (15')	Total/NA	Solid	8021B	5271
880-4047-7	BH-1 (20')	Total/NA	Solid	8021B	5271
880-4047-8	BH-1 (25')	Total/NA	Solid	8021B	5271
880-4047-9	BH-1 (30')	Total/NA	Solid	8021B	5271
MB 880-5271/5-A	Method Blank	Total/NA	Solid	8021B	5271
LCS 880-5271/1-A	Lab Control Sample	Total/NA	Solid	8021B	5271
LCSD 880-5271/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	5271

Prep Batch: 5271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-1	BH-1 (0-1')	Total/NA	Solid	5035	
880-4047-2	BH-1 (2-3')	Total/NA	Solid	5035	
880-4047-3	BH-1 (5')	Total/NA	Solid	5035	
880-4047-4	BH-1 (7')	Total/NA	Solid	5035	
880-4047-5	BH-1 (10')	Total/NA	Solid	5035	
880-4047-6	BH-1 (15')	Total/NA	Solid	5035	
880-4047-7	BH-1 (20')	Total/NA	Solid	5035	
880-4047-8	BH-1 (25')	Total/NA	Solid	5035	
880-4047-9	BH-1 (30')	Total/NA	Solid	5035	
MB 880-5271/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-5271/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-5271/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 5272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-10	BH-1 (35')	Total/NA	Solid	8021B	5237
MB 880-5237/5-A	Method Blank	Total/NA	Solid	8021B	5237

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

GC VOA (Continued)

Analysis Batch: 5272 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-5237/1-A	Lab Control Sample	Total/NA	Solid	8021B	5237
LCSD 880-5237/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	5237

Prep Batch: 5278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-11	BH-1 (40')	Total/NA	Solid	5035	
MB 880-5278/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-5278/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-5278/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 5268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-1	BH-1 (0-1')	Total/NA	Solid	8015NM Prep	
880-4047-2	BH-1 (2-3')	Total/NA	Solid	8015NM Prep	
880-4047-3	BH-1 (5')	Total/NA	Solid	8015NM Prep	
880-4047-4	BH-1 (7')	Total/NA	Solid	8015NM Prep	
880-4047-5	BH-1 (10')	Total/NA	Solid	8015NM Prep	
880-4047-6	BH-1 (15')	Total/NA	Solid	8015NM Prep	
880-4047-7	BH-1 (20')	Total/NA	Solid	8015NM Prep	
880-4047-8	BH-1 (25')	Total/NA	Solid	8015NM Prep	
880-4047-9	BH-1 (30')	Total/NA	Solid	8015NM Prep	
880-4047-10	BH-1 (35')	Total/NA	Solid	8015NM Prep	
880-4047-11	BH-1 (40')	Total/NA	Solid	8015NM Prep	
MB 880-5268/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-5268/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-5268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-4047-1 MS	BH-1 (0-1')	Total/NA	Solid	8015NM Prep	
880-4047-1 MSD	BH-1 (0-1')	Total/NA	Solid	8015NM Prep	

Analysis Batch: 5327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-1	BH-1 (0-1')	Total/NA	Solid	8015B NM	5268
880-4047-2	BH-1 (2-3')	Total/NA	Solid	8015B NM	5268
880-4047-3	BH-1 (5')	Total/NA	Solid	8015B NM	5268
880-4047-4	BH-1 (7')	Total/NA	Solid	8015B NM	5268
880-4047-5	BH-1 (10')	Total/NA	Solid	8015B NM	5268
880-4047-6	BH-1 (15')	Total/NA	Solid	8015B NM	5268
880-4047-7	BH-1 (20')	Total/NA	Solid	8015B NM	5268
880-4047-8	BH-1 (25')	Total/NA	Solid	8015B NM	5268
880-4047-9	BH-1 (30')	Total/NA	Solid	8015B NM	5268
880-4047-10	BH-1 (35')	Total/NA	Solid	8015B NM	5268
880-4047-11	BH-1 (40')	Total/NA	Solid	8015B NM	5268
MB 880-5268/1-A	Method Blank	Total/NA	Solid	8015B NM	5268
LCS 880-5268/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	5268
LCSD 880-5268/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	5268
880-4047-1 MS	BH-1 (0-1')	Total/NA	Solid	8015B NM	5268
880-4047-1 MSD	BH-1 (0-1')	Total/NA	Solid	8015B NM	5268

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

HPLC/IC

Leach Batch: 5285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-4	BH-1 (7')	Soluble	Solid	DI Leach	
880-4047-5	BH-1 (10')	Soluble	Solid	DI Leach	
880-4047-6	BH-1 (15')	Soluble	Solid	DI Leach	
880-4047-7	BH-1 (20')	Soluble	Solid	DI Leach	
880-4047-8	BH-1 (25')	Soluble	Solid	DI Leach	
880-4047-9	BH-1 (30')	Soluble	Solid	DI Leach	
880-4047-10	BH-1 (35')	Soluble	Solid	DI Leach	
880-4047-11	BH-1 (40')	Soluble	Solid	DI Leach	
MB 880-5285/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-5285/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-5285/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-4047-10 MS	BH-1 (35')	Soluble	Solid	DI Leach	
880-4047-10 MSD	BH-1 (35')	Soluble	Solid	DI Leach	

Analysis Batch: 5333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-4	BH-1 (7')	Soluble	Solid	300.0	5285
880-4047-5	BH-1 (10')	Soluble	Solid	300.0	5285
880-4047-6	BH-1 (15')	Soluble	Solid	300.0	5285
880-4047-7	BH-1 (20')	Soluble	Solid	300.0	5285
880-4047-8	BH-1 (25')	Soluble	Solid	300.0	5285
880-4047-9	BH-1 (30')	Soluble	Solid	300.0	5285
880-4047-10	BH-1 (35')	Soluble	Solid	300.0	5285
880-4047-11	BH-1 (40')	Soluble	Solid	300.0	5285
MB 880-5285/1-A	Method Blank	Soluble	Solid	300.0	5285
LCS 880-5285/2-A	Lab Control Sample	Soluble	Solid	300.0	5285
LCSD 880-5285/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	5285
880-4047-10 MS	BH-1 (35')	Soluble	Solid	300.0	5285
880-4047-10 MSD	BH-1 (35')	Soluble	Solid	300.0	5285

Leach Batch: 5347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-1	BH-1 (0-1')	Soluble	Solid	DI Leach	
880-4047-2	BH-1 (2-3')	Soluble	Solid	DI Leach	
880-4047-3	BH-1 (5')	Soluble	Solid	DI Leach	
MB 880-5347/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-5347/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-5347/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-4047-1 MS	BH-1 (0-1')	Soluble	Solid	DI Leach	
880-4047-1 MSD	BH-1 (0-1')	Soluble	Solid	DI Leach	

Analysis Batch: 5348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-4047-1	BH-1 (0-1')	Soluble	Solid	300.0	5347
880-4047-2	BH-1 (2-3')	Soluble	Solid	300.0	5347
880-4047-3	BH-1 (5')	Soluble	Solid	300.0	5347
MB 880-5347/1-A	Method Blank	Soluble	Solid	300.0	5347
LCS 880-5347/2-A	Lab Control Sample	Soluble	Solid	300.0	5347
LCSD 880-5347/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	5347
880-4047-1 MS	BH-1 (0-1')	Soluble	Solid	300.0	5347
880-4047-1 MSD	BH-1 (0-1')	Soluble	Solid	300.0	5347

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Client Sample ID: BH-1 (0-1')

Lab Sample ID: 880-4047-1
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	5271	07/16/21 09:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	5270	07/16/21 17:48	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	5268	07/16/21 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			5327	07/18/21 13:10	AJ	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	5347	07/18/21 15:55	SC	XEN MID
Soluble	Analysis	300.0		1			5348	07/19/21 09:39	CH	XEN MID

Client Sample ID: BH-1 (2-3')

Lab Sample ID: 880-4047-2
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	5271	07/16/21 09:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	5270	07/16/21 18:09	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	5268	07/16/21 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			5327	07/18/21 14:12	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	5347	07/18/21 15:55	SC	XEN MID
Soluble	Analysis	300.0		1			5348	07/19/21 09:55	CH	XEN MID

Client Sample ID: BH-1 (5')

Lab Sample ID: 880-4047-3
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	5271	07/16/21 09:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	5270	07/16/21 18:29	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	5268	07/16/21 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			5327	07/18/21 14:33	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	5347	07/18/21 15:55	SC	XEN MID
Soluble	Analysis	300.0		1			5348	07/19/21 10:00	CH	XEN MID

Client Sample ID: BH-1 (7')

Lab Sample ID: 880-4047-4
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	5271	07/16/21 09:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	5270	07/16/21 18:50	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	5268	07/16/21 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			5327	07/18/21 14:54	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	5285	07/16/21 12:17	CH	XEN MID
Soluble	Analysis	300.0		1			5333	07/17/21 21:33	CH	XEN MID

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Client Sample ID: BH-1 (10')

Lab Sample ID: 880-4047-5
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	5271	07/16/21 09:44	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	5270	07/16/21 19:11	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	5268	07/16/21 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			5327	07/18/21 15:15	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	5285	07/16/21 12:17	CH	XEN MID
Soluble	Analysis	300.0		1			5333	07/17/21 21:49	CH	XEN MID

Client Sample ID: BH-1 (15')

Lab Sample ID: 880-4047-6
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	5271	07/16/21 09:44	MR	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	5270	07/16/21 19:32	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	5268	07/16/21 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			5327	07/18/21 15:35	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	5285	07/16/21 12:17	CH	XEN MID
Soluble	Analysis	300.0		1			5333	07/17/21 21:55	CH	XEN MID

Client Sample ID: BH-1 (20')

Lab Sample ID: 880-4047-7
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	5271	07/16/21 09:44	MR	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	5270	07/16/21 19:52	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	5268	07/16/21 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			5327	07/18/21 15:56	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	5285	07/16/21 12:17	CH	XEN MID
Soluble	Analysis	300.0		1			5333	07/17/21 22:00	CH	XEN MID

Client Sample ID: BH-1 (25')

Lab Sample ID: 880-4047-8
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	5271	07/16/21 09:44	MR	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	5270	07/16/21 20:13	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	5268	07/16/21 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			5327	07/18/21 16:20	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	5285	07/16/21 12:17	CH	XEN MID
Soluble	Analysis	300.0		1			5333	07/17/21 22:05	CH	XEN MID

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Client Sample ID: BH-1 (30')

Lab Sample ID: 880-4047-9
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	5271	07/16/21 09:44	MR	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	5270	07/16/21 20:34	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	5268	07/16/21 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			5327	07/18/21 16:40	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	5285	07/16/21 12:17	CH	XEN MID
Soluble	Analysis	300.0		1			5333	07/17/21 22:11	CH	XEN MID

Client Sample ID: BH-1 (35')

Lab Sample ID: 880-4047-10
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	5237	07/15/21 17:00	MR	XEN MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	5272	07/16/21 22:42	KL	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	5268	07/16/21 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			5327	07/18/21 17:02	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	5285	07/16/21 12:17	CH	XEN MID
Soluble	Analysis	300.0		5			5333	07/17/21 22:16	CH	XEN MID

Client Sample ID: BH-1 (40')

Lab Sample ID: 880-4047-11
Matrix: Solid
Date Collected: 07/13/21 00:00
Date Received: 07/15/21 16:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	5278	07/16/21 11:59	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	5266	07/17/21 03:32	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	5268	07/16/21 09:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			5327	07/18/21 17:44	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	5285	07/16/21 12:17	CH	XEN MID
Soluble	Analysis	300.0		5			5333	07/17/21 22:32	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Harkey 35 State #1

Job ID: 880-4047-1
SDG: Eddy Co, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
880-4047-1	BH-1 (0-1')	Solid	07/13/21 00:00	07/15/21 16:14	
880-4047-2	BH-1 (2-3')	Solid	07/13/21 00:00	07/15/21 16:14	
880-4047-3	BH-1 (5')	Solid	07/13/21 00:00	07/15/21 16:14	
880-4047-4	BH-1 (7')	Solid	07/13/21 00:00	07/15/21 16:14	
880-4047-5	BH-1 (10')	Solid	07/13/21 00:00	07/15/21 16:14	
880-4047-6	BH-1 (15')	Solid	07/13/21 00:00	07/15/21 16:14	
880-4047-7	BH-1 (20')	Solid	07/13/21 00:00	07/15/21 16:14	
880-4047-8	BH-1 (25')	Solid	07/13/21 00:00	07/15/21 16:14	
880-4047-9	BH-1 (30')	Solid	07/13/21 00:00	07/15/21 16:14	
880-4047-10	BH-1 (35')	Solid	07/13/21 00:00	07/15/21 16:14	
880-4047-11	BH-1 (40')	Solid	07/13/21 00:00	07/15/21 16:14	

880-4047

Analysis Request of Chain of Custody Record

Page 1 of 2

Tetra Tech, Inc.

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Fax

880-4047 Chain of Custody

Client Name	EOG	Site Manager	Brittany Long
Project Name	Harkey 35 State #1	Contact Information	Brittany Long@tetratech.com
Project Location (county, state)	Eddy Co, NM	Project #:	212C-MD-02521 task 100
Invoice to	EOG James Kennedy		
Receiving Laboratory	Xenco	Sampler Signature	Colton Bickerstaff
Comments			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B / BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO)	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 300 0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	Asbestos			Hold
	BH-1 (0-1)'	7/13/2021	12 20		X						X		X												X							
	BH-1 (2-3)'	7/13/2021	12 20		X						X		X												X							
	BH-1 (5)'	7/13/2021	12 20		X						X		X												X							
	BH-1 (7)'	7/13/2021	12 20		X						X		X												X							
	BH-1 (10)'	7/13/2021	12 20		X						X		X												X							
	BH-1 (15)'	7/13/2021	12 20		X						X		X												X							
	BH-1 (20)'	7/13/2021	12 20		X						X		X												X							
	BH-1 (25)'	7/13/2021	12 20		X						X		X												X							
	BH-1 (30)'	7/13/2021	12 20		X						X		X												X							
	BH-1 (35)'	7/13/2021	12 20		X						X		X												X							

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by	Date	Time	Received by	Date	Time
	7-15-21	1608		7/15/21	1608
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time

LAB USE ONLY

Sample Temperature
5.5|6.0
+0.5

REMARKS.

☐ RUSH Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #

ORIGINAL COPY

7/19/2021

880-4047

Analysis Request of Chain of Custody Record

Page _____ of _____

7/19/2021

Tetra Tech, Inc.

901 W Wall Street, Ste 100
Midland, Texas 79701
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: EOG	Site Manager: Brittany Long
Project Name: Harkey 35 State #1	Contact Information: Brittany.Long@tetratech com
Project Location (county, state): Eddy Co, NM	Project #: 212C-MD-02521 task 100
Invoice to: EOG James Kennedy	
Receiving Laboratory: Xenco	Sampler Signature: Colton Bickerstaff
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE			# CONTAINERS	FILTERED (Y/N)
	BH-1 (40)'	7/13/2021	12 20		X								

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO DRO - ORO)	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 300 0	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	Asbestos			Hold
X		X												X							

Relinquished by	Date	Time	Received by	Date	Time
	7-15-21	1608		7/15/21	1608
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time

LAB USE ONLY

Sample Temperature 5.5 | 6.0 +0.5

REMARKS

☐ RUSH Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 880-4047-1
SDG Number: Eddy Co, NM

Login Number: 4047
List Number: 1
Creator: Teel, Brianna

List Source: Eurofins Xenco, Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	No times on COC, logged in per container labels.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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

Operator:	OGRID:
EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	7377
	Action Number: 68350
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	1/14/2022