

SITE INFORMATION

Report Type: Work Plan

NRM1935137204

General Site Information:

Site:		Goldeneye 18 Federal Com #1H					
Company:		COG Operating LLC					
Section, Township and Range		Unit P	Sec. 12	T 24S	R 31E		
Lease Number:							
County:		Lea County					
GPS:		32.22479			-103.723087		
Surface Owner:							
Mineral Owner:							
Directions:		From Intersection HWY 128 and HWY 31, travel 19.60 miles and turn right on lease road. Follow lease road for 0.43 miles, turn left onto lease road. Travel 0.42 miles to location.					

Release Data:

Date Released:	10/15/2019
Type Release:	Produced Water
Source of Contamination:	Flowline
Fluid Released:	200 bbls
Fluids Recovered:	150 bbls

Official Communication:

Name:	Ike Tavarez	Mike Carmona
Company:	COG Operating, LLC	Tetra Tech
Address:	One Concho Center	901 West Wall Street
	600 W. Illinois Ave.	Suite 100
City:	Midland Texas, 79701	Midland, Texas
Phone number:	(432) 686-3023	(432) 687-8121
Fax:	(432) 684-7137	
Email:	itavarez@conchoresources.com	Mike.Carmona@tetrattech.com

Site Characterization

Depth to Groundwater:	160' Below Surface
Karst Potential:	Low

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	20,000 mg/kg



April 14, 2020

Oil Conservation Division, District 1
1625 North French Drive
Hobbs, New Mexico 88240

Re: Work Plan for the COG Operating, LLC, Goldeneye 18 Federal Com #1H, Unit P, Section 12, Township 24 South, Range 31 East, Lea County, New Mexico. NRM1935137204

To Whom It may Concern:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating, LLC (COG), to assess a release that occurred at the Goldeneye 18 Federal Com #1H, Unit P, Section 12, Township 24 South, Range 31 East, Lea County, New Mexico (Site). The spill site coordinates are 32.224790°, -103.723087°. 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 October 15, 2019, and released approximately 200 barrels of produced water due to a third party damaging a flowline. A vacuum truck was dispatched to remove all freestanding fluids, recovering approximately 150 barrels of produced water. The release occurred on the edge of a paved road and pasture areas measuring 677' x 4', 345' x 5', 91' x 30', and 122' x 80'. 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, springs, wetlands, incorporated municipal boundaries, subsurface mines, water courses, or floodplains are located within the specified distances. T

The site is located in a low karst potential area. No water wells were listed within Section 12 on the New Mexico Office of the State Engineer's (NMOSE) database, the Geology and Groundwater Resources of Eddy County (Report 3), or the USGS National Water Information Database. The nearest well is listed in Section 2 on the NMOSE Database, approximately 2.26 miles northwest of the site, and has a reported depth to groundwater of 160' below surface. The groundwater data is shown in Appendix B.

Tetra Tech

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

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com

**TETRA TECH**

Regulatory

A risk-based evaluation was performed for the Site per 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. A site characterization was performed for the site, and no watercourses, lakebeds, sinkholes, playa lakes, residences, schools, hospitals, institutions, churches, springs, private domestic water wells, springs, wetlands, incorporated municipal boundaries, subsurface mines, or floodplains are located within the specified distances. Additionally, the site is located in a low karst potential area. 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 on the site characterization, the proposed RRAL for TPH is 2,500 mg/kg (GRO + DRO + MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 20,000 mg/kg.

Soil Assessment and Analytical Results

Initial Assessment

On December 11, 2019, Tetra Tech personnel were onsite to evaluate and sample the release area. A total of thirteen backhoe trenches (T-1 through T-13) were installed in the release footprint to total depths ranging from 0-1' to 5.0' below surface. Deeper samples could not be collected via backhoe due to a dense formation in the area.

The areas of T-9 and T-11, T-12 and T-13 were installed in areas where the release migrated into the pasture into a pipeline right-of-way. The remaining areas or trenches were along the side of the paved road where the release width measured approximately 3.0' to 5.0'.

Soil samples were collected and submitted to the laboratory for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The sample locations are shown on Figure 3.

Referring to Table 1, none of the samples collected showed TPH, benzene, total BTEX or chlorides above the laboratory RRALs. The areas of T-2 through T-12 showed chloride concentrations in the shallow soils, with concentrations highs of 7,230 mg/kg, 9,110 mg/kg, 8,480 mg/kg, 3,400 mg/kg, 10,400 mg/kg, 8,420 mg/kg, 9,060 mg/kg, 16,000 mg/kg, 6,970 mg/kg, 8,400 mg/kg, and 734 mg/kg at depths ranging from 0-1.0' to 4.0' below surface, respectively.

**TETRA TECH**

Proposed Work Plan

All of the constituents of concern were below Table 1 closure criteria concentrations. COG will attempt to remediate the areas below the reclamation standards. However, due to the dense formation and release location, paved road and pipeline right-of-way, the excavation depth of 4.0' may not be achieved. Heavy machinery (track hoe) cannot be used without partially closing the paved road, which is a high traffic area. The excavation will be performed using a backhoe to minimize the hazards in the area and excavate the impact to the maximum extent possible.

Based on the laboratory results, COG proposes to remove the chloride impacted soils as shown on Figure 4 and highlighted (green) on Table 1.

- The areas of T-2 through T-10 will be excavated to approximately 2.0'-3.0' below surface. Due to the dense formation, COG will attempt to remove the impact to a depth of 4.0' or to the maximum extent practicable.
- The area of T-11 and T-12 will be excavated to approximately 3.0'-4.0' below surface. Due to the dense formation, COG will attempt to remove the impact to a depth of 4.0' or the maximum extent practicable.

Safety Concerns

The proposed excavation depths may not be achieved to a depth 4.0' below surface or removed due to the dense formation and high volume of traffic along the road. Also, impacted soil around oil and gas equipment, structures or lines may not be feasible or practicable to be removed due to safety concerns for onsite personnel. As such, COG will excavate the impacted soils to the maximum extent possible.

Site Reclamation and Restoration

Concho will perform the reclamation and revegetation in the pasture area per 19.15.29.13. Based on the assessment results, the reclamation will be achieved by removing the impacted soil to a depth of 4.0' below surface above the Table 1 Closure Criteria (Groundwater <50 feet) constituents. Sidewall samples will be collected to confirm the removal of chlorides greater than 600 mg/kg or background (whichever is greater), TPH (GRO/DRO/MRO) of 100 mg/kg, benzene of 10 mg/kg and total BTEX of 50 mg/kg. Five-point composite sidewall confirmation samples will be collected every 200 square feet to ensure proper removal of the impacted areas. The backfilled material will be non-contaminated with concentrations below 600 mg/kg chlorides and reseeded per landowner guidelines when appropriate.



Conclusion

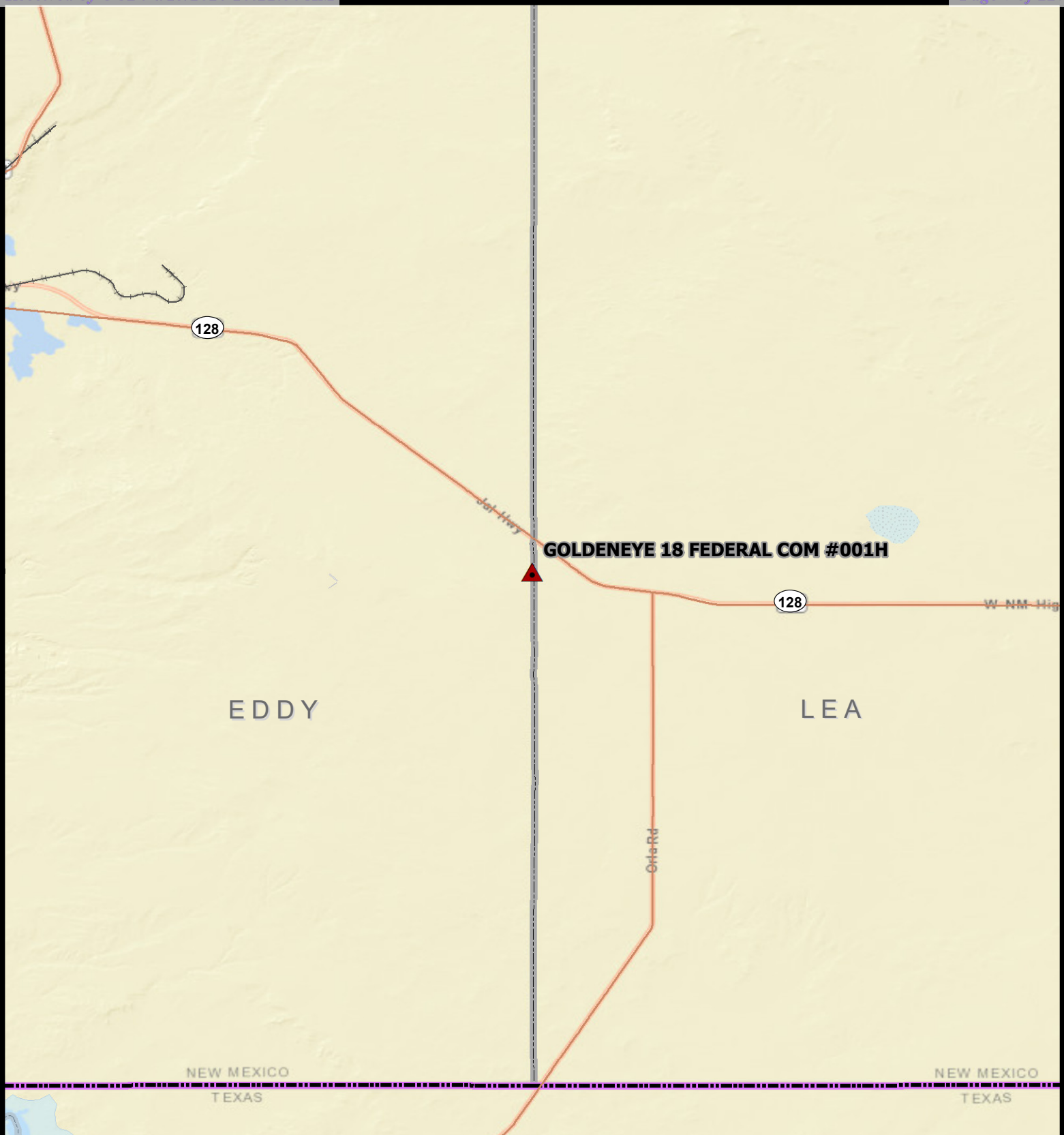
Upon completion, a final report detailing the remediation activities will be submitted to the NMOCD. If you have any questions or comments concerning the assessment or the proposed remediation activities for this site, please call at (432) 682-4559.

Respectfully submitted,
TETRA TECH

A handwritten signature in black ink, appearing to read 'Mike Carmona', written over a light gray rectangular background.

Mike Carmona
Geologist

Figures



SITE LOCATION



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

Colorado	Kansas
New Mexico	Oklahoma
	Texas

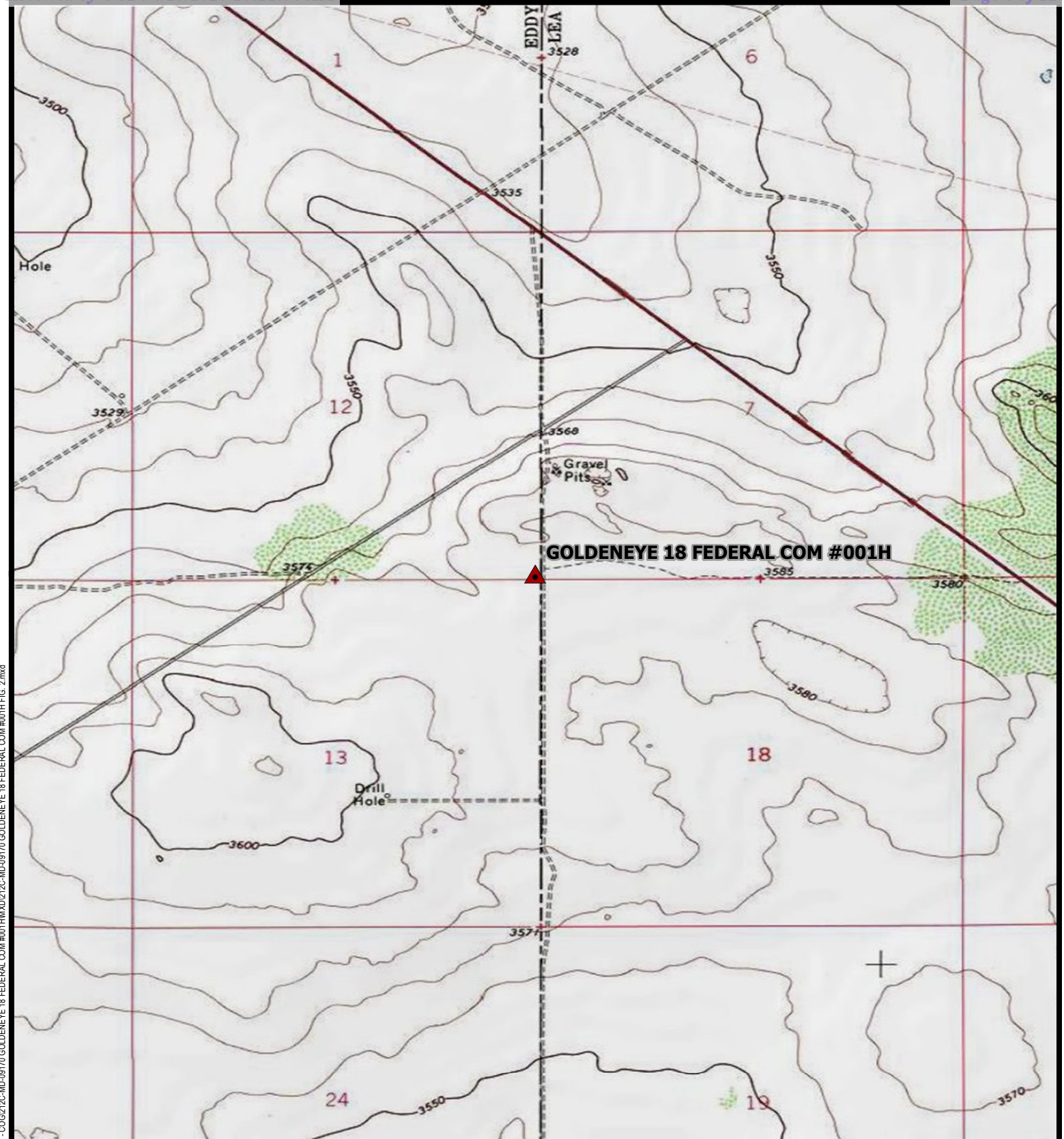
STATE LOCATOR MAP

TOPOGRAPHIC MAP
 GOLDENEYE 18 FEDERAL COM #001H
 Property Located at coordinates 32.224747°,-103.723299°
 EDDY COUNTY, NEW MEXICO

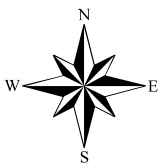


Project #:
 212C-MD-01970
 Date: 12-09-2019

FIGURE
 1



SITE LOCATION



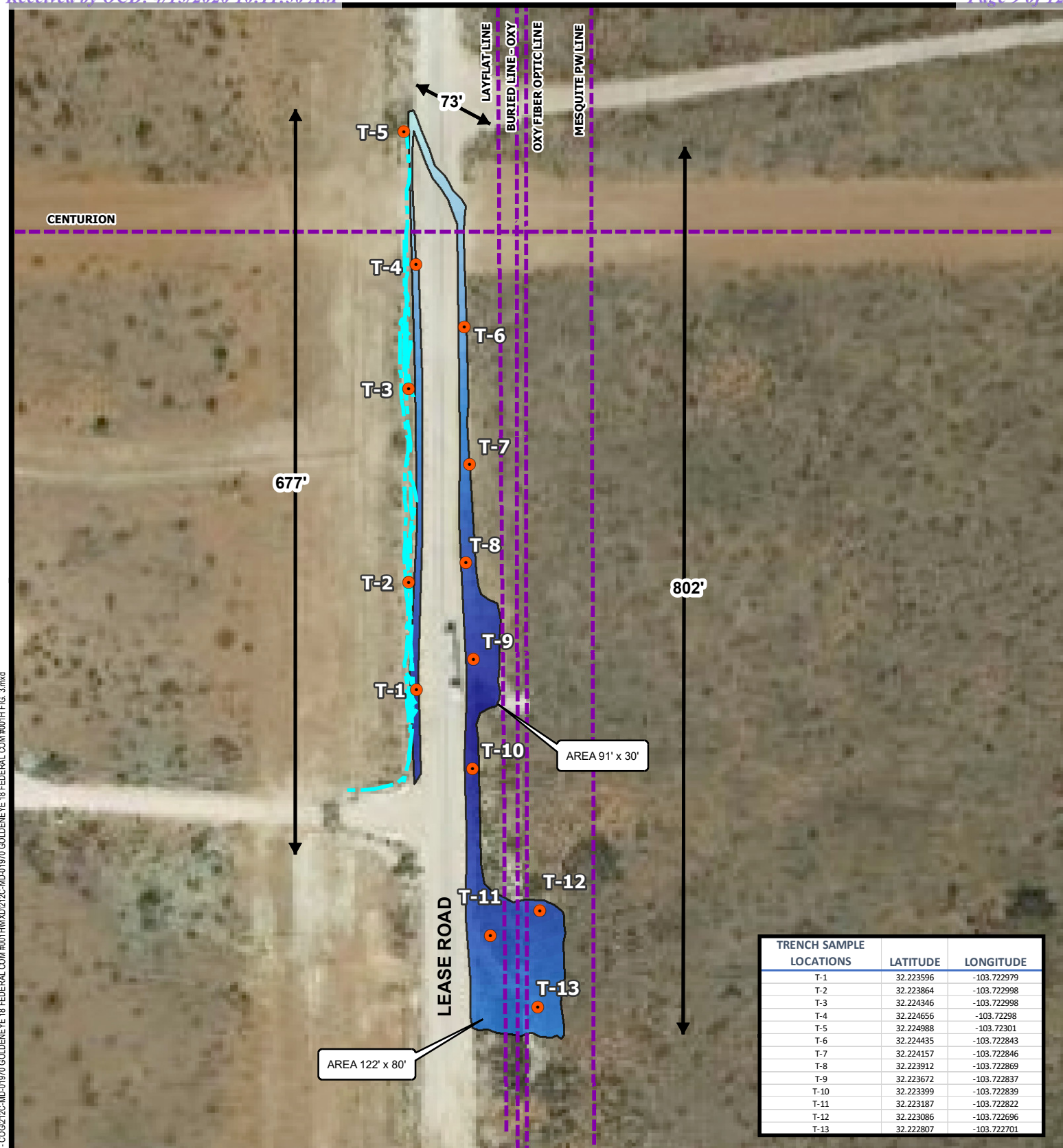
0 1,000 2,000
Approximate Scale in Feet

TOPOGRAPHIC MAP
GOLDENEYE 18 FEDERAL COM #001H
Property Located at coordinates 32.224747°,-103.723299°
EDDY COUNTY, NEW MEXICO



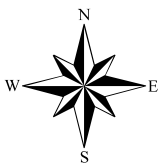
Project #:
212C-MD-01970
Date: 12-09-2019

FIGURE
2



TRENCH SAMPLE LOCATIONS	LATITUDE	LONGITUDE
T-1	32.223596	-103.722979
T-2	32.223864	-103.722998
T-3	32.224346	-103.722998
T-4	32.224656	-103.72298
T-5	32.224988	-103.72301
T-6	32.224435	-103.722843
T-7	32.224157	-103.722846
T-8	32.223912	-103.722869
T-9	32.223672	-103.722837
T-10	32.223399	-103.722839
T-11	32.223187	-103.722822
T-12	32.223086	-103.722696
T-13	32.222807	-103.722701

- TRENCH SAMPLE LOCATIONS
- FLOWLINES
- BURIED LINES
- AFFECTED SPILL AREA



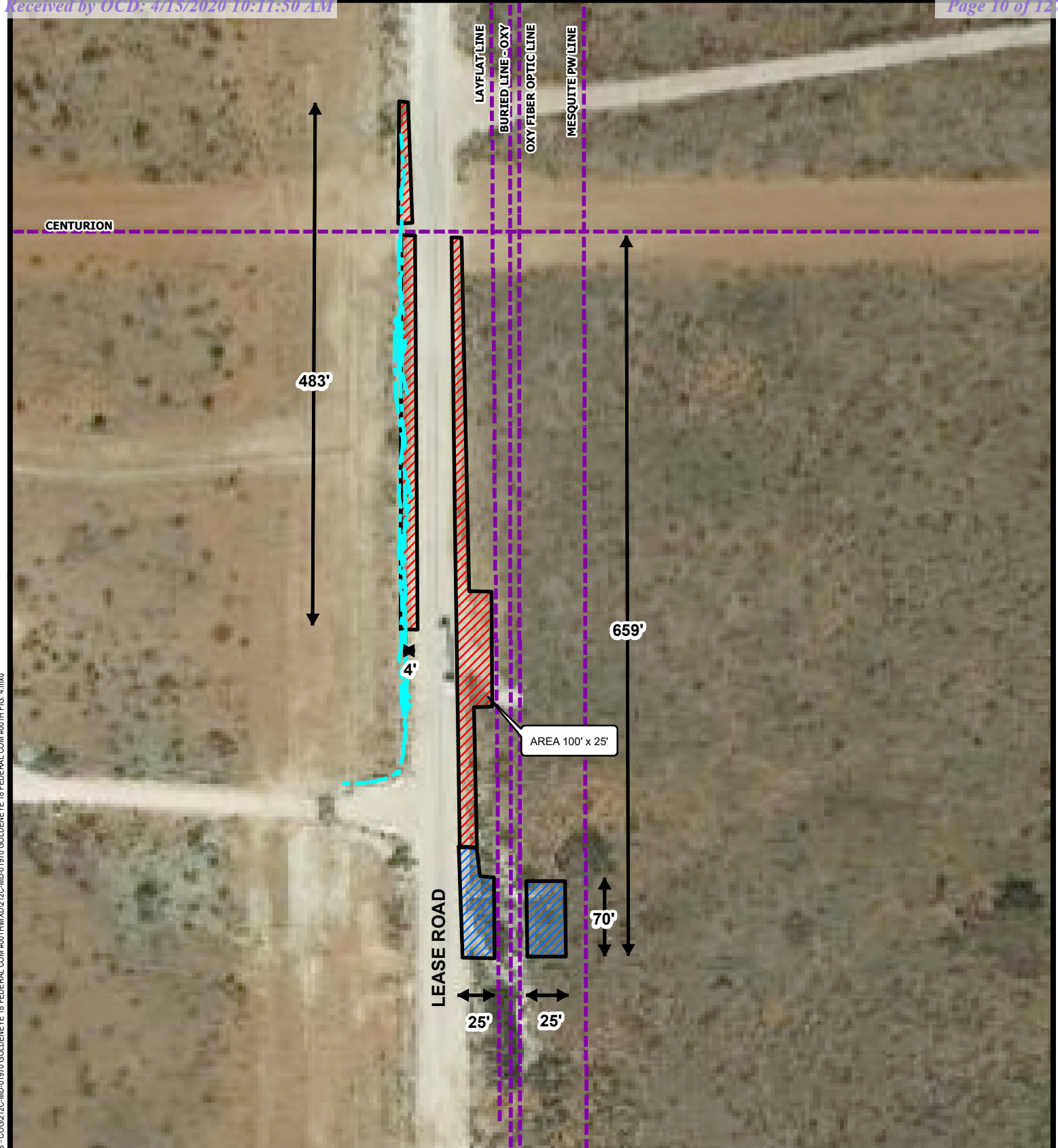
0 60 120
Approximate Scale in Feet

SPILL ASSESSMENT MAP
GOLDENEYE 18 FEDERAL COM #001H
Property Located at coordinates 32.224747°, -103.723299°
EDDY COUNTY, NEW MEXICO

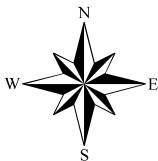


Project #:
212C-MD-01970
Date: 12-09-2019

FIGURE
3



- FLOWLINES
- 3.0'-4.0' PROPOSED EXCAVATION DEPTH AREA
- 2.0'-3.0' PROPOSED EXCAVATION DEPTH AREA
- BURIED LINES



0 60 120
Approximate Scale in Feet

PROPOSED EXCAVATION AREA & DEPTH MAP
GOLDENEYE 18 FEDERAL COM #001H
Property Located at coordinates 32.224747°,-103.723299°
EDDY COUNTY, NEW MEXICO



Project #:
212C-MD-01970
Date: 12-09-2019

FIGURE
4

Tables

Table 1
COG
Goldeneye 18 Federal Com #1H
Lea County, New Mexico

[illegible]

Table 1
COG
Goldeneye 18 Federal Com #1H
Lea 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	GRO+DRO	ORO	Total						
T-10	12/11/19	0-1	-	X		<49.9	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	6,970
	"	1	-	X		-	-	-	-	-	-	-	-	-	-	5,350
	"	2	-	X		-	-	-	-	-	-	-	-	-	-	828
T-11	12/11/19	0-1	-	X		<49.9	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	6,830
	"	1	-	X		-	-	-	-	-	-	-	-	-	-	7,420
	"	2	-	X		-	-	-	-	-	-	-	-	-	-	6,630
	"	3	-	X		-	-	-	-	-	-	-	-	-	-	6,470
	"	4	-	X		-	-	-	-	-	-	-	-	-	-	8,400
	"	5	-	X		-	-	-	-	-	-	-	-	-	-	7,690
T-12	12/11/19	0-1	-	X		<49.8	<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	7.43
	"	1	-	X		-	-	-	-	-	-	-	-	-	-	11.7
	"	2	-	X		-	-	-	-	-	-	-	-	-	-	702
	"	3	-	X		-	-	-	-	-	-	-	-	-	-	734
	"	4	-	X		-	-	-	-	-	-	-	-	-	-	207
	"	5	-	X		-	-	-	-	-	-	-	-	-	-	17.0
T-13	12/11/19	0-1	-	X		<49.9	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	7.68
	"	1	-	X		-	-	-	-	-	-	-	-	-	-	52.3
	"	2	-	X		-	-	-	-	-	-	-	-	-	-	544

(-)

Not Analyzed

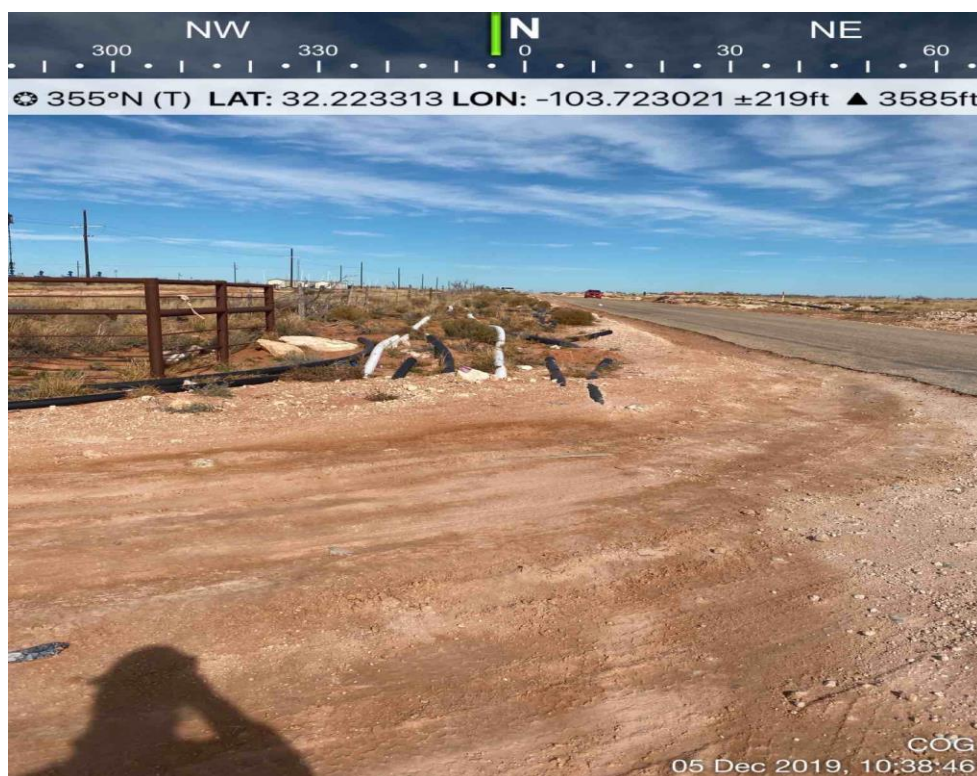
Proposed Excavation

Photos

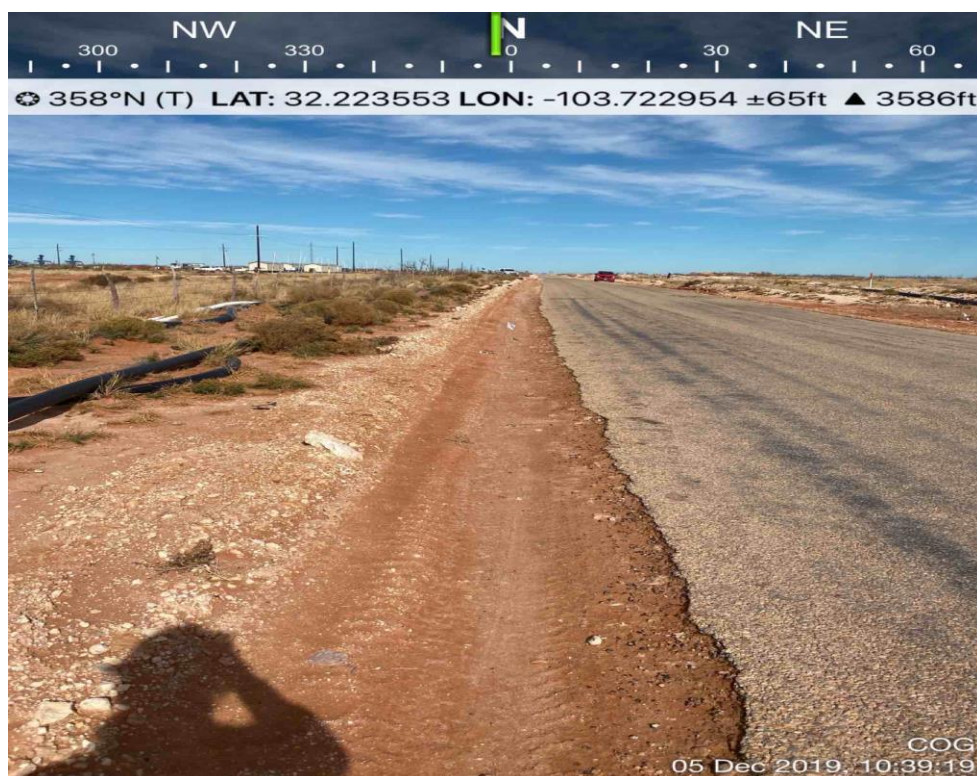
COG
Goldeneye 18 Fed Com #1H
Lea County, New Mexico



TETRA TECH



View North— areas of T-1 through T-3

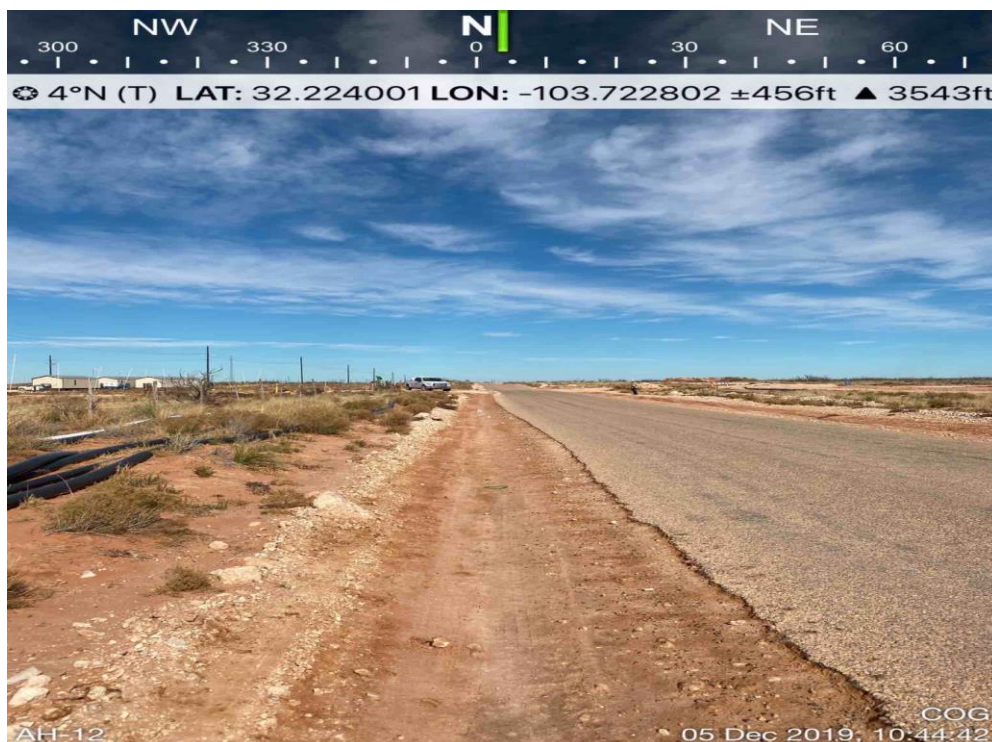


View North- area of AH-3 through AH-5

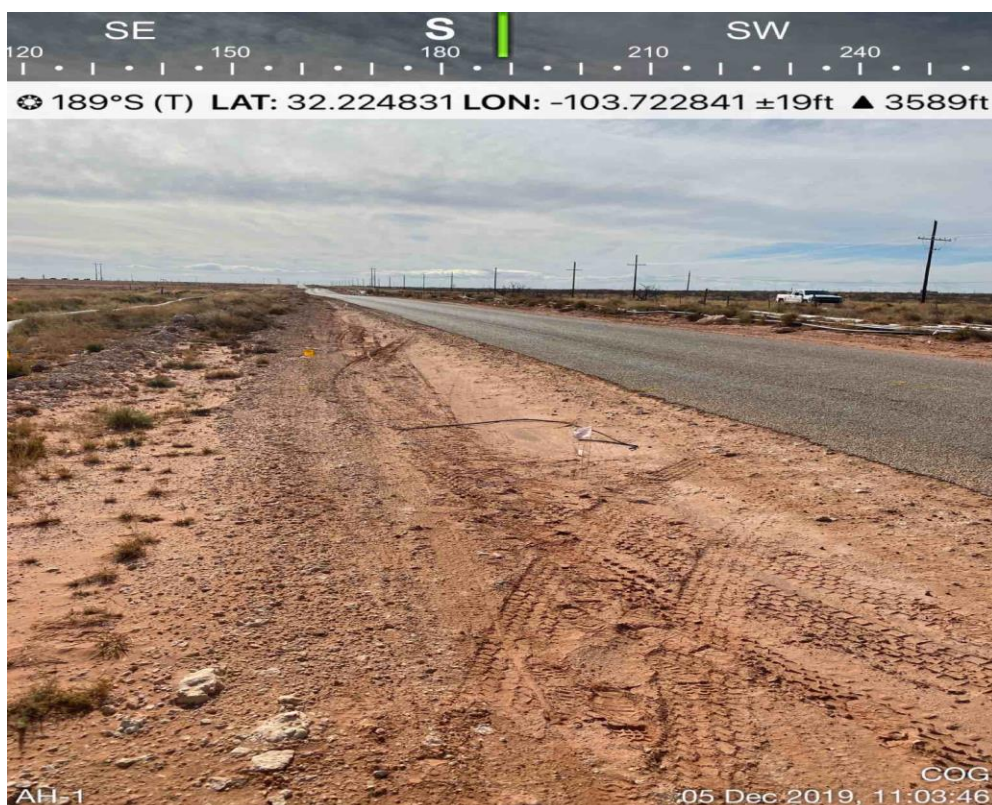
COG
Goldeneye 18 Fed Com #1H
Lea County, New Mexico



TETRA TECH



View North- Area of T-3, T-4, and T-5

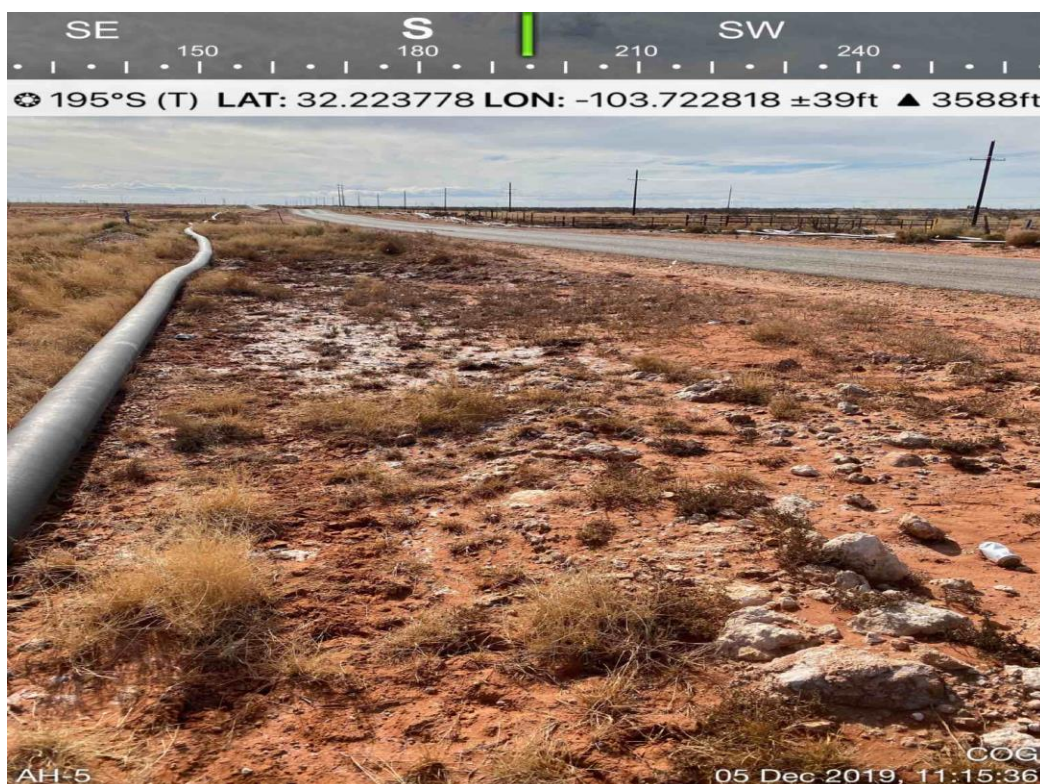


View South- Area of T-6 through T-8

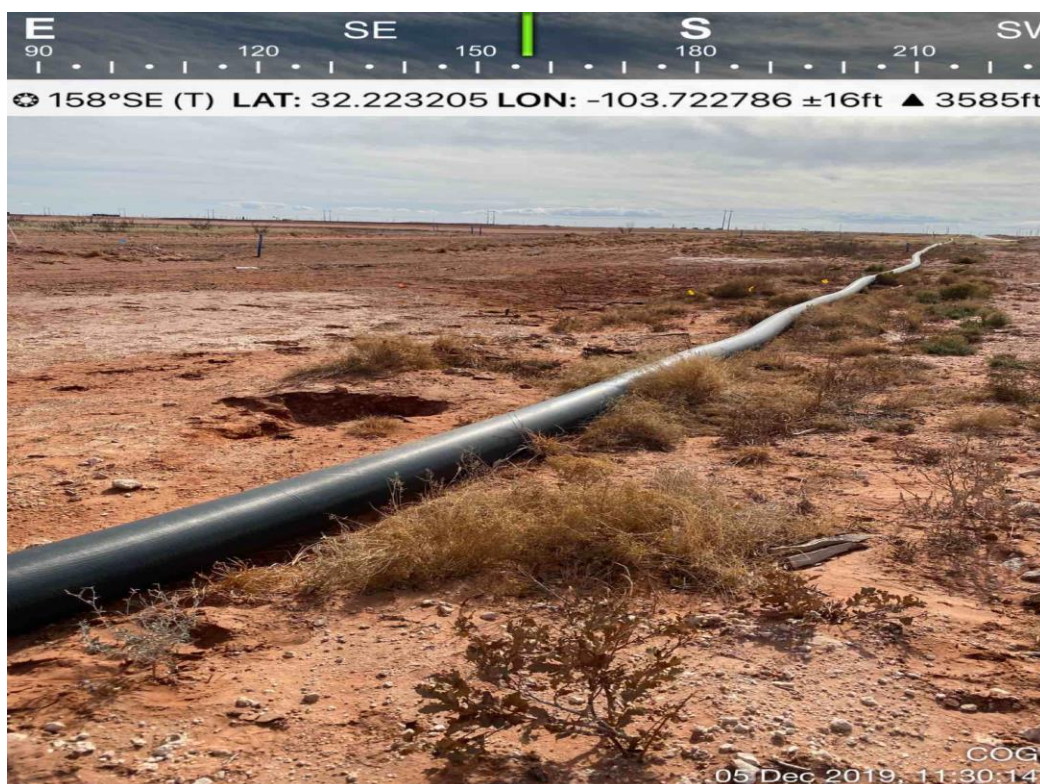
COG
Goldeneye 18 Fed Com #1H
Lea County, New Mexico



TETRA TECH

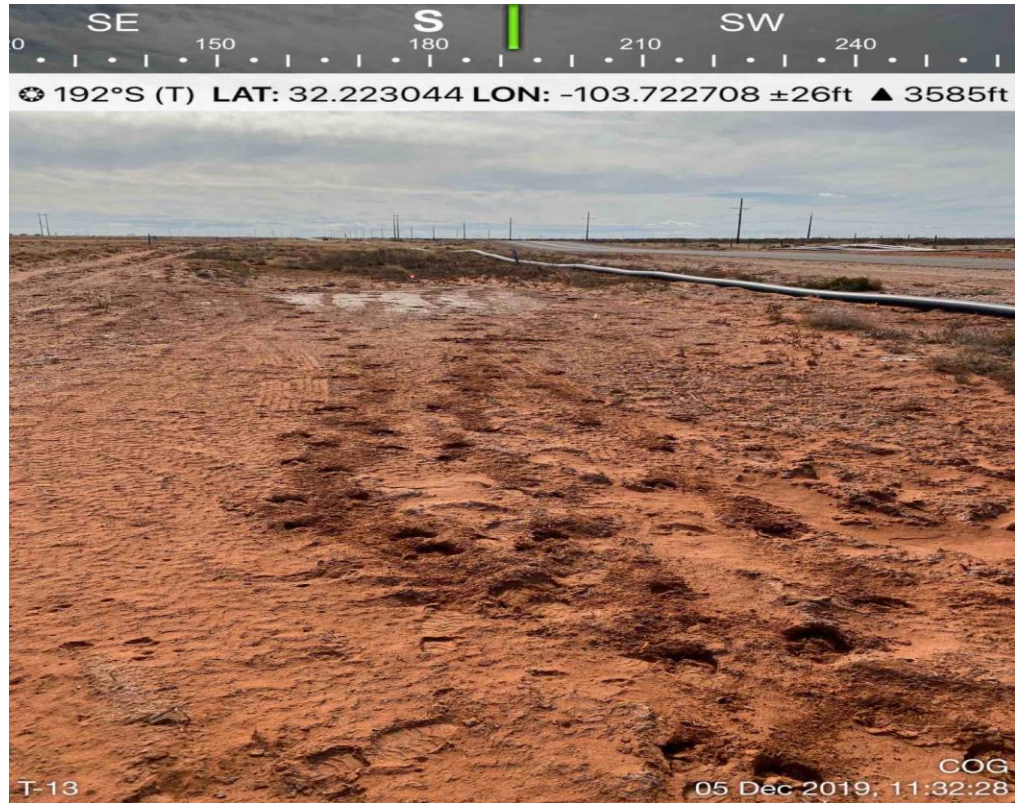


View South- Area of T-9 and T-10



View Southeast- Area of T-11 and T-12

COG
Goldeneye 18 Fed Com #1H
Lea County, New Mexico



View South- Area of T-13

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 dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

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 <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: _____	Title: _____
Signature: <u>Delann Opreant</u>	Date: _____
email: _____	Telephone: _____
<u>OCD Only</u>	
Received by: _____	Date: _____

Incident ID	nRM1935137204
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	nRM1935137204
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:  _____ Date: 4/15/2020

email: _____ Telephone: _____

OCD Only

Received by: Cristina Eads _____ Date: 04/15/2020

Incident ID	nRM1935137204
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: _____ Date: _____
email: _____ Telephone: _____

OCD Only

Received by: Cristina Eads Date: 04/15/2020

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

Signature: _____ Date: 06/08/2020

***** LIQUID SPILLS - VOLUME CALCULATIONS *****

Location of spill: COG -Goldeneye 18 Fed Com 1H

Date of Spill: 15-Oct-2019

If the leak/spill is associated with production equipment, i.e. - wellhead, stuffing box, flowline, tank battery, production vessel, transfer pump, or storage tank place an "X" here: ☒

Input Data:

If spill volumes from measurement, i.e. metering, tank volumes, etc. are known enter the volumes here: OIL: 0.0 BBL WATER: 0.0 BBL

If "known" spill volumes are given, input data for the following "Area Calculations" is optional. The above will override the calculated volumes.

Total Area Calculations							Standing Liquid Calculations							
Total Surface Area		width	length		wet soil depth	oil (%)	Standing Liquid Area		width	length		liquid depth	oil (%)	
Rectangle Area #1		450 ft		12 ft	X	4.50 in	0%	Rectangle Area #1	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #2		0 ft	X	0 ft	X	0.00 in	0%	Rectangle Area #2	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #3		0 ft	X	0 ft	X	0 in	0%	Rectangle Area #3	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #4		0 ft	X	0 ft	X	0 in	0%	Rectangle Area #4	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #5		0 ft	X	0 ft	X	0 in	0%	Rectangle Area #5	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #6		0 ft	X	0 ft	X	0 in	0%	Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #7		0 ft	X	0 ft	X	0 in	0%	Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #8		0 ft	X	0 ft	X	0 in	0%	Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%

okay

production system leak - DAILY PRODUCTION DATA REQUIRED

Average Daily Production: Oil 0 BBL Water 0 BBL 0 Gas (MCFD)

Total Hydrocarbon Content in gas: 0% (percentage)

Did leak occur before the separator?: ☒ YES ☒ N/A (place an "X")

H2S Content in Produced Gas: 0 PPM

H2S Content in Tank Vapors: 0 PPM

Amount of Free Liquid Recovered: 0 BBL okay

Percentage of Oil in Free Liquid Recovered: 0% (percentage)

Liquid holding factor *: 0.14 gal per gal

Use the following when the spill wets the grains of the soil.

* Sand = 0.08 gallon (gal.) liquid per gal. volume of soil.

* Gravelly (caliche) loam = 0.14 gal. liquid per gal. volume of soil.

* Sandy clay loam soil = 0.14 gal liquid per gal. volume of soil.

* Clay loam = 0.16 gal. liquid per gal. volume of soil.

Use the following when the liquid completely fills the pore space of the soil:

Occurs when the spill soaked soil is contained by barriers, natural (or not).

* Clay loam = 0.20 gal. liquid per gal. volume of soil.

* Gravelly (caliche) loam = 0.25 gal. liquid per gal. volume of soil.

* Sandy loam = 0.5 gal. liquid per gal. volume of soil.

Total Solid/Liquid Volume:	5,400 sq. ft.	2,025 cu. ft.	cu. ft.	Total Free Liquid Volume:	sq. ft.	cu. ft.	cu. ft.
Estimated Volumes Spilled				Estimated Production Volumes Lost			
		H2O	OIL			H2O	OIL
Liquid in Soil:		50.5 BBL	0.0 BBL	Estimated Production Spilled:		0.0 BBL	0.0 BBL
Free Liquid:		0.0 BBL	0.0 BBL				
Totals:		50.5 BBL	0.0 BBL	Estimated Surface Damage			
				Surface Area:	5,400 sq. ft.		
Total Liquid Spill Liquid:		50.5 BBL	0.00 BBL	Surface Area:	.1240 acre		
Recovered Volumes				Estimated Weights, and Volumes			
Estimated oil recovered:	BBL	check - okay		Saturated Soil =	226,800 lbs	2,025 cu. ft.	75 cu. yds.
Estimated water recovered:	BBL	check - okay		Total Liquid =	50 BBL	2,121 gallon	17,643 lbs

Air Emission from flowline leaks:

Volume of oil spill: - BBL
 Separator gas calculated: - MCF
 Separator gas released: - MCF
 Gas released from oil: - lb
 H2S released: - lb
 Total HC gas released: - lb
 Total HC gas released: - MCF

Air Emission of Reporting Requirements:

New Mexico
 HC gas release reportable? NO
 H2S release reportable? NO
 Texas
 NO
 NO

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG - Goldeneye 18 Fed Com #1H
Lea County, New Mexico

23 South			30 East		
6	5	4	3	2	1
110	Maljamar			250	
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
			440		

23 South			31 East		
6	5	4	3	2	1
85	354	168			
7	8	9	10	11	12
140					
18	17	16	15	14	13
	125				
19	20	21	22	23	24
30	29	28	27	26	25
	140			100	
31	32	33	34	35	36

23 South			32 East		
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
		400			
30	29	28	27	26	25
31	32	33	34	35	36

24 South			30 East		
6	5	4	3	2	1
7	8	9	10	11	12
	186				
18	17	16	15	14	13
19	231	20	21	22	23
150				400	24
30	29	28	27	26	25
31	32	33	34	35	36

24 South			31 East		
6	5	4	3	2	1
				205	
				160	
7	8	9	10	11	12
					Site
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
		474			

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

25 South			30 East		
6	5	4	3	2	1
				295	
7	264	8	9	295	10
					390
18	17	16	15	14	13
19	20	21	22	23	24
		265			
		268			
30	29	28	27	26	25
31	32	33	34	35	36

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

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

- 88 New Mexico State Engineers Well Reports
- 105 USGS Well Reports
- 90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)
Geology and Groundwater Resources of Eddy County, NM (Report 3)
- 34 NMOCD - Groundwater Data
- 123 Tetra Tech installed temporary wells and field water level
- 143 NMOCD Groundwater map well location



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02405		CUB	ED	4	1	02	24S	31E		617690	3568631*	275	160	115
C 02440		C	ED	2	3	10	24S	31E		616103	3566599*	350		
C 02460		C	ED		3	02	24S	31E		617496	3568022*	320		
C 02460 POD2		C	ED		3	02	24S	31E		617496	3568022*	320		
C 02464		C	ED	3	4	1	02	24S	31E	617589	3568530*	320	205	115
C 02661		CUB	ED	3	3	1	04	24S	31E	613969	3568485*	708		
C 02783		CUB	ED	3	3	1	04	24S	31E	613911	3568461	708		
C 02783 POD2		CUB	ED	3	3	1	04	24S	31E	613911	3568461	672		
C 02784		C	ED	4	2	4	04	24S	31E	613911	3568461	584		
C 02785		CUB	ED	3	3	1	04	24S	31E	613969	3568485*	692		

Average Depth to Water: **182 feet**

Minimum Depth: **160 feet**

Maximum Depth: **205 feet**

Record Count: 10

PLSS Search:

Township: 24S

Range: 31E

*UTM location was derived from PLSS - see Help

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



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Data Category:

Groundwater

Geographic Area:

United States

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Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 321312103395601

Minimum number of levels = 1

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

USGS 321312103395601 24S.32E.10.344333

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°13'30.4", Longitude 103°39'52.7" NAD83

Land-surface elevation 3,589.00 feet above NGVD29

The depth of the well is 60 feet below land surface.

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

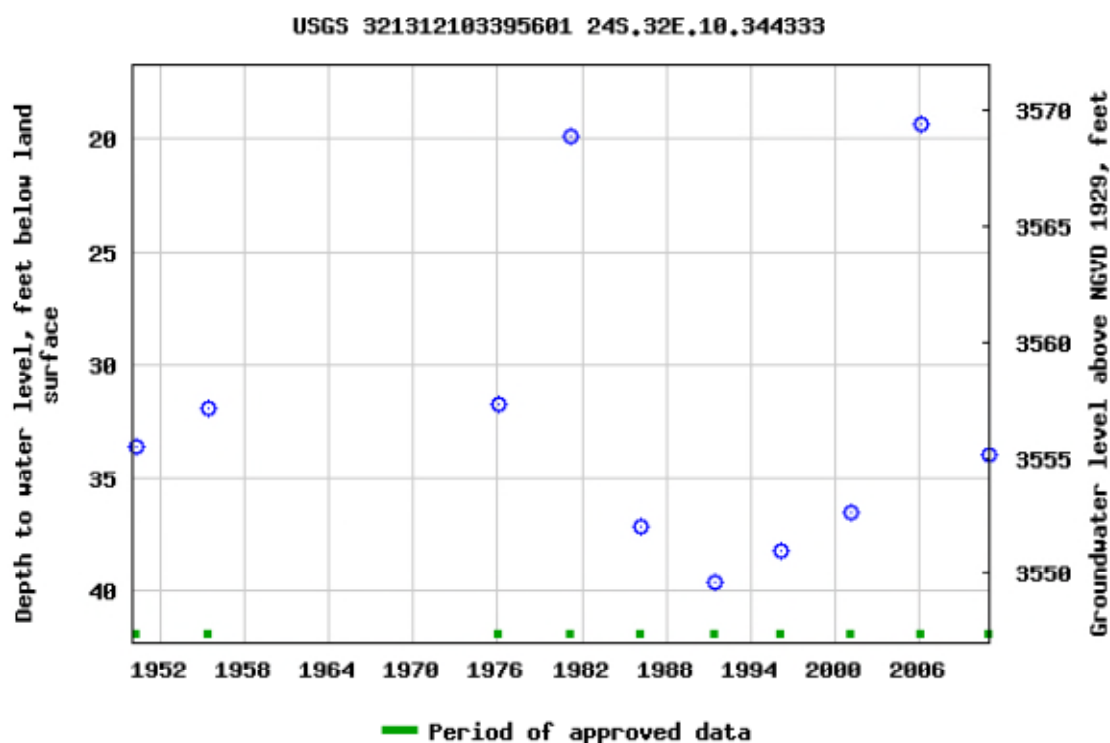
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Breaks in the plot represent a gap of at least one year between field measurements.

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Title: Groundwater for USA: Water Levels

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



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1.05 0.95 nadww01



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site_no list =

- 321609103445901

Minimum number of levels = 1

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USGS 321609103445901 23S.31E.26.34411

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°16'11.9", Longitude 103°45'01.2" NAD83

Land-surface elevation 3,451.00 feet above NGVD29

The depth of the well is 365 feet below land surface.

This well is completed in the Dewey Lake Redbeds (312DYLK) local aquifer.

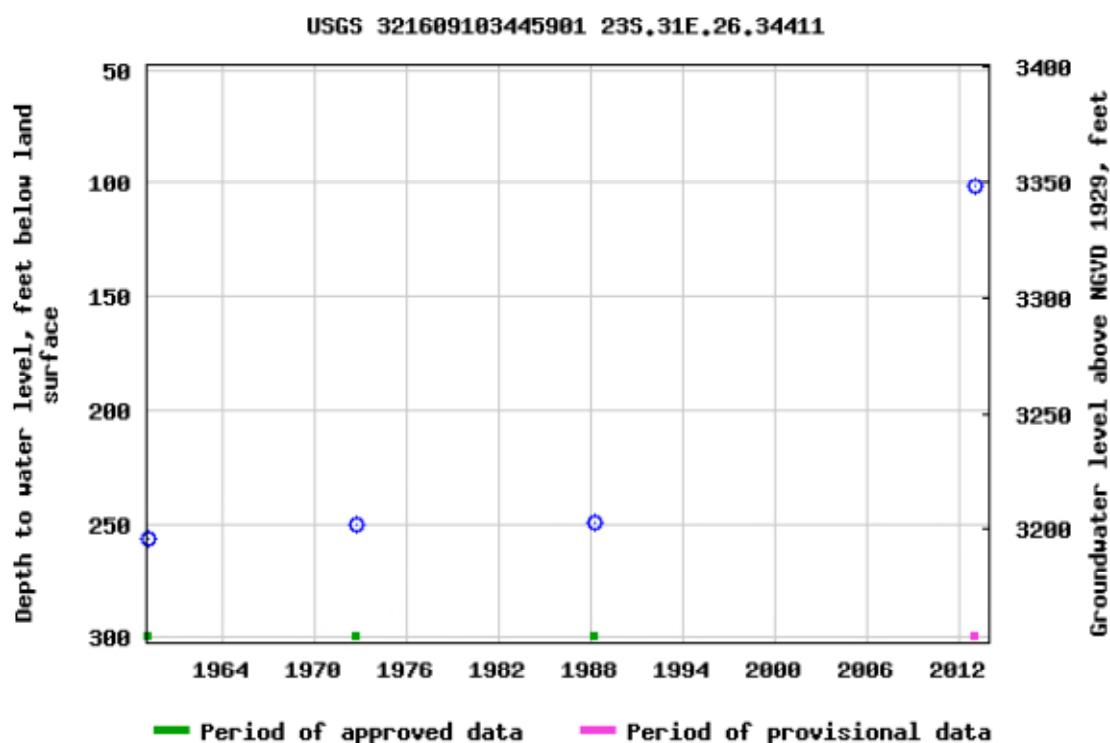
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Title: Groundwater for USA: Water Levels

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



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Page Last Modified: 2019-10-16 14:47:38 EDT

1.03 0.89 nadww01





NFHL Web Mapping Application

Please select a c



Data Layers

780

Buck Jaco

Measure

Print

E

Search Result

Y:32.224790 X:-103.723087

3587 ft

Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garm

100m
300ft

Appendix C



Certificate of Analysis Summary 646108

Tetra Tech- Midland, Midland, TX

Project Name: Golden Eye 18 Fed Com 1H



Project Id: 212C-MD-01970
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu Dec-12-19 01:05 pm
Report Date: 17-DEC-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	646108-001	646108-002	646108-003	646108-004	646108-005	646108-006
	<i>Field Id:</i>	T-1 (0'-1')	T-1 (1')	T-1 (2')	T-1 (3')	T-1 (4')	T-2 (0'-1')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Dec-12-19 14:30					Dec-12-19 14:30
	<i>Analyzed:</i>	Dec-12-19 17:48					Dec-12-19 18:08
	<i>Units/RL:</i>	mg/kg RL					mg/kg RL
Benzene		<0.00198 0.00198					<0.00200 0.00200
Toluene		<0.00198 0.00198					<0.00200 0.00200
Ethylbenzene		<0.00198 0.00198					<0.00200 0.00200
m,p-Xylenes		<0.00397 0.00397					<0.00399 0.00399
o-Xylene		<0.00198 0.00198					<0.00200 0.00200
Total Xylenes		<0.00198 0.00198					<0.00200 0.00200
Total BTEX		<0.00198 0.00198					<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:00
	<i>Analyzed:</i>	Dec-12-19 19:35	Dec-12-19 19:55	Dec-12-19 20:01	Dec-12-19 20:08	Dec-12-19 20:15	Dec-12-19 20:34
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		141 5.04	72.4 4.99	81.0 4.97	303 4.95	325 4.95	4790 25.3
TPH by SW8015 Mod	<i>Extracted:</i>	Dec-12-19 14:00					Dec-12-19 14:00
	<i>Analyzed:</i>	Dec-12-19 17:21					Dec-12-19 18:17
	<i>Units/RL:</i>	mg/kg RL					mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0					<49.8 49.8
Diesel Range Organics (DRO)		<50.0 50.0					<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0					<49.8 49.8
Total TPH		<50.0 50.0					<49.8 49.8

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 646108

Tetra Tech- Midland, Midland, TX

Project Name: Golden Eye 18 Fed Com 1H



Project Id: 212C-MD-01970
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu Dec-12-19 01:05 pm
Report Date: 17-DEC-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	646108-007	646108-008	646108-009	646108-010	646108-011	646108-012
	<i>Field Id:</i>	T-2 (1')	T-2 (2')	T-2 (3')	T-3 (0'-1')	T-3 (1')	T-3 (2')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>				Dec-12-19 14:30		
	<i>Analyzed:</i>				Dec-12-19 18:28		
	<i>Units/RL:</i>				mg/kg RL		
Benzene					<0.00198 0.00198		
Toluene					<0.00198 0.00198		
Ethylbenzene					<0.00198 0.00198		
m,p-Xylenes					<0.00397 0.00397		
o-Xylene					<0.00198 0.00198		
Total Xylenes					<0.00198 0.00198		
Total BTEX					<0.00198 0.00198		
Chloride by EPA 300	<i>Extracted:</i>	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:00
	<i>Analyzed:</i>	Dec-12-19 20:41	Dec-12-19 20:48	Dec-12-19 21:08	Dec-12-19 20:54	Dec-12-19 21:01	Dec-12-19 21:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		7230 49.9	3540 24.8	540 5.02	9110 50.0	7370 50.0	3800 24.9
TPH by SW8015 Mod	<i>Extracted:</i>				Dec-12-19 14:00		
	<i>Analyzed:</i>				Dec-12-19 18:36		
	<i>Units/RL:</i>				mg/kg RL		
Gasoline Range Hydrocarbons (GRO)					<50.0 50.0		
Diesel Range Organics (DRO)					<50.0 50.0		
Motor Oil Range Hydrocarbons (MRO)					<50.0 50.0		
Total TPH					<50.0 50.0		

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 646108

Tetra Tech- Midland, Midland, TX

Project Name: Golden Eye 18 Fed Com 1H



Project Id: 212C-MD-01970
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu Dec-12-19 01:05 pm
Report Date: 17-DEC-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	646108-013	646108-014	646108-015	646108-016	646108-017	646108-018
	<i>Field Id:</i>	T-3 (3')	T-4 (0'-1')	T-4 (1')	T-4 (2')	T-4 (3')	T-5 (0'-1')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>		Dec-12-19 14:30				Dec-12-19 14:30
	<i>Analyzed:</i>		Dec-12-19 18:49				Dec-12-19 19:09
	<i>Units/RL:</i>		mg/kg RL				mg/kg RL
Benzene			<0.00199 0.00199				<0.00198 0.00198
Toluene			<0.00199 0.00199				<0.00198 0.00198
Ethylbenzene			<0.00199 0.00199				<0.00198 0.00198
m,p-Xylenes			<0.00398 0.00398				<0.00396 0.00396
o-Xylene			<0.00199 0.00199				<0.00198 0.00198
Total Xylenes			<0.00199 0.00199				<0.00198 0.00198
Total BTEX			<0.00199 0.00199				<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:45	Dec-12-19 18:00
	<i>Analyzed:</i>	Dec-12-19 21:34	Dec-12-19 21:54	Dec-12-19 22:01	Dec-12-19 22:08	Dec-12-19 23:14	Dec-12-19 22:14
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1300 4.95	8480 50.4	4900 25.1	521 4.99	793 5.00	3400 25.2
TPH by SW8015 Mod	<i>Extracted:</i>		Dec-12-19 14:00				Dec-12-19 14:00
	<i>Analyzed:</i>		Dec-12-19 18:55				Dec-12-19 19:14
	<i>Units/RL:</i>		mg/kg RL				mg/kg RL
Gasoline Range Hydrocarbons (GRO)			<49.9 49.9				<50.0 50.0
Diesel Range Organics (DRO)			<49.9 49.9				<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)			<49.9 49.9				<50.0 50.0
Total TPH			<49.9 49.9				<50.0 50.0

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Jessica Kramer

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Certificate of Analysis Summary 646108

Tetra Tech- Midland, Midland, TX

Project Name: Golden Eye 18 Fed Com 1H



Project Id: 212C-MD-01970
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu Dec-12-19 01:05 pm
Report Date: 17-DEC-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	646108-019	646108-020	646108-021	646108-022	646108-023	646108-024
	<i>Field Id:</i>	T-5 (1')	T-5 (2')	T-6 (0'-1')	T-6 (1')	T-6(2')	T-6(3')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>			Dec-12-19 14:30			
	<i>Analyzed:</i>			Dec-12-19 19:29			
	<i>Units/RL:</i>			mg/kg RL			
Benzene				<0.00200 0.00200			
Toluene				<0.00200 0.00200			
Ethylbenzene				<0.00200 0.00200			
m,p-Xylenes				<0.00401 0.00401			
o-Xylene				<0.00200 0.00200			
Total Xylenes				<0.00200 0.00200			
Total BTEX				<0.00200 0.00200			
Chloride by EPA 300	<i>Extracted:</i>	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:00	Dec-12-19 18:45	Dec-12-19 18:45	Dec-12-19 18:45
	<i>Analyzed:</i>	Dec-12-19 22:21	Dec-12-19 22:27	Dec-12-19 22:34	Dec-12-19 23:34	Dec-12-19 23:41	Dec-12-19 23:47
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		2830 25.0	2890 25.0	8350 50.0	2600 24.8	10400 49.9	2360 25.2
TPH by SW8015 Mod	<i>Extracted:</i>			Dec-12-19 14:00			
	<i>Analyzed:</i>			Dec-12-19 19:33			
	<i>Units/RL:</i>			mg/kg RL			
Gasoline Range Hydrocarbons (GRO)				<49.9 49.9			
Diesel Range Organics (DRO)				<49.9 49.9			
Motor Oil Range Hydrocarbons (MRO)				<49.9 49.9			
Total TPH				<49.9 49.9			

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 646108

Tetra Tech- Midland, Midland, TX

Project Name: Golden Eye 18 Fed Com 1H



Project Id: 212C-MD-01970
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu Dec-12-19 01:05 pm
Report Date: 17-DEC-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	646108-025	646108-026	646108-027	646108-028	646108-029	646108-030
	<i>Field Id:</i>	T-7 (0'-1')	T-7 (1')	T-7 (2')	T-8 (0'-1')	T-8 (1')	T-8 (2')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Dec-12-19 14:30			Dec-12-19 14:30		
	<i>Analyzed:</i>	Dec-12-19 19:50			Dec-12-19 20:10		
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL		
Benzene		<0.00200 0.00200			<0.00198 0.00198		
Toluene		<0.00200 0.00200			<0.00198 0.00198		
Ethylbenzene		<0.00200 0.00200			<0.00198 0.00198		
m,p-Xylenes		<0.00401 0.00401			<0.00397 0.00397		
o-Xylene		<0.00200 0.00200			<0.00198 0.00198		
Total Xylenes		<0.00200 0.00200			<0.00198 0.00198		
Total BTEX		<0.00200 0.00200			<0.00198 0.00198		
Chloride by EPA 300	<i>Extracted:</i>	Dec-12-19 18:45	Dec-12-19 18:45	Dec-12-19 18:45	Dec-12-19 18:45	Dec-12-19 18:45	Dec-12-19 18:45
	<i>Analyzed:</i>	Dec-12-19 23:54	Dec-13-19 00:14	Dec-13-19 00:20	Dec-13-19 00:27	Dec-13-19 00:34	Dec-13-19 00:40
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		7430 50.1	8420 49.6	6450 50.0	9060 49.7	8490 50.3	8450 50.5
TPH by SW8015 Mod	<i>Extracted:</i>	Dec-12-19 14:00			Dec-12-19 14:00		
	<i>Analyzed:</i>	Dec-12-19 19:52			Dec-12-19 20:11		
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8			<50.0 50.0		
Diesel Range Organics (DRO)		<49.8 49.8			<50.0 50.0		
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8			<50.0 50.0		
Total TPH		<49.8 49.8			<50.0 50.0		

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 646108

Tetra Tech- Midland, Midland, TX

Project Name: Golden Eye 18 Fed Com 1H



Project Id: 212C-MD-01970
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu Dec-12-19 01:05 pm
Report Date: 17-DEC-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	646108-031	646108-032	646108-033	646108-034	646108-035	646108-036
	<i>Field Id:</i>	T-8 (3')	T-9 (0'-1')	T-9 (1')	T-10 (0'-1')	T-10 (1')	T-10 (2')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>		Dec-12-19 14:30		Dec-12-19 14:30		
	<i>Analyzed:</i>		Dec-12-19 20:31		Dec-12-19 20:51		
	<i>Units/RL:</i>		mg/kg RL		mg/kg RL		
Benzene			<0.00199 0.00199		<0.00202 0.00202		
Toluene			<0.00199 0.00199		<0.00202 0.00202		
Ethylbenzene			<0.00199 0.00199		<0.00202 0.00202		
m,p-Xylenes			<0.00398 0.00398		<0.00403 0.00403		
o-Xylene			<0.00199 0.00199		<0.00202 0.00202		
Total Xylenes			<0.00199 0.00199		<0.00202 0.00202		
Total BTEX			<0.00199 0.00199		<0.00202 0.00202		
Chloride by EPA 300	<i>Extracted:</i>	Dec-12-19 18:45	Dec-12-19 18:45	Dec-12-19 18:45	Dec-12-19 18:45	Dec-12-19 18:45	Dec-12-19 18:45
	<i>Analyzed:</i>	Dec-13-19 01:07	Dec-13-19 01:14	Dec-13-19 01:33	Dec-13-19 01:40	Dec-13-19 01:47	Dec-13-19 00:47
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		4070 24.8	16000 101	6710 49.8	6970 50.0	5350 25.0	828 5.00
TPH by SW8015 Mod	<i>Extracted:</i>		Dec-12-19 14:00		Dec-12-19 14:00		
	<i>Analyzed:</i>		Dec-12-19 20:30		Dec-12-19 20:49		
	<i>Units/RL:</i>		mg/kg RL		mg/kg RL		
Gasoline Range Hydrocarbons (GRO)			<50.0 50.0		<49.9 49.9		
Diesel Range Organics (DRO)			<50.0 50.0		<49.9 49.9		
Motor Oil Range Hydrocarbons (MRO)			<50.0 50.0		<49.9 49.9		
Total TPH			<50.0 50.0		<49.9 49.9		

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 646108

Tetra Tech- Midland, Midland, TX

Project Name: Golden Eye 18 Fed Com 1H



Project Id: 212C-MD-01970
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu Dec-12-19 01:05 pm
Report Date: 17-DEC-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	646108-037	646108-038	646108-039	646108-040	646108-041	646108-042
	<i>Field Id:</i>	T-1 1(0'-1')	T-11 (1')	T-11 (2')	T-11 (3')	T-11 (4')	T-11 (5')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Dec-12-19 14:30					
	<i>Analyzed:</i>	Dec-12-19 22:30					
	<i>Units/RL:</i>	mg/kg RL					
Benzene		<0.00200 0.00200					
Toluene		<0.00200 0.00200					
Ethylbenzene		<0.00200 0.00200					
m,p-Xylenes		<0.00400 0.00400					
o-Xylene		<0.00200 0.00200					
Total Xylenes		<0.00200 0.00200					
Total BTEX		<0.00200 0.00200					
Chloride by EPA 300	<i>Extracted:</i>	Dec-12-19 18:45	Dec-12-19 18:45	Dec-12-19 18:45	Dec-12-19 18:45	Dec-13-19 08:15	Dec-13-19 08:15
	<i>Analyzed:</i>	Dec-13-19 01:53	Dec-13-19 02:00	Dec-13-19 02:07	Dec-13-19 02:13	Dec-13-19 09:14	Dec-13-19 09:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		6830 50.2	7420 49.7	6630 49.5	6470 50.4	8400 50.0	7690 50.0
TPH by SW8015 Mod	<i>Extracted:</i>	Dec-12-19 14:00					
	<i>Analyzed:</i>	Dec-12-19 21:08					
	<i>Units/RL:</i>	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9					
Diesel Range Organics (DRO)		<49.9 49.9					
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9					
Total TPH		<49.9 49.9					

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 646108

Tetra Tech- Midland, Midland, TX

Project Name: Golden Eye 18 Fed Com 1H



Project Id: 212C-MD-01970
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu Dec-12-19 01:05 pm
Report Date: 17-DEC-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	646108-043	646108-044	646108-045	646108-046	646108-047	646108-048
	<i>Field Id:</i>	T-12 (0'-1')	T-12 (1')	T-12 (2')	T-12 (3')	T-12 (4')	T-12 (5')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Dec-12-19 14:30					
	<i>Analyzed:</i>	Dec-12-19 22:51					
	<i>Units/RL:</i>	mg/kg RL					
Benzene		<0.00201 0.00201					
Toluene		<0.00201 0.00201					
Ethylbenzene		<0.00201 0.00201					
m,p-Xylenes		<0.00402 0.00402					
o-Xylene		<0.00201 0.00201					
Total Xylenes		<0.00201 0.00201					
Total BTEX		<0.00201 0.00201					
Chloride by EPA 300	<i>Extracted:</i>	Dec-13-19 08:15	Dec-13-19 08:15	Dec-13-19 08:15	Dec-13-19 08:15	Dec-13-19 08:15	Dec-13-19 08:15
	<i>Analyzed:</i>	Dec-13-19 08:48	Dec-13-19 09:28	Dec-13-19 09:48	Dec-13-19 09:54	Dec-13-19 11:14	Dec-13-19 11:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		7.43 5.00	11.7 4.99	702 4.95	734 4.98	207 4.99	17.0 5.02
TPH by SW8015 Mod	<i>Extracted:</i>	Dec-12-19 14:00					
	<i>Analyzed:</i>	Dec-12-19 21:27					
	<i>Units/RL:</i>	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8					
Diesel Range Organics (DRO)		<49.8 49.8					
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8					
Total TPH		<49.8 49.8					

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 646108

Tetra Tech- Midland, Midland, TX

Project Name: Golden Eye 18 Fed Com 1H



Project Id: 212C-MD-01970
Contact: Mike Carmona
Project Location: Lea County, New Mexico

Date Received in Lab: Thu Dec-12-19 01:05 pm
Report Date: 17-DEC-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	646108-049	646108-050	646108-051			
	Field Id:	T-13 (0'-1')	T-13 (1')	T-1 3(2')			
	Depth:						
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	Dec-11-19 00:00	Dec-11-19 00:00	Dec-11-19 00:00			
BTEX by EPA 8021B	Extracted:	Dec-12-19 14:30					
	Analyzed:	Dec-12-19 23:11					
	Units/RL:	mg/kg RL					
Benzene		<0.00199 0.00199					
Toluene		<0.00199 0.00199					
Ethylbenzene		<0.00199 0.00199					
m,p-Xylenes		<0.00398 0.00398					
o-Xylene		<0.00199 0.00199					
Total Xylenes		<0.00199 0.00199					
Total BTEX		<0.00199 0.00199					
Chloride by EPA 300	Extracted:	Dec-13-19 08:15	Dec-13-19 08:15	Dec-13-19 08:15			
	Analyzed:	Dec-13-19 11:28	Dec-13-19 11:34	Dec-13-19 11:54			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		7.68 5.00	52.3 5.00	544 4.95			
TPH by SW8015 Mod	Extracted:	Dec-12-19 14:00					
	Analyzed:	Dec-12-19 21:46					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9					
Diesel Range Organics (DRO)		<49.9 49.9					
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9					
Total TPH		<49.9 49.9					

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Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 646108

for
Tetra Tech- Midland

Project Manager: Mike Carmona

Golden Eye 18 Fed Com 1H

212C-MD-01970

17-DEC-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

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

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



17-DEC-19

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **646108**

Golden Eye 18 Fed Com 1H

Project Address: Lea 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) 646108. 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. 646108 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Assistant

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

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Sample Cross Reference 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 (0'-1')	S	12-11-19 00:00		646108-001
T-1 (1')	S	12-11-19 00:00		646108-002
T-1 (2')	S	12-11-19 00:00		646108-003
T-1 (3')	S	12-11-19 00:00		646108-004
T-1 (4')	S	12-11-19 00:00		646108-005
T-2 (0'-1')	S	12-11-19 00:00		646108-006
T-2 (1')	S	12-11-19 00:00		646108-007
T-2 (2')	S	12-11-19 00:00		646108-008
T-2 (3')	S	12-11-19 00:00		646108-009
T-3 (0'-1')	S	12-11-19 00:00		646108-010
T-3 (1')	S	12-11-19 00:00		646108-011
T-3 (2')	S	12-11-19 00:00		646108-012
T-3 (3')	S	12-11-19 00:00		646108-013
T-4 (0'-1')	S	12-11-19 00:00		646108-014
T-4 (1')	S	12-11-19 00:00		646108-015
T-4 (2')	S	12-11-19 00:00		646108-016
T-4 (3')	S	12-11-19 00:00		646108-017
T-5 (0'-1')	S	12-11-19 00:00		646108-018
T-5 (1')	S	12-11-19 00:00		646108-019
T-5 (2')	S	12-11-19 00:00		646108-020
T-6 (0'-1')	S	12-11-19 00:00		646108-021
T-6 (1')	S	12-11-19 00:00		646108-022
T-6(2')	S	12-11-19 00:00		646108-023
T-6(3')	S	12-11-19 00:00		646108-024
T-7 (0'-1')	S	12-11-19 00:00		646108-025
T-7 (1')	S	12-11-19 00:00		646108-026
T-7 (2')	S	12-11-19 00:00		646108-027
T-8 (0'-1')	S	12-11-19 00:00		646108-028
T-8 (1')	S	12-11-19 00:00		646108-029
T-8 (2')	S	12-11-19 00:00		646108-030
T-8 (3')	S	12-11-19 00:00		646108-031
T-9 (0'-1')	S	12-11-19 00:00		646108-032
T-9 (1')	S	12-11-19 00:00		646108-033
T-10 (0'-1')	S	12-11-19 00:00		646108-034
T-10 (1')	S	12-11-19 00:00		646108-035
T-10 (2')	S	12-11-19 00:00		646108-036
T-1 1(0'-1')	S	12-11-19 00:00		646108-037
T-11 (1')	S	12-11-19 00:00		646108-038
T-11 (2')	S	12-11-19 00:00		646108-039
T-11 (3')	S	12-11-19 00:00		646108-040
T-11 (4')	S	12-11-19 00:00		646108-041
T-11 (5')	S	12-11-19 00:00		646108-042
T-12 (0'-1')	S	12-11-19 00:00		646108-043

**Sample Cross Reference 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

T-12 (1')	S	12-11-19 00:00	646108-044
T-12 (2')	S	12-11-19 00:00	646108-045
T-12 (3')	S	12-11-19 00:00	646108-046
T-12 (4')	S	12-11-19 00:00	646108-047
T-12 (5')	S	12-11-19 00:00	646108-048
T-13 (0'-1')	S	12-11-19 00:00	646108-049
T-13 (1')	S	12-11-19 00:00	646108-050
T-1 3(2')	S	12-11-19 00:00	646108-051

**CASE NARRATIVE****Client Name: Tetra Tech- Midland****Project Name: Golden Eye 18 Fed Com 1H**

Project ID: 212C-MD-01970
Work Order Number(s): 646108

Report Date: 17-DEC-19
Date Received: 12/12/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3110379 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 646108-049.

Batch: LBA-3110390 Chloride by EPA 300

Lab Sample ID 646108-050 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 646108-041, -042, -043, -044, -045, -046, -047, -048, -049, -050, -051.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3110412 Chloride by EPA 300

Lab Sample ID 646108-009 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 646108-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -018, -019, -020, -021.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3110413 Chloride by EPA 300

Lab Sample ID 646108-036 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 646108-017, -022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036, -037, -038, -039, -040.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: Golden Eye 18 Fed Com 1H

Project ID: 212C-MD-01970
Work Order Number(s): 646108

Report Date: 17-DEC-19
Date Received: 12/12/2019

Batch: LBA-3110431 BTEX by EPA 8021B

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



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-1 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-001

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	141	5.04	mg/kg	12.12.19 19.35		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.12.19 17.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.12.19 17.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.12.19 17.21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.12.19 17.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	112	%	70-135	12.12.19 17.21		
o-Terphenyl	84-15-1	112	%	70-135	12.12.19 17.21		



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-1 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-001

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.12.19 17.48	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.12.19 17.48	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.12.19 17.48	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.12.19 17.48	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.12.19 17.48	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.12.19 17.48	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.12.19 17.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	12.12.19 17.48		
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.12.19 17.48		



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-1 (1')
Lab Sample Id: 646108-002

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	72.4	4.99	mg/kg	12.12.19 19.55		1

**Certificate of Analytical Results 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

Sample Id: T-1 (2')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-003

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	81.0	4.97	mg/kg	12.12.19 20.01		1



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-1 (3')
Lab Sample Id: 646108-004

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	303	4.95	mg/kg	12.12.19 20.08		1



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-1 (4')
Lab Sample Id: 646108-005

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	325	4.95	mg/kg	12.12.19 20.15		1



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-2 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-006

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4790	25.3	mg/kg	12.12.19 20.34		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.12.19 18.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.12.19 18.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.12.19 18.17	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.12.19 18.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	12.12.19 18.17	
o-Terphenyl	84-15-1	107	%	70-135	12.12.19 18.17	



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-2 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-006

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.19 18.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.19 18.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.12.19 18.08	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.12.19 18.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.12.19 18.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.12.19 18.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.12.19 18.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.12.19 18.08		
4-Bromofluorobenzene	460-00-4	95	%	70-130	12.12.19 18.08		



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-2 (1')
Lab Sample Id: 646108-007

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7230	49.9	mg/kg	12.12.19 20.41		10

**Certificate of Analytical Results 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

Sample Id: T-2 (2')
Lab Sample Id: 646108-008

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3540	24.8	mg/kg	12.12.19 20.48		5



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-2 (3')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-009

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	540	5.02	mg/kg	12.12.19 21.08		1



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-3 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-010

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9110	50.0	mg/kg	12.12.19 20.54		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.12.19 18.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.12.19 18.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.12.19 18.36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.12.19 18.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	12.12.19 18.36	
o-Terphenyl	84-15-1	107	%	70-135	12.12.19 18.36	



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-3 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-010

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.12.19 18.28	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.12.19 18.28	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.12.19 18.28	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.12.19 18.28	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.12.19 18.28	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.12.19 18.28	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.12.19 18.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	12.12.19 18.28		
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.12.19 18.28		

**Certificate of Analytical Results 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

Sample Id: T-3 (1')
Lab Sample Id: 646108-011

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7370	50.0	mg/kg	12.12.19 21.01		10



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-3 (2')
Lab Sample Id: 646108-012

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3800	24.9	mg/kg	12.12.19 21.28		5



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-3 (3')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-013

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1300	4.95	mg/kg	12.12.19 21.34		1



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-4 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-014

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8480	50.4	mg/kg	12.12.19 21.54		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.12.19 18.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.12.19 18.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.12.19 18.55	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.12.19 18.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	107	%	70-135	12.12.19 18.55		
o-Terphenyl	84-15-1	107	%	70-135	12.12.19 18.55		



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-4 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-014

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.12.19 18.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.12.19 18.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.12.19 18.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.12.19 18.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.12.19 18.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.12.19 18.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.12.19 18.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	12.12.19 18.49		
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.12.19 18.49		



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-4 (1')
Lab Sample Id: 646108-015

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4900	25.1	mg/kg	12.12.19 22.01		5



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-4 (2')
Lab Sample Id: 646108-016

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	521	4.99	mg/kg	12.12.19 22.08		1



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-4 (3')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-017

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	793	5.00	mg/kg	12.12.19 23.14		1



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-5 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-018

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3400	25.2	mg/kg	12.12.19 22.14		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.12.19 19.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.12.19 19.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.12.19 19.14	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.12.19 19.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	12.12.19 19.14	
o-Terphenyl	84-15-1	105	%	70-135	12.12.19 19.14	



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-5 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-018

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.12.19 19.09	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.12.19 19.09	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.12.19 19.09	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.12.19 19.09	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.12.19 19.09	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.12.19 19.09	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.12.19 19.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	12.12.19 19.09		
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.12.19 19.09		

**Certificate of Analytical Results 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

Sample Id: T-5 (1')
Lab Sample Id: 646108-019

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2830	25.0	mg/kg	12.12.19 22.21		5



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-5 (2')
Lab Sample Id: 646108-020

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2890	25.0	mg/kg	12.12.19 22.27		5



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-6 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-021

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.00

Basis: Wet Weight

Seq Number: 3110412

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8350	50.0	mg/kg	12.12.19 22.34		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.12.19 19.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.12.19 19.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.12.19 19.33	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.12.19 19.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-135	12.12.19 19.33		
o-Terphenyl	84-15-1	108	%	70-135	12.12.19 19.33		



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-6 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-021

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.19 19.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.19 19.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.12.19 19.29	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.12.19 19.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.12.19 19.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.12.19 19.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.12.19 19.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.12.19 19.29		
1,4-Difluorobenzene	540-36-3	111	%	70-130	12.12.19 19.29		

**Certificate of Analytical Results 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

Sample Id: **T-6 (1')**
Lab Sample Id: 646108-022

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2600	24.8	mg/kg	12.12.19 23.34		5



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-6(2')
Lab Sample Id: 646108-023

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10400	49.9	mg/kg	12.12.19 23.41		10

**Certificate of Analytical Results 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

Sample Id: **T-6(3')**
Lab Sample Id: 646108-024

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2360	25.2	mg/kg	12.12.19 23.47		5



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-7 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-025

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7430	50.1	mg/kg	12.12.19 23.54		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.12.19 19.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.12.19 19.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.12.19 19.52	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.12.19 19.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-135	12.12.19 19.52		
o-Terphenyl	84-15-1	105	%	70-135	12.12.19 19.52		



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-7 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-025

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.19 19.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.19 19.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.12.19 19.50	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.12.19 19.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.12.19 19.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.12.19 19.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.12.19 19.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	12.12.19 19.50		
1,4-Difluorobenzene	540-36-3	113	%	70-130	12.12.19 19.50		

**Certificate of Analytical Results 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

Sample Id: T-7 (1')
Lab Sample Id: 646108-026

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8420	49.6	mg/kg	12.13.19 00.14		10

**Certificate of Analytical Results 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

Sample Id: T-7 (2')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-027

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6450	50.0	mg/kg	12.13.19 00.20		10



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-8 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-028

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9060	49.7	mg/kg	12.13.19 00.27		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.12.19 20.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.12.19 20.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.12.19 20.11	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.12.19 20.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	105	%	70-135	12.12.19 20.11		
o-Terphenyl	84-15-1	105	%	70-135	12.12.19 20.11		



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-8 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-028

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.12.19 20.10	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.12.19 20.10	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.12.19 20.10	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.12.19 20.10	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.12.19 20.10	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.12.19 20.10	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.12.19 20.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.12.19 20.10		
1,4-Difluorobenzene	540-36-3	113	%	70-130	12.12.19 20.10		

**Certificate of Analytical Results 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

Sample Id: **T-8 (1')**
Lab Sample Id: 646108-029

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8490	50.3	mg/kg	12.13.19 00.34		10



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-8 (2')
Lab Sample Id: 646108-030

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8450	50.5	mg/kg	12.13.19 00.40		10



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-8 (3')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-031

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4070	24.8	mg/kg	12.13.19 01.07		5



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-9 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-032

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16000	101	mg/kg	12.13.19 01.14		20

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.12.19 20.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.12.19 20.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.12.19 20.30	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.12.19 20.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-135	12.12.19 20.30		
o-Terphenyl	84-15-1	109	%	70-135	12.12.19 20.30		



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-9 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-032

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.12.19 20.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.12.19 20.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.12.19 20.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.12.19 20.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.12.19 20.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.12.19 20.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.12.19 20.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	12.12.19 20.31		
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.12.19 20.31		



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-9 (1')
Lab Sample Id: 646108-033

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6710	49.8	mg/kg	12.13.19 01.33		10



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-10 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-034

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6970	50.0	mg/kg	12.13.19 01.40		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.12.19 20.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.12.19 20.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.12.19 20.49	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.12.19 20.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	103	%	70-135	12.12.19 20.49		
o-Terphenyl	84-15-1	102	%	70-135	12.12.19 20.49		



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-10 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-034

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.12.19 20.51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.12.19 20.51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.12.19 20.51	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.12.19 20.51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.12.19 20.51	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.12.19 20.51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.12.19 20.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.12.19 20.51		
1,4-Difluorobenzene	540-36-3	112	%	70-130	12.12.19 20.51		



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-10 (1')
Lab Sample Id: 646108-035

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5350	25.0	mg/kg	12.13.19 01.47		5



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-10 (2')
Lab Sample Id: 646108-036

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	828	5.00	mg/kg	12.13.19 00.47		1



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-1 1(0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-037

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6830	50.2	mg/kg	12.13.19 01.53		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.12.19 21.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.12.19 21.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.12.19 21.08	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.12.19 21.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	12.12.19 21.08	
o-Terphenyl	84-15-1	105	%	70-135	12.12.19 21.08	



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-1 1(0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-037

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.19 22.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.19 22.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.12.19 22.30	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.12.19 22.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.12.19 22.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.12.19 22.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.12.19 22.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.12.19 22.30		
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.12.19 22.30		



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-11 (1')
Lab Sample Id: 646108-038

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7420	49.7	mg/kg	12.13.19 02.00		10

**Certificate of Analytical Results 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

Sample Id: T-11 (2')
Lab Sample Id: 646108-039

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6630	49.5	mg/kg	12.13.19 02.07		10



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-11 (3')
Lab Sample Id: 646108-040

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.12.19 18.45

Basis: Wet Weight

Seq Number: 3110413

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6470	50.4	mg/kg	12.13.19 02.13		10



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-11 (4')
Lab Sample Id: 646108-041

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.13.19 08.15

Basis: Wet Weight

Seq Number: 3110390

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8400	50.0	mg/kg	12.13.19 09.14		10



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-11 (5')
Lab Sample Id: 646108-042

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.13.19 08.15

Basis: Wet Weight

Seq Number: 3110390

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7690	50.0	mg/kg	12.13.19 09.21		10



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-12 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-043

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.13.19 08.15

Basis: Wet Weight

Seq Number: 3110390

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.43	5.00	mg/kg	12.13.19 08.48		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.12.19 21.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.12.19 21.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.12.19 21.27	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.12.19 21.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	104	%	70-135	12.12.19 21.27		
o-Terphenyl	84-15-1	103	%	70-135	12.12.19 21.27		



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-12 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-043

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.12.19 22.51	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.12.19 22.51	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.12.19 22.51	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.12.19 22.51	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.12.19 22.51	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.12.19 22.51	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.12.19 22.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	12.12.19 22.51		
4-Bromofluorobenzene	460-00-4	90	%	70-130	12.12.19 22.51		

**Certificate of Analytical Results 646108****Tetra Tech- Midland, Midland, TX**

Golden Eye 18 Fed Com 1H

Sample Id: T-12 (1')
Lab Sample Id: 646108-044

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.13.19 08.15

Basis: Wet Weight

Seq Number: 3110390

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.7	4.99	mg/kg	12.13.19 09.28		1



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-12 (2')
Lab Sample Id: 646108-045

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.13.19 08.15

Basis: Wet Weight

Seq Number: 3110390

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	702	4.95	mg/kg	12.13.19 09.48		1



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-12 (3')
Lab Sample Id: 646108-046

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.13.19 08.15

Basis: Wet Weight

Seq Number: 3110390

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	734	4.98	mg/kg	12.13.19 09.54		1



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-12 (4')
Lab Sample Id: 646108-047

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.13.19 08.15

Basis: Wet Weight

Seq Number: 3110390

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	207	4.99	mg/kg	12.13.19 11.14		1



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-12 (5')
Lab Sample Id: 646108-048

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.13.19 08.15

Basis: Wet Weight

Seq Number: 3110390

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.0	5.02	mg/kg	12.13.19 11.21		1



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-13 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-049

Date Collected: 12.11.19 00.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.13.19 08.15

Basis: Wet Weight

Seq Number: 3110390

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.68	5.00	mg/kg	12.13.19 11.28		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 12.12.19 14.00

Basis: Wet Weight

Seq Number: 3110379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.12.19 21.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.12.19 21.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.12.19 21.46	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.12.19 21.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	34	%	70-135	12.12.19 21.46	**
o-Terphenyl	84-15-1	78	%	70-135	12.12.19 21.46	



Certificate of Analytical Results 646108



Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-13 (0'-1')

Matrix: Soil

Date Received: 12.12.19 13.05

Lab Sample Id: 646108-049

Date Collected: 12.11.19 00.00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 12.12.19 14.30

Basis: Wet Weight

Seq Number: 3110431

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.12.19 23.11	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.12.19 23.11	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.12.19 23.11	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.12.19 23.11	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.12.19 23.11	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.12.19 23.11	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.12.19 23.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	12.12.19 23.11		
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.12.19 23.11		



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-13 (1')
Lab Sample Id: 646108-050

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.13.19 08.15

Basis: Wet Weight

Seq Number: 3110390

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	52.3	5.00	mg/kg	12.13.19 11.34		1



Certificate of Analytical Results 646108

Tetra Tech- Midland, Midland, TX

Golden Eye 18 Fed Com 1H

Sample Id: T-1 3(2')
Lab Sample Id: 646108-051

Matrix: Soil
Date Collected: 12.11.19 00.00

Date Received: 12.12.19 13.05

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 12.13.19 08.15

Basis: Wet Weight

Seq Number: 3110390

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	544	4.95	mg/kg	12.13.19 11.54		1



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Tetra Tech- Midland
Golden Eye 18 Fed Com 1H

Analytical Method: Chloride by EPA 300

Seq Number: 3110412

MB Sample Id: 7692383-1-BLK

Matrix: Solid

LCS Sample Id: 7692383-1-BKS

Prep Method: E300P

Date Prep: 12.12.19

LCSD Sample Id: 7692383-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	235	94	231	92	90-110	2	20	mg/kg	12.12.19 19:21	

Analytical Method: Chloride by EPA 300

Seq Number: 3110413

MB Sample Id: 7692385-1-BLK

Matrix: Solid

LCS Sample Id: 7692385-1-BKS

Prep Method: E300P

Date Prep: 12.12.19

LCSD Sample Id: 7692385-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	238	95	238	95	90-110	0	20	mg/kg	12.12.19 23:01	

Analytical Method: Chloride by EPA 300

Seq Number: 3110390

MB Sample Id: 7692378-1-BLK

Matrix: Solid

LCS Sample Id: 7692378-1-BKS

Prep Method: E300P

Date Prep: 12.13.19

LCSD Sample Id: 7692378-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	270	108	255	102	90-110	6	20	mg/kg	12.13.19 08:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3110412

Parent Sample Id: 646108-001

Matrix: Soil

MS Sample Id: 646108-001 S

Prep Method: E300P

Date Prep: 12.12.19

MSD Sample Id: 646108-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	141	252	381	95	380	95	90-110	0	20	mg/kg	12.12.19 19:41	

Analytical Method: Chloride by EPA 300

Seq Number: 3110412

Parent Sample Id: 646108-009

Matrix: Soil

MS Sample Id: 646108-009 S

Prep Method: E300P

Date Prep: 12.12.19

MSD Sample Id: 646108-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	540	251	764	89	764	89	90-110	0	20	mg/kg	12.12.19 21:14	X

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

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

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

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



Tetra Tech- Midland
Golden Eye 18 Fed Com 1H

Analytical Method: Chloride by EPA 300

Seq Number: 3110413

Parent Sample Id: 646108-017

Matrix: Soil

MS Sample Id: 646108-017 S

Prep Method: E300P

Date Prep: 12.12.19

MSD Sample Id: 646108-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	793	250	999	82	998	82	90-110	0	20	mg/kg	12.12.19 23:21	X

Analytical Method: Chloride by EPA 300

Seq Number: 3110413

Parent Sample Id: 646108-036

Matrix: Soil

MS Sample Id: 646108-036 S

Prep Method: E300P

Date Prep: 12.12.19

MSD Sample Id: 646108-036 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	828	250	1030	81	1030	81	90-110	0	20	mg/kg	12.13.19 00:54	X

Analytical Method: Chloride by EPA 300

Seq Number: 3110390

Parent Sample Id: 646108-043

Matrix: Soil

MS Sample Id: 646108-043 S

Prep Method: E300P

Date Prep: 12.13.19

MSD Sample Id: 646108-043 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.43	249	247	96	265	103	90-110	7	20	mg/kg	12.13.19 08:54	

Analytical Method: Chloride by EPA 300

Seq Number: 3110390

Parent Sample Id: 646108-050

Matrix: Soil

MS Sample Id: 646108-050 S

Prep Method: E300P

Date Prep: 12.13.19

MSD Sample Id: 646108-050 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	52.3	250	333	112	331	111	90-110	1	20	mg/kg	12.13.19 11:41	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3110379

MB Sample Id: 7692317-1-BLK

Matrix: Solid

LCS Sample Id: 7692317-1-BKS

Prep Method: SW8015P

Date Prep: 12.12.19

LCSD Sample Id: 7692317-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1060	106	1070	107	70-135	1	20	mg/kg	12.12.19 16:43	
Diesel Range Organics (DRO)	<15.0	1000	1070	107	1080	108	70-135	1	20	mg/kg	12.12.19 16:43	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		124		121		70-135	%	12.12.19 16:43
o-Terphenyl	105		114		111		70-135	%	12.12.19 16:43

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

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

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

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



Tetra Tech- Midland
Golden Eye 18 Fed Com 1H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3110379

Matrix: Solid

Prep Method: SW8015P

Date Prep: 12.12.19

MB Sample Id: 7692317-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.12.19 16:24	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3110379

Matrix: Soil

Prep Method: SW8015P

Date Prep: 12.12.19

Parent Sample Id: 646108-001

MS Sample Id: 646108-001 S

MSD Sample Id: 646108-001 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)	<15.0	997	1130	113	1130	113	70-135	0	20	mg/kg	12.12.19 17:39	
Diesel Range Organics (DRO)	<15.0	997	1130	113	1140	114	70-135	1	20	mg/kg	12.12.19 17:39	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		127		70-135	%	12.12.19 17:39
o-Terphenyl	119		116		70-135	%	12.12.19 17:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3110431

Matrix: Solid

Prep Method: SW5030B

Date Prep: 12.12.19

MB Sample Id: 7692309-1-BLK

LCS Sample Id: 7692309-1-BKS

LCSD Sample Id: 7692309-1-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	0.100	0.124	124	0.118	118	70-130	5	35	mg/kg	12.12.19 15:07	
Toluene	<0.00200	0.100	0.113	113	0.109	109	70-130	4	35	mg/kg	12.12.19 15:07	
Ethylbenzene	<0.00200	0.100	0.113	113	0.110	110	70-130	3	35	mg/kg	12.12.19 15:07	
m,p-Xylenes	<0.00400	0.200	0.232	116	0.224	112	70-130	4	35	mg/kg	12.12.19 15:07	
o-Xylene	<0.00200	0.100	0.114	114	0.110	110	70-130	4	35	mg/kg	12.12.19 15:07	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		112		111		70-130	%	12.12.19 15:07
4-Bromofluorobenzene	94		100		99		70-130	%	12.12.19 15:07

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

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

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

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



Tetra Tech- Midland
Golden Eye 18 Fed Com 1H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3110431

Parent Sample Id: 646108-001

Matrix: Soil

MS Sample Id: 646108-001 S

Prep Method: SW5030B

Date Prep: 12.12.19

MSD Sample Id: 646108-001 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	0.112	112	0.0976	98	70-130	14	35	mg/kg	12.12.19 16:17	
Toluene	<0.00199	0.0996	0.105	105	0.0900	90	70-130	15	35	mg/kg	12.12.19 16:17	
Ethylbenzene	<0.00199	0.0996	0.105	105	0.0889	89	70-130	17	35	mg/kg	12.12.19 16:17	
m,p-Xylenes	<0.00398	0.199	0.215	108	0.180	90	70-130	18	35	mg/kg	12.12.19 16:17	
o-Xylene	<0.00199	0.0996	0.106	106	0.0891	89	70-130	17	35	mg/kg	12.12.19 16:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		110		70-130	%	12.12.19 16:17
4-Bromofluorobenzene	111		102		70-130	%	12.12.19 16:17

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

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

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

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

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

Page 1 of 6

Client Name: Concho		Site Manager: Mike Carmona	
Project Name: Golden Eye 18 Fed Com 1H		Project #: 212C-MD-01970	
Project Location: Lea County, New Mexico		Project #: 212C-MD-01970	
Invoice to: Ike Tavaréz		Sampler Signature: Brittany Long	
Receiving Laboratory: Xenco		Sampler Signature: Brittany Long	
Comments: Run deeper samples if TPH (GRO + DRO + MRO) exceeds 2,500 mg/kg or (GRO + DRO) exceeds 1,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg.			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX				PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	LAB USE ONLY	REMARKS:
		YEAR	DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE						
	T-1 (0-1')		12/11/2019		X			X				1	N	X	
	T-1 (1')		12/11/2019		X			X				1	N	X	
	T-1 (2')		12/11/2019		X			X				1	N	X	
	T-1 (3')		12/11/2019		X			X				1	N	X	
	T-1 (4')		12/11/2019		X			X				1	N	X	
	T-2 (0-1')		12/11/2019		X			X				1	N	X	
	T-2 (1')		12/11/2019		X			X				1	N	X	
	T-2 (2')		12/11/2019		X			X				1	N	X	
	T-2 (3')		12/11/2019		X			X				1	N	X	
	T-3 (0-1')		12/11/2019		X			X				1	N	X	

LAB USE ONLY	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			

Relinquished by: <i>[Signature]</i>	Date: 12.12.19	Time: 13:05	Received by: <i>[Signature]</i>	Date: 12/11/19	Time: 1305
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
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3.3

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

Analysis Request of Chain of Custody Record



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 04/16/20
 Page 2 of 6

Client Name: Concho		Site Manager: Mike Carmona	
Project Name: Golden Eye 18 Fed Com 1H		Project #: 212C-MD-01970	
Project Location: Lea County, New Mexico		Invoice to: Ike Tavaraz	
Receiving Laboratory: Xenco		Sampler Signature: Brittany Long	
Comments: Run deeper samples if TPH (GRO + DRO + MRO) exceeds 2,500 mg/kg or (GRO + DRO) exceeds 1,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg.			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX	PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	
		DATE	TIME		WATER	SOIL	HCL	HNO ₃			ICE
	T-3 (1)	12/11/2019		X			X			1	N
	T-3 (2)	12/11/2019		X			X			1	N
	T-3 (3)	12/11/2019		X			X			1	N
	T-4 (0-1)	12/11/2019		X			X			1	N
	T-4 (1)	12/11/2019		X			X			1	N
	T-4 (2)	12/11/2019		X			X			1	N
	T-4 (3)	12/11/2019		X			X			1	N
	T-5 (0-1)	12/11/2019		X			X			1	N
	T-5 (1)	12/11/2019		X			X			1	N
	T-5 (2)	12/11/2019		X			X			1	N

Relinquished by: <i>[Signature]</i>	Date: 12/12/19	Time: 13:15	Received by: <i>[Signature]</i>	Date: 12/11/19	Time: 13:05
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
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LAB USE ONLY	REMARKS:
3.3	☒ RUSH: Same Day 24 hr 48 hr 72 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report

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
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Page 3 of 6

Client Name:		Concho		Site Manager:		Mike Carmona	
Project Name:		Golden Eye 18 Fed Com 1H		Project #:		212C-MD-01970	
Project Location: (county, state)		Lea County, New Mexico		Project #:		212C-MD-01970	
Invoice to:		Ike Tavaraz		Sampler Signature:		Brittany Long	
Receiving Laboratory:		Xenco		Comments:		Run deeper samples if TPH (GRO + DRO + MRO) exceeds 2,500 mg/kg or (GRO + DRO) exceeds 1,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg.	
LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)
		YEAR	DATE				
	T-6 (0-1')		12/11/2019		X	1	N
	T-6 (1')		12/11/2019		X	1	N
	T-6 (2')		12/11/2019		X	1	N
	T-6 (3')		12/11/2019		X	1	N
	T-7 (0-1')		12/11/2019		X	1	N
	T-7 (1')		12/11/2019		X	1	N
	T-7 (2')		12/11/2019		X	1	N
	T-8 (0-1')		12/11/2019		X	1	N
	T-8 (1')		12/11/2019		X	1	N
	T-8 (2')		12/11/2019		X	1	N
Relinquished by:	Date:	Time:	Received by:	Date:	Time:		
Relinquished by:	Date:	Time:	Received by:	Date:	Time:		
Relinquished by:	Date:	Time:	Received by:	Date:	Time:		

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

LAB USE ONLY

Sample Temperature

3.3

REMARKS:

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

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Page 4 of 6

Client Name: Concho		Site Manager: Mike Carmona	
Project Name: Golden Eye 18 Fed Com 1H		Project #: 212C-MD-01970	
Project Location: Lea County, New Mexico		Project #: 212C-MD-01970	
Invoice to: Ike Tavaraz		Sampler Signature: Brittany Long	
Receiving Laboratory: Xenco		Sampler Signature: Brittany Long	
Comments: Run deeper samples if TPH (GRO + DRO + MRO) exceeds 2,500 mg/kg or (GRO + DRO) exceeds 1,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg.			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	LAB USE ONLY	REMARKS:	
		YEAR	DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE					
	T-8 (3)		12/11/2019		X			X			1	N		
	T-9 (0'-1')		12/11/2019		X			X			1	N	X	
	T-9 (1')		12/11/2019		X			X			1	N	X	
	T-10 (0'-1')		12/11/2019		X			X			1	N	X	
	T-10 (1')		12/11/2019		X			X			1	N	X	
	T-10 (2)		12/11/2019		X			X			1	N	X	
	T-11 (0'-1')		12/11/2019		X			X			1	N	X	
	T-11 (1')		12/11/2019		X			X			1	N	X	
	T-11 (2)		12/11/2019		X			X			1	N	X	
	T-11 (3)		12/11/2019		X			X			1	N	X	

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													
LAB USE ONLY Sample Temperature 3.3													
REMARKS: ☒ RUSH: Same Day 24 hr 48 hr 72 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report													

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Analysis Request of Chain of Custody Record



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Page 5 of 6

Client Name: Concho		Site Manager: Mike Carmona													
Project Name: Golden Eye 18 Fed Com 1H		Project #: 212C-MD-01970													
Project Location: Lea County, New Mexico		Project #: 212C-MD-01970													
Invoice to: Ike Tavaréz		Sampler Signature: Brittany Long													
Receiving Laboratory: Xenco		Comments: Run deeper samples if TPH (GRO + DRO + MRO) exceeds 2,500 mg/kg or (GRO + DRO) exceeds 1,000 mg/kg. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg.													
LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	LAB USE ONLY	REMARKS:
		YEAR	DATE												
	T-11 (4)		12/11/2019			X				X		1	N		
	T-11 (5)		12/11/2019			X				X		1	N		
	T-12 (0-1)		12/11/2019			X				X		1	N		
	T-12 (1)		12/11/2019			X				X		1	N		
	T-12 (2)		12/11/2019			X				X		1	N		
	T-12 (3)		12/11/2019			X				X		1	N		
	T-12 (4)		12/11/2019			X				X		1	N		
	T-12 (5)		12/11/2019			X				X		1	N		
	T-13 (0-1)		12/11/2019			X				X		1	N		
	T-13 (1)		12/11/2019			X				X		1	N		
Relinquished by: [Signature]		Date: 12.12.19		Time: 13:05		Received by: [Signature]		Date: 12.11.19		Time: 13:05		LAB USE ONLY		REMARKS:	
Relinquished by: [Signature]		Date: 12.12.19		Time: 13:05		Received by: [Signature]		Date: 12.11.19		Time: 13:05		LAB USE ONLY		REMARKS:	
Relinquished by: [Signature]		Date: 12.12.19		Time: 13:05		Received by: [Signature]		Date: 12.11.19		Time: 13:05		LAB USE ONLY		REMARKS:	

LAB USE ONLY

Sample Temperature

REMARKS:

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

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Client Name:

Concho

Site Manager:

Mike Carmona

Project Name:

Golden Eye 18 Fed Com 1H

Project Location:

Lea County, New Mexico

Project #:

212C-MD-01970

Invoice to:

Ike Tavaraz

Receiving Laboratory:

Xenco

Sampler Signature:

Brittany Long

Comments:

 Run deeper samples if TPH (GRO + DRO + MRO) exceeds 2,500 mg/kg or (GRO + DRO) exceeds 1,000 mg/kg.
 Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg.

 LAB #
 (LAB USE ONLY)

SAMPLE IDENTIFICATION

T-13 (2)

SAMPLING

MATRIX

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)

X Chloride

Chloride Sulfate TDS

General Water Chemistry (see attached list)

Anion/Cation Balance

Hold

ANALYSIS REQUEST

(Circle or Specify Method No.)

Relinquished by:

Date: Time:

Relinquished by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

Received by:

Date: Time:

Received by:

Date: Time:

LAB USE ONLY

Sample Temperature

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



Client: Tetra Tech- Midland

Date/ Time Received: 12/12/2019 01:05:00 PM

Work Order #: 646108

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)?	3.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 12/12/2019

Checklist reviewed by:

Jessica Kramer

Date: 12/13/2019