State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature: _____ Date: 3-8-22_____

email: _____ Telephone: ___432-687-7108_____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

CLOSURE REQUEST REPORT

Chevron Corporation
Quail Queen Unit #001
Lea County, New Mexico
Unit Letter "O", Section 11, Township 19 South, Range 34 East
Latitude 32.66943º North, Longitude 103.52890º West
NMOCD Reference #: nJXK1604136243

Prepared For:

Chevron Corporation
6301 Deauville Blvd.
Midland, TX 79706

Prepared By:

Etech Environmental & Safety Solutions, Inc.
P.O. Box 62228
Midland, Texas 79711

March 3, 2022

Blake Estep
Project Manager

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INTRODUCTION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Chevron Corporation, has prepared this Closure Request for the release site known as Quail Queen Unit #001. The legal description of the release site is Unit Letter "O", Section 11, Township 19 South, Range 34 East, in Lea County, New Mexico. The release site GPS coordinates are 32.66943º North and 103.52890º West. A "Site Location Topographic Map" is provided as Figure 1. A copy of the New Mexico Oil Conservation Division (NMOCD) Release Notification and Corrective Action (Form C-141) is provided in Appendix D.

On August 26, 2011, a produced water pipeline ruptured causing the release at the Quail Queen Unit #001 site (Release Site). Approximately sixty (60) barrels of produced water was release on the caliche pad. Approximately fifty (50) barrels of produced water was recovered with vacuum trucks.

Photographic documentation of the release site is provided as Appendix B.

NMOCD SITE CLASSIFICATION

A search of the groundwater database maintained by United States Geological Survey (USGS) identified that there are no freshwater wells within a half (1/2) mile of the release site. The closest freshwater well (USGS Well #:324016103301701) is approximately 1.40 miles east of the release site. The USGS database indicated groundwater should be encountered at approximately seventy-four (74) feet below ground surface (bgs). On October 18, 2005, Environmental Plus, Inc. conducted a site characterization assessment for the incident (nPAC0606153274), their assessment consisted of two (2) soil borings to approximate depths of forty-five (45) and sixty-five (65) feet bgs. No ground water was encountered in either of the soil borings (refer to Appendix A). No surface water or water wells were observed within one thousand (1,000) feet of the release site. The Quail Queen Unit #001 is not considered to be in a karst area and is considered stable. An "Aerial Proximity Map" is provided as Figure 2.

Based on the NMOCD site classification system, the following soil remediation levels were assigned to the Quail Queen Unit #001 site as a result of this criteria:

- Benzene – 10 mg/kg
- BTEX – 50 mg/kg
- TPH – 2,500 mg/kg
- Chloride – 10,000 mg/kg

INITIAL SITE ASSESSMENT AND DELINEATION

On January 6, 2022, Etech conducted an assessment and sampling event at the Quail Queen Unit #001 to determine the condition of the soil where it was believed the spill had occurred. Two (2) soil borings were installed, and samples were collected at six (6) inch and forty-eight (48) inch intervals bgs unless refusal was met (refer to Figure 3). Refusal was met at a depth of thirty (30) inches bgs in Auger Hole 1 (AH-1) and twelve (12) inches bgs in Auger Hole 2 (AH-2). Samples were submitted to Xenco Eurofins to be analyzed for total petroleum hydrocarbons (TPH), chlorides, and benzene, toluene, ethylbenzene & xylenes (BTEX) concentrations. A "Site and Sample Location Map" is provided as Figure 3.

Laboratory results indicated TPH, chloride, and BTEX concentrations were below the NMOCD Closure Criteria and/or the NMOCD Reclamation Standards in each of the submitted soil samples (refer to Table 1).

Analytical reports are provided as Appendix C.

SITE CLOSURE REQUEST

Laboratory analytical results indicate TPH, chloride, and BTEX concentrations were below the NMOCD Closure Criteria and/or the NMOCD Reclamation Standards in each of the submitted soil samples. Based on laboratory analytical results and field observations made during the initial site assessment, the affected area appears to be restored to its original condition and vegetation growth has been occurring at a steady rate. Etech, on behalf of Chevron Corporation, respectfully request that the NMOCD Office grant site closure to the Quail Queen Unit #001 (NMOCD Incident ID: nJXK1604136243).

LIMITATIONS

Etech has prepared this Closure Request Report to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Etech has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report. This report has been prepared for the benefit of Chevron Corporation. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Etech and/or Chevron Corporation.

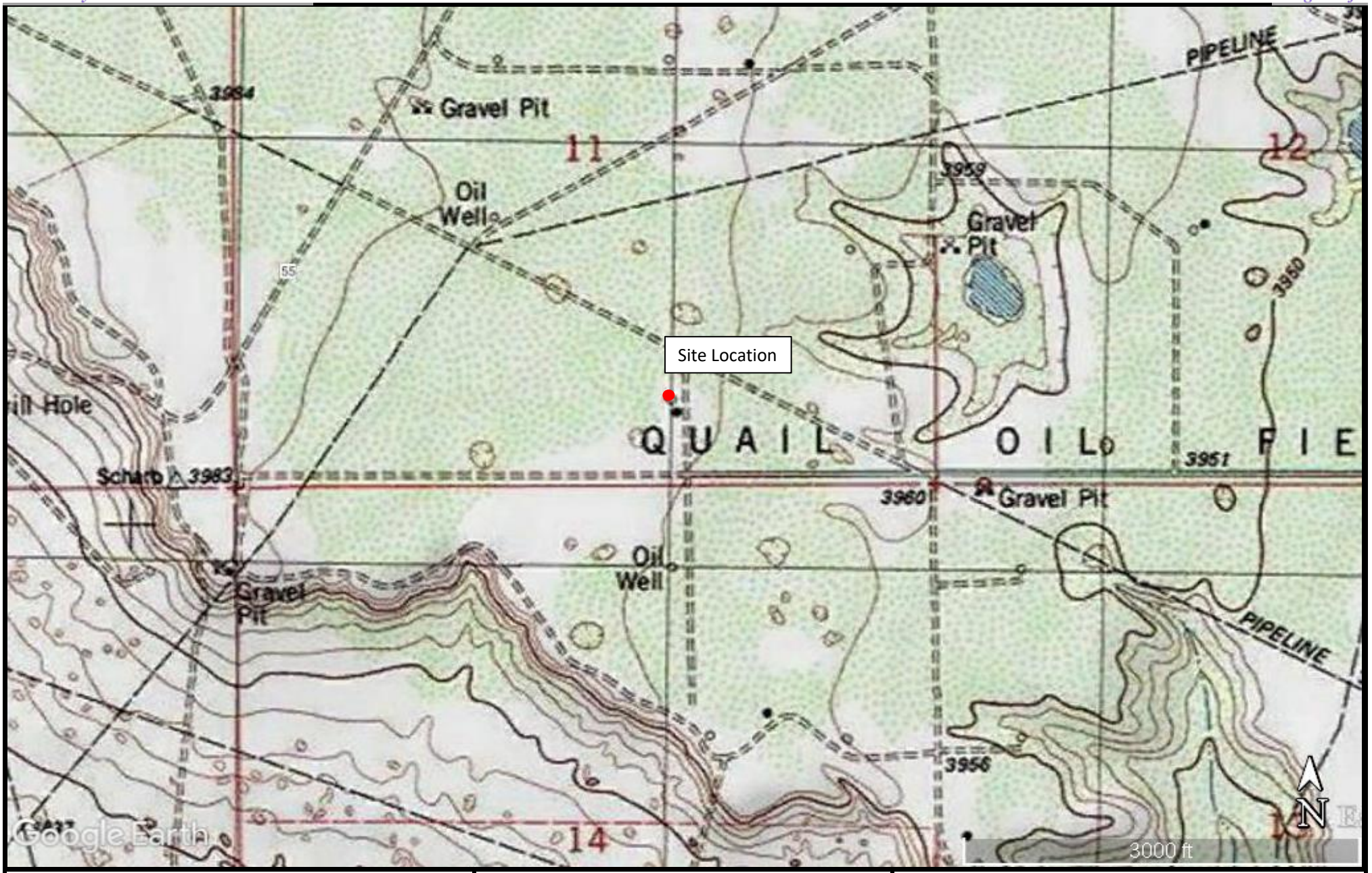
DISTRIBUTION

Copy 1: New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

Copy 2: Amy Barnhill
Chevron Corporation
6301 Deauville Bulverde
Midland, Texas 79706

Copy 3: Etech Environmental & Safety Solutions, Inc.
P.O. Box 62228
Midland, Texas 79711

FIGURES



Legend:

- Site Location

Figure 1

Site Location Topographic Map

Chevron Corporation

Quail Queen Unit #001

GPS: 32.66943, -103.52890

Lea County

eTECH Environmental & Safety Solutions, Inc.

Drafted:

Date: 3/3/22

Legend:

- Site Location
- Fresh Water Well
- 100-Year Floodplain
- High/Critical Karst
- Non-Industrial Building
- Subsurface Mine

Figure 2

Aerial Proximity Map

Chevron Corporation

Quail Queen Unit #001

GPS: 32.66943, -103.52890

Lea County

eTECH Environmental & Safety Solutions, Inc.

Drafted:

Date: 3/3/22

Environmental & Safety Solutions, Inc.

Figure 3
Site and Sample Location Map

Project Name:	Quail Queen Unit #001	Project No.:	15316
Date Sampled:	January 6, 2022	GPS:	32.66943, -103.52890

TABLES

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

CHEVRON CORPORATION

Quail Queen Unit #001

LEA COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	DEPTH	SAMPLE DATE	METHODS: SW 846-8021B						METHOD: SW 8015M					E 300.0
			BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C_6-C_{12}	TPH DRO C_{12}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
			10 mg/Kg						50 mg/Kg				100 mg/Kg	600 mg/Kg
AH-1	0-6"	1/6/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,870
AH-1	24-30"	1/6/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,500
AH-2	0-6"	1/6/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	64.1
AH-2	6-12"	1/6/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15

Bold and Yellow Highlighted indicates Analyte Above NMOCD Regulatory Limit

ND - Analyte Not Detected at or above the laboratory reporting limit

**** - Sample area was eliminated during further excavation activities.**

APPENDICES

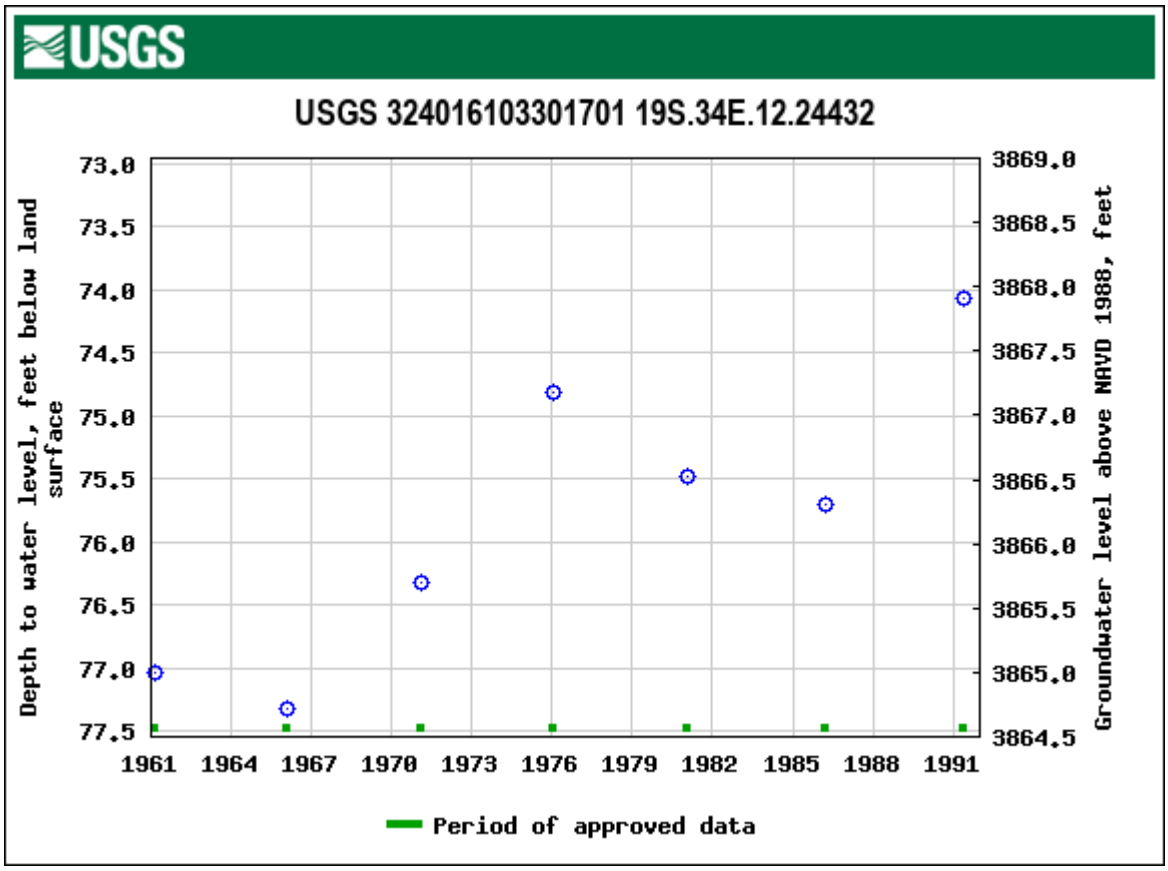
Appendix A – Depth to Groundwater Information

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

No records found.

UTMNAD83 Radius Search (in meters):

Easting (X): 637940.55 **Northing (Y):** 3615596.87 **Radius:** 804


USGS
USGS 324016103301701 19S.34E.12.24432
Depth to water level, feet below land surface
Groundwater level above NAVD 1988, feet
73.0
73.5
74.0
74.5
75.0
75.5
76.0
76.5
77.0
77.5
3869.0
3868.5
3868.0
3867.5
3867.0
3866.5
3866.0
3865.5
3865.0
3864.5
1961
1964
1967
1970
1973
1976
1979
1982
1985
1988
1991
Period of approved data

Legend:

- Site Location
- USGS Water Well

Figure 4

USGS Well Proximity Map

Chevron Corporation

Quail Queen Unit #001

GPS: 32.66943, -103.52890

Lea County

eTECH Environmental & Safety Solutions, Inc.

Drafted:

Date: 3/3/22

ENVIRONMENTAL PLUS, INC. Micro-Blaze Micro-Blaze Out™
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

WTR 76
Sidetrack for
1000 CLEAN UP

6 December 2005

Mr. Larry Johnson
Environmental Engineer Specialist
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, New Mexico 88240

RE: Site Characterization
Chesapeake Energy-Quail State SWD (Ref. #160030)
UL-O of Section 11, T19S, R34E

Dear Mr. Johnson:

On September 17, 2005, approximately 115 barrels (bbls) of fluid were released onto the ground surface after lightening struck a 500 bbl fiberglass produced water tank. Approximately 55 bbls of production fluid were recovered by a vacuum truck with the remaining fluid seeping into the soil. Chesapeake Energy Corporation (Chesapeake) retained Environmental Plus, Inc. (EPI) in September 2005 to delineate the vertical extent of impacted soil at the site. This letter report documents the results of the delineation activities and recommends remedial procedures for cleanup of the impacted soil.

Site Background

The site is located in the SW¼ of the SE¼ of Section 11, Township 19 South, Range 34 East at an elevation of approximately 3,792 feet above mean sea level (reference *Figures 1 and 2*). The property is owned by the State of New Mexico. A search for area water wells was completed utilizing the *New Mexico Office of the State Engineers* website and a database maintained by the United States Geological Survey (USGS). No wells (domestic, agriculture or public) or bodies of surface water exist within a 1,000- foot radius of the site (reference *Figure 2*). However, there are three (3) water supply wells located within a 1.0- mile radius of the release area. Groundwater level data indicates an average water depth of approximately 76 feet below ground surface in the area (reference *Table 1*). Therefore, based on available information, it was determined the distance between the contamination and groundwater is approximately 70 feet. Utilizing this information, the New Mexico Oil Conservation Division (NMOCD) Remedial Goals for this site are determined as follows:

API# 30025255360000
incident - nPAC0606153274
application - pPAC0606153450

Parameter	Remedial Goal
Benzene	10 parts per million
BTEX	50 parts per million
TPH	1,000 parts per million

* Chloride residuals may not be capable of impacting local groundwater above NMWQCC Standard of 250 mg/Kg

P.O. BOX 1558 ••• 2100 AVENUE O ••• EUNICE, NEW MEXICO 88231
TELEPHONE 505•394•3481 ••• FAX 505•394•2601

Field Work

On September 19, 2005, EPI performed an assessment of the surface area damage caused by the spill. The total spill area was surveyed and classified as a primary release area consisting of approximately 16,500 square feet (sf).

On October 18, 2005, EPI mobilized at the site to direct the placement and depth of two (2) soil borings within the perimeter of the release area to delineate the vertical extent of production fluid impacted soil (reference *Figure 4*). During the advancement of the soil borings, samples were collected at 5-foot intervals with a portion of the sample placed in a laboratory provided container and the remainder placed in a self sealing polyethylene bag. The samples in the laboratory provided containers were immediately placed on ice for transport to Environmental Lab of Texas in Odessa, Texas, for quantification of benzene, toluene, ethylbenzene and total xylenes (BTEX), gasoline range organics (GRO), diesel range organics (DRO) and chlorides. The portions of the samples in the self-sealing polyethylene bags were placed in a heated environment (i.e., cab of a truck) to allow the volatilization of organic vapors. After the samples had been allowed to equilibrate to ≈70° F, they were analyzed for the presence of organic vapors utilizing a MiniRae® photoionozation detector (PID) equipped with a 9.8 electron-volt (eV) lamp. In addition, the samples were analyzed in the field for the presence of chlorides using a LaMotte Chloride Test Kit.

The soil borings were advanced to a depth of 45 feet (BH-1) and 65 feet (BH-2) below ground surface (bgs) with samples being collected at 2-feet and 5-feet depths initially then at 5-foot intervals to total depth (TD) of the soil borings. Field analyses of the samples collected during the advancement of soil boring BH-1 indicated the presence of organic vapor concentrations ranging from 1.5 parts per million (ppm) at 20 feet bgs to 4.4 ppm at 2 feet bgs. Field analyses for chloride indicated concentrations ranging from 240 milligrams per kilogram (mg/Kg) at 45 feet bgs to 3,540 mg/Kg at 2 feet bgs. Field analyses of the samples collected during the advancement of soil boring BH-2 indicated the presence of organic vapor concentrations ranging from 1.1 ppm at 20 feet bgs to 3.0 ppm at 15 feet bgs. Field analyses for chlorides indicated concentrations ranging from 240 mg/Kg at 65 feet bgs to 3,120 mg/Kg at 2 feet bgs (reference *Table 1*).

During the advancement of the soil boring, the lithology was defined as caliche from ground surface to a depth of approximately 20 feet bgs, underlain by light tan sand from a depth of approximately 20 feet bgs to TD of each wells respective bore hole (reference *Attachment II*).

Analytical Data

Analytical results for soil samples collected from BH-1 at 2-feet bgs indicated TPH concentrations of 18.7 mg/Kg while benzene and BTEX were not detected at or above laboratory method detection limits (MDL). Samples collected at 5-feet bgs showed traces of toluene (0.0259mg/ Kg), ethylene benzene (0.0657 mg/Kg), m,p-xylenes (0.2680 mg/Kg), o-xylene (0.0890 mf/Kg) and BTEX (0.4486 mg/Kg) while TPH was not detected at or above laboratory MDL (reference *Table 1*).

Analytical results from samples collected from BH-2 at 2-feet and 5-feet bgs indicated benzene, BTEX and TPH were not detected at or above laboratory MDL (reference *Table 1*).

Chloride concentrations for the samples obtained during the advancement of soil boring BH-1 were reported ranging from 3,710 mg/Kg at 2-feet bgs to 214 mg/Kg at 15-feet bgs. Chloride concentrations for the samples obtained during the advancement of soil boring for BH-2 were reported ranging from 1,862 mg/Kg at 2-feet bgs to 172 mg/Kg at 15- feet. However, the concentrations from ground level to 5-feet bgs are above the New Mexico Water Quality Control Commission's (NMWQCC) standards for groundwater of 250 mg/Kg. Chloride concentrations from 5-feet bgs to total depth of well borings are below the 250 mg/Kg groundwater standards for both BH-1 and BH-2 (reference Table 1).

Summary

Analytical results for the samples collected during the advancement of soil borings for BH-1 indicate soil is slightly impacted with benzene, BTEX and TPH to a depth of approximately 5-feet bgs while samples for BH-2 indicate no impacted soil. However, the soil from BH-1 and BH-2 is impacted with chlorides which exceed NMOCD Remedial Goals as set forth in the Site Background section and could possibly impact groundwater above New Mexico Water Quality Control Commission's (NMWQCC) standards of 250 mg/Kg groundwater standards.

Based on field and analytical analysis, soil impacted above the NMOCD remedial thresholds extends to a depth of approximately 5-feet bgs within the confines of the release area (reference *Figure 3*). The release area is approximately 16,500 square feet in size, resulting in approximately 3,060 cubic yards of soil (*in situ*) impacted above NMOCD remedial guidelines for this site. It is unlikely that soil impacted above the NMOCD remedial guidelines for this site extends completely to 5 feet bgs across the entire release area and the actual volume of impacted soil may be less than 3,060 cubic yards.

Should you have any questions or concerns, please feel free to contact me at (505) 394-3481 or via e-mail at dduncan@envplus.net. Upon your approval, EPI will initiate the next phase of site remediation. All official correspondence should be submitted to Mr. Bradley Blevins at:

Mr. Bradley Blevins
Chesapeake Energy Corporation
P.O. Box 190
Hobbs, NM 88240-0190

(505) 391-1462, ext. 6224
bblevins@chkenergy.com

Sincerely,

ENVIRONMENTAL PLUS, INC.

David P. Duncan
Civil Engineer

cc: Bradley Blevins, Chesapeake Energy-Hobbs, NM
Curtis Blake, Chesapeake Energy-Hobbs, NM
Jace Marshall, Chesapeake Energy-Oklahoma City, OK

Myra Meyers, New Mexico State Land Office, Hobbs, NM
Cody Morrow, New Mexico State Land Office, Santa Fe, NM

encl. Figure 1 – Area Map
Figure 2 – Site Location Map
Figure 3 – Site Map
Figure 4 – Soil Boring Location Map
Table 1 – Summary of Soil Boring Analytical Results
Table 2 – Well Data
Attachment I – Site Photographs
Attachment II – Laboratory Results and Chain-of-Custody Form
Attachment III – Soil Boring Logs
Attachment IV – Copy of Initial C-141

TABLES

TABLE 1

Summary of Soil Boring Analytical Results

Chesapeake Energy Quail State SWD (Ref.#160030)

Soil Boring	Depth (feet)	Sample Date	PID Reading (ppm)	Field Chloride (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	m,p-Xylenes (mg/Kg)	o-Xylene (mg/Kg)	Total BTEX (mg/Kg)	TPH (as gasoline) (mg/Kg)	TPH (as diesel) (mg/Kg)	Total TPH (mg/Kg)	Chloride (mg/Kg)
BH-1	2	18-Oct-05	4.4	3540	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	18.7	18.7	**3710**
	5	18-Oct-05	2	450	<0.0250	0.0259	0.0657	0.2680	0.0890	0.4486	<10.0	<10.0	<10.0	**652**
	10	18-Oct-05	5	400	--	--	--	--	--	--	--	--	--	133
	15	18-Oct-05	2.3	480	--	--	--	--	--	--	--	--	--	214
	20	18-Oct-05	1.5	400	--	--	--	--	--	--	--	--	--	--
	25	18-Oct-05	2.3	320	--	--	--	--	--	--	--	--	--	--
	30	18-Oct-05	1.5	320	--	--	--	--	--	--	--	--	--	--
	35	18-Oct-05	1.6	240	--	--	--	--	--	--	--	--	--	--
	40	18-Oct-05	3.1	240	--	--	--	--	--	--	--	--	--	--
	45	18-Oct-05	3.5	240	--	--	--	--	--	--	--	--	--	--
BH-2	2	18-Oct-05	2.6	3,120	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	**1860**
	5	18-Oct-05	2.3	1,280	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	**814**
	10	18-Oct-05	2.2	640	--	--	--	--	--	--	--	--	--	215
	15	18-Oct-05	3.0	500	--	--	--	--	--	--	--	--	--	172
	20	18-Oct-05	1.1	500	--	--	--	--	--	--	--	--	--	--
	25	18-Oct-05	1.9	480	--	--	--	--	--	--	--	--	--	--
	30	18-Oct-05	2.1	480	--	--	--	--	--	--	--	--	--	--
	35	18-Oct-05	1.4	400	--	--	--	--	--	--	--	--	--	--
	40	18-Oct-05	1.7	400	--	--	--	-	--	--	--	--	--	--
	45	18-Oct-05	1.5	400	--	--	--	--	--	--	--	--	-	--
	50	18-Oct-05	0.9	400	--	--	--	--	--	--	--	--	--	--
	55	18-Oct-05	0.2	320	--	--	--	--	--	--	--	--	--	--
	60	18-Oct-05	0.3	240	--	--	--	--	--	--	--	--	-	--
	65	18-Oct-05	0.2	240	--	--	--	--	--	--	--	--	--	--
NMOCD Remedial Thresholds			**100**[3]		**10**					**50**			**1,000**	**250**[4]

[1] *Bolded values are in excess of the NMOCD Remediation Thresholds*

[2] *"--": Not Analyzed*

[3] *In lieu of laboratory analyes of benzene, toluene, ethylbenzene and total xylenes.*

[4] *Chloride residuals may not be capable of impacting local groundwaterabove the NMWQCCstandard of 250 mg/L*

TABLE 2

Well Data

Chesapeake Energy Quail State SWD (Ref. #160030)

Well Number	Diversion[A]	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation[B]	Well Depth (ft bgs)	Depth to Water (ft bgs)
L04723	3	Cactus Drilling Company	PRO	19S	34E	11 1 1 1	N 32° 40' 42.06"	W 103° 32' 20.82"	24-Sep-61	3,986	145	123
L10380	3	Gillespie Charles B Jr	STK	19S	34E	02 4 4 3	N 32° 40' 55.32"	W 103° 31' 34.61"	11-Mar-94	3,965	153	100
CP00806	0	Smith Kenneth	STK	19S	34E	04 4 4	N 32° 40' 54.91"	W 103° 33' 38.15"		3,882	50	
CP00875	0	Matador Petroleum, Inc.	PRO	19S	34E	05 3 4 3	N 32° 40' 54.68"	W 103° 35' 10.86"	07-Jan-98	3,806	200	
L04059	3	Noble Drilling Co.	PRO	19S	34E	12 1 4	N 32° 40' 29.29"	W 103° 31' 3.72"	29-Jan-59		125	60
L04059 APPRO				19S	34E	12 1 4	N 32° 40' 29.29"	W 103° 31' 3.72"	29-Jan-59		125	60
CP00466 EXP	0	Gulf Oil Corporation	PRO	19S	34E	16 3 3 2	N 32° 39' 10.29"	W 103° 34' 24.43"		3,760		
CP00466 (2)E EXP	0	Inc. Pennzoil United	PRO	19S	34E	16 3 3 2	N 32° 39' 10.29"	W 103° 34' 24.43"		3,760		
CP00680 EXP	0	C.W. Trainer	OBS	19S	34E	25 4 3 3	N 32° 37' 26.49"	W 103° 30' 48.18"		3,732		
CP00683	3	C.W. Trainer	OBS	19S	34E	26 4 3 3	N 32° 37' 26.49"	W 103° 30' 48.18"	20-Jul-85	3,732	120	28
USGS #1				19S	35E	17 2 1 1	N 32° 39' 44"	W 103° 28' 40"	25-Jan-96	3,822	50	26.04
USGS #2				19S	35E	09 1 3 3	N 32° 40' 15"	W 103° 28' 08"	20-Mar-96	3,834	36	19.45
USGS #3				19S	34E	09 2 4 2	N 32° 40' 22"	W 103° 33' 26"	08-Mar-01	3,890	33	28.97
USGS #4				19S	34E	06 3 4 1	N 32° 40' 46"	W 103° 36' 04"	08-Mar-01	3,777	500	244.23
USGS #5				19S	35E	06 1 3 3	N 32° 41' 07"	W 103° 30' 11"	01-Feb-96	3,922	130	61.68
USGS #6				19S	35E	05 1 2 1	N 32° 41' 30"	W 103° 28' 49"	02-Jan-01	3,866	117	46.8
USGS #7				19S	34E	03 4 1 2			28-Jan-81			104.9
USGS #8				19S	34E	06 3 4 1			30-Jan-96			239.06
USGS #9				19S	34E	09 2 4 2			30-Jan-96			28.73
USGS #10				19S	34E	12 2 4 4			29-May-91			74.07
USGS #11				19S	34E	16 3 3 4			07-Apr-86			231.18
USGS #12				19S	34E	31 1 3 1			14-Mar-68			53.14
USGS #13				19S	34E	31 1 3 2			17-Nov-65			58.6
USGS #14				19S	34E	31 2 3 2			15-Dec-76			147.58
USGS #15				19S	34E	31 2 3 2			28-Jan-81			147.86

Data obtained from the New Mexico Office of the State Engineer Website (http://iwaters.ose.state.nm.us:7001/iWATERS/wr_RegisServlet1) and the USGS Website (http://waterdata.usgs.gov/nwis).
Shaded areas indicate well locations shown on Figure 2

[A] = in acre feet per annum

[B] = Elevation interpolated from USGS topographical map based on referenced location.

STK = Livestock

OBS = Observation

PRO = Prospecting or development of natural resources

quarters are 1=NW, 2=NE, 3=SW, 4=SE; quarters are biggest to smallest

ATTACHMENT II

LABORATORY RESULTS AND CHAIN-OF-CUSTODY FORM

ATTACHMENT III

SOIL BORES

Log Of Test Borings

(NOTE - Page 1 of 2)

ENVIRONMENTAL PLUS, INC.
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES
EUNICE
505-394-3481

Project Number: 160030

Project Name: Chesapeake Quail State SWD

Location: UL-D, Section 11, Township 19 South, Range 34 East

Boring Number: BH-1 | Surface Elevation: 3,972

Start Date: 10/18/05 Time: 1245 hrs

Completion Date: 10/18/05 Time: 1415 hrs

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Description
1245				4.4			Rock, Top Soil, Black Clay
						2	
						5	
1259				2.4			Caliche, Rock
						10	
1310				4.5			Caliche, Rock
						15	
1320				2.3			Caliche, Rock
						20	
1330				1.5			Caliche, Rock
						25	
1335				2.3			SAND, Caliche
						30	
1345				1.5			SAND

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
10/18/05	-	-	-	-	-
-	-	-	-	-	-

Drilling Method: HSA 3.5" ID

Backfill Method: Bentonite

Field Representative: JR

Log Of Test Borings

(NOTE - Page 2 of 2)

ENVIRONMENTAL PLUS, INC.
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES
EUNICE
505-394-3481

Project Number: 160030

Project Name: Chesapeake Quail State SWD

Location: UL-O, Section 11, Township 19 South, Range 34 East

Boring Number: BH-1 | Surface Elevation: 3,972

Start Date: 10/18/05 Time: 1245 hrs

Completion Date: 10/18/05 Time: 1415 hrs

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Description
						35	
1355				1.6			SAND, Pebbles
						40	
1403				3.1			SAND, Pebbles
						45	
1415				3.5			SAND, Pebbles End of Boring at 45.0'
						50	
						55	
						60	

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
10/18/05	-	-	-	-	-
-	-	-	-	-	-

Drilling Method: HSA 3.5" ID

Backfill Method: Bentonite

Field Representative: JR

Log Of Test Borings

(NOTE - Page 1 of 3)

ENVIRONMENTAL PLUS, INC.
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES
EUNICE
505-394-3481

Project Number: 160030

Project Name: Chesapeake Quail State SWD

Location: UL-O, Section 11, Township 19 South, Range 34 East

Boring Number: BH-2 | Surface Elevation: 3,972

Start Date: 10/18/05 Time: 1443 hrs

Completion Date: 10/18/05 Time: 1630 hrs

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Description
1443				2.6		0	Rock, Top Soil, Black Clay
						2	
						5	
1447				2.3			Caliche
						10	
1500				2.2			Caliche
						15	
1510				3.0			Caliche
						20	
1518				1.1			Caliche
						25	
1523				1.9			Light Tan Sugar Sand
						30	
1526				2.1			Light Tan Sugar Sand

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
10/18/05	-	-	-	-	-
-	-	-	-	-	-

Drilling Method: HSA 3.5" ID

Backfill Method: Bentonite

Field Representative: JR

Log Of Test Borings

(NOTE - Page 2 of 3)

ENVIRONMENTAL PLUS, INC.
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES
EUNICE
505-394-3481

Project Number: 160030

Project Name: Chesapeake Quail State SWD

Location: UL-D, Section 11, Township 19 South, Range 34 East

Boring Number: BH-2 | Surface Elevation: 3,972

Start Date: 10/18/05 Time: 1443 hrs

Completion Date: 10/18/05 Time: 1630 hrs

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Description
						35	
1544				1.4			Light Tan Sugar Sand Pebbles
						40	
1547				1.7			Light Tan Sugar Sand Pebbles
						45	
1600				1.5			Light Tan Sugar Sand
						50	
1605				.9			Redish Tan Sugar Sand
						55	
1610				.2			Redish Tan Sugar Sand
						60	
1622				.3			Redish Tan Sugar Sand

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
10/18/05	-	-	-	-	-
-	-	-	-	-	-

Drilling Method: HSA 3.5" ID

Backfill Method: Bentonite

Field Representative: JR

Log Of Test Borings

(NOTE - Page 3 of 3)

ENVIRONMENTAL PLUS, INC.
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES
EUNICE
505-394-3481

Project Number: 160030
Project Name: Chesapeake Quail State SWD
Location: UL-D, Section 11, Township 19 South, Range 34 East
Boring Number: BH-2 | Surface Elevation: 3,972

Start Date: 10/18/05 Time: 1443 hrs
Completion Date: 10/18/05 Time: 1630 hrs

Sample # and Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	U.S.C.S. Symbol	Depth (feet)	Description
						65	
1630				.2			Redish Tan Sugar Sand End of Boring at 65.0'
						70	
						75	
						80	
						85	
						90	

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
10/18/05	-	-	-	-	-
-	-	-	-	-	-

Drilling Method: HSA 3.5" ID
Backfill Method: Bentonite
Field Representative: JR

Appendix B – Photographic Documentation

Project Name: *Quail Queen Unit #001*
Project No: *15317*

Photographic Documentation

Photo No: **1.**	
Direction Taken: Northwest	
Description: View during assessment and delineation event.	

Photo No: **2.**	
Direction Taken: Southeast	
Description: View during assessment and delineation event.	

Appendix C – Analytical Reports

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-9960-1
Client Project/Site: Quail Queen Unit #001 (6243)

For:
Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Brandon Wilson

Authorized for release by:
1/13/2022 8:22:58 AM

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

Client: Etech Environmental & Safety Solutions
Project/Site: Quail Queen Unit #001 (6243)

Laboratory Job ID: 880-9960-1

Table of Contents

Definitions/Glossary

Client: Etech Environmental & Safety Solutions Job ID: 880-9960-1
Project/Site: Quail Queen Unit #001 (6243)

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Quail Queen Unit #001 (6243)

Job ID: 880-9960-1

Job ID: 880-9960-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-9960-1

Receipt
The samples were received on 1/7/2022 1:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

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

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

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

Client Sample Results

Client: Etech Environmental & Safety Solutions
Job ID: 880-9960-1
Project/Site: Quail Queen Unit #001 (6243)

Client Sample ID: Auger Hole 1
Lab Sample ID: 880-9960-1
Date Collected: 01/06/22 10:00
Matrix: Solid
Date Received: 01/07/22 13:05
Sample Depth: 0-6"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U F1	0.00198		mg/Kg		01/07/22 14:31	01/10/22 22:00	1
Toluene	<0.00198	U F1	0.00198		mg/Kg		01/07/22 14:31	01/10/22 22:00	1
Ethylbenzene	<0.00198	U F1	0.00198		mg/Kg		01/07/22 14:31	01/10/22 22:00	1
m-Xylene & p-Xylene	<0.00396	U F1	0.00396		mg/Kg		01/07/22 14:31	01/10/22 22:00	1
o-Xylene	<0.00198	U F1	0.00198		mg/Kg		01/07/22 14:31	01/10/22 22:00	1
Xylenes, Total	<0.00396	U F1	0.00396		mg/Kg		01/07/22 14:31	01/10/22 22:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*01/07/22 14:31*	*01/10/22 22:00*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*01/07/22 14:31*	*01/10/22 22:00*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			01/11/22 12:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/11/22 14:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/07/22 16:42	01/10/22 12:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/07/22 16:42	01/10/22 12:17	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/07/22 16:42	01/10/22 12:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*01/07/22 16:42*	*01/10/22 12:17*	*1*
o-Terphenyl	*92*		*70 - 130*	*01/07/22 16:42*	*01/10/22 12:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1870**		25.0		mg/Kg			01/12/22 13:00	5

Client Sample ID: Auger Hole 1
Lab Sample ID: 880-9960-2
Date Collected: 01/06/22 10:02
Matrix: Solid
Date Received: 01/07/22 13:05
Sample Depth: 24-30"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/07/22 14:31	01/10/22 22:21	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/07/22 14:31	01/10/22 22:21	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/07/22 14:31	01/10/22 22:21	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		01/07/22 14:31	01/10/22 22:21	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/07/22 14:31	01/10/22 22:21	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/07/22 14:31	01/10/22 22:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*01/07/22 14:31*	*01/10/22 22:21*	*1*

Client Sample Results

Client: Etech Environmental & Safety Solutions
Job ID: 880-9960-1
Project/Site: Quail Queen Unit #001 (6243)

Client Sample ID: Auger Hole 1
Lab Sample ID: 880-9960-2
Date Collected: 01/06/22 10:02
Matrix: Solid
Date Received: 01/07/22 13:05
Sample Depth: 24-30"

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*01/07/22 14:31*	*01/10/22 22:21*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/11/22 12:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/11/22 14:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/07/22 16:42	01/10/22 13:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 16:42	01/10/22 13:20	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 16:42	01/10/22 13:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*01/07/22 16:42*	*01/10/22 13:20*	*1*
o-Terphenyl	*92*		*70 - 130*	*01/07/22 16:42*	*01/10/22 13:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1500**		25.0		mg/Kg			01/12/22 13:10	5

Client Sample ID: Auger Hole 2
Lab Sample ID: 880-9960-3
Date Collected: 01/06/22 10:04
Matrix: Solid
Date Received: 01/07/22 13:05
Sample Depth: 0-6"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:31	01/10/22 22:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:31	01/10/22 22:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:31	01/10/22 22:41	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		01/07/22 14:31	01/10/22 22:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:31	01/10/22 22:41	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		01/07/22 14:31	01/10/22 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*01/07/22 14:31*	*01/10/22 22:41*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*01/07/22 14:31*	*01/10/22 22:41*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			01/11/22 12:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/11/22 14:19	1

Client Sample Results

Client: Etech Environmental & Safety Solutions
Job ID: 880-9960-1
Project/Site: Quail Queen Unit #001 (6243)

Client Sample ID: Auger Hole 2
Lab Sample ID: 880-9960-3
Date Collected: 01/06/22 10:04
Matrix: Solid
Date Received: 01/07/22 13:05
Sample Depth: 0-6"

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/07/22 16:42	01/10/22 13:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/07/22 16:42	01/10/22 13:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/07/22 16:42	01/10/22 13:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*01/07/22 16:42*	*01/10/22 13:40*	*1*
o-Terphenyl	*87*		*70 - 130*	*01/07/22 16:42*	*01/10/22 13:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**64.1**		4.95		mg/Kg			01/12/22 13:20	1

Client Sample ID: Auger Hole 2
Lab Sample ID: 880-9960-4
Date Collected: 01/06/22 10:06
Matrix: Solid
Date Received: 01/07/22 13:05
Sample Depth: 6-12"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/07/22 14:31	01/10/22 23:02	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/07/22 14:31	01/10/22 23:02	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/07/22 14:31	01/10/22 23:02	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		01/07/22 14:31	01/10/22 23:02	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/07/22 14:31	01/10/22 23:02	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/07/22 14:31	01/10/22 23:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*135*	*S1+*	*70 - 130*	*01/07/22 14:31*	*01/10/22 23:02*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*01/07/22 14:31*	*01/10/22 23:02*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			01/11/22 12:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/11/22 14:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/07/22 16:42	01/10/22 14:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/07/22 16:42	01/10/22 14:01	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/07/22 16:42	01/10/22 14:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*01/07/22 16:42*	*01/10/22 14:01*	*1*
o-Terphenyl	*85*		*70 - 130*	*01/07/22 16:42*	*01/10/22 14:01*	*1*

Client Sample Results

Client: Etech Environmental & Safety Solutions
Job ID: 880-9960-1
Project/Site: Quail Queen Unit #001 (6243)

Client Sample ID: Auger Hole 2
Lab Sample ID: 880-9960-4
Date Collected: 01/06/22 10:06
Matrix: Solid
Date Received: 01/07/22 13:05
Sample Depth: 6-12"

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.0		5.00		mg/Kg			01/12/22 13:29	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Quail Queen Unit #001 (6243)

Job ID: 880-9960-1

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-9960-1	Auger Hole 1	112	102										
880-9960-1 MS	Auger Hole 1	108	108										
880-9960-1 MSD	Auger Hole 1	103	99										
880-9960-2	Auger Hole 1	116	103										
880-9960-3	Auger Hole 2	110	109										
880-9960-4	Auger Hole 2	135 S1+	106										
LCS 880-16279/1-A	Lab Control Sample	101	99										
LCSD 880-16279/2-A	Lab Control Sample Dup	105	95										
MB 880-16220/5-A	Method Blank	98	106										
MB 880-16279/5-A	Method Blank	108	97										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-9960-1	Auger Hole 1	93	92										
880-9960-1 MS	Auger Hole 1	82	76										
880-9960-1 MSD	Auger Hole 1	90	80										
880-9960-2	Auger Hole 1	90	92										
880-9960-3	Auger Hole 2	90	87										
880-9960-4	Auger Hole 2	85	85										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO2	OTPH2										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
LCS 880-16315/2-A	Lab Control Sample	81	85										
LCSD 880-16315/3-A	Lab Control Sample Dup	87	90										
MB 880-16315/1-A	Method Blank	80	83										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Quail Queen Unit #001 (6243)

Job ID: 880-9960-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-16220/5-A
Matrix: Solid
Analysis Batch: 16342

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16220

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 09:17	01/10/22 10:46	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 09:17	01/10/22 10:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 09:17	01/10/22 10:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/07/22 09:17	01/10/22 10:46	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 09:17	01/10/22 10:46	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/07/22 09:17	01/10/22 10:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*01/07/22 09:17*	*01/10/22 10:46*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*01/07/22 09:17*	*01/10/22 10:46*	*1*

Lab Sample ID: MB 880-16279/5-A
Matrix: Solid
Analysis Batch: 16342

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16279

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:31	01/10/22 21:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:31	01/10/22 21:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:31	01/10/22 21:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/07/22 14:31	01/10/22 21:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:31	01/10/22 21:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/07/22 14:31	01/10/22 21:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*01/07/22 14:31*	*01/10/22 21:39*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*01/07/22 14:31*	*01/10/22 21:39*	*1*

Lab Sample ID: LCS 880-16279/1-A
Matrix: Solid
Analysis Batch: 16342

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16279

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09238		mg/Kg		92	70 - 130
Toluene	0.100	0.08627		mg/Kg		86	70 - 130
Ethylbenzene	0.100	0.08328		mg/Kg		83	70 - 130
m-Xylene & p-Xylene	0.200	0.1716		mg/Kg		86	70 - 130
o-Xylene	0.100	0.08407		mg/Kg		84	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-16279/2-A
Matrix: Solid
Analysis Batch: 16342

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16279

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09219		mg/Kg		92	70 - 130	0	35

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Job ID: 880-9960-1
Project/Site: Quail Queen Unit #001 (6243)

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-16279/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 16342 — **Prep Batch: 16279**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.08649		mg/Kg		86	70 - 130	0	35
Ethylbenzene			0.100	0.08511		mg/Kg		85	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1746		mg/Kg		87	70 - 130	2	35
o-Xylene			0.100	0.08698		mg/Kg		87	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-9960-1 MS — **Client Sample ID: Auger Hole 1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 16342 — **Prep Batch: 16279**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00198	U F1	0.100	0.06756	F1	mg/Kg		68	70 - 130
Toluene	<0.00198	U F1	0.100	0.05938	F1	mg/Kg		59	70 - 130
Ethylbenzene	<0.00198	U F1	0.100	0.05428	F1	mg/Kg		54	70 - 130
m-Xylene & p-Xylene	<0.00396	U F1	0.200	0.1102	F1	mg/Kg		55	70 - 130
o-Xylene	<0.00198	U F1	0.100	0.05533	F1	mg/Kg		55	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 880-9960-1 MSD — **Client Sample ID: Auger Hole 1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 16342 — **Prep Batch: 16279**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U F1	0.0998	0.07272		mg/Kg		73	70 - 130	7	35
Toluene	<0.00198	U F1	0.0998	0.06335	F1	mg/Kg		63	70 - 130	6	35
Ethylbenzene	<0.00198	U F1	0.0998	0.05857	F1	mg/Kg		58	70 - 130	8	35
m-Xylene & p-Xylene	<0.00396	U F1	0.200	0.1183	F1	mg/Kg		59	70 - 130	7	35
o-Xylene	<0.00198	U F1	0.0998	0.05836	F1	mg/Kg		58	70 - 130	5	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-16315/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 16336 — **Prep Batch: 16315**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/07/22 16:42	01/10/22 11:15	1

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Quail Queen Unit #001 (6243)

Job ID: 880-9960-1

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

Lab Sample ID: MB 880-16315/1-A
Matrix: Solid
Analysis Batch: 16336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16315

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 16:42	01/10/22 11:15	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 16:42	01/10/22 11:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*01/07/22 16:42*	*01/10/22 11:15*	*1*
o-Terphenyl	*83*		*70 - 130*	*01/07/22 16:42*	*01/10/22 11:15*	*1*

Lab Sample ID: LCS 880-16315/2-A
Matrix: Solid
Analysis Batch: 16336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16315

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	742.3		mg/Kg		74	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	816.2		mg/Kg		82	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*81*		*70 - 130*
o-Terphenyl	*85*		*70 - 130*

Lab Sample ID: LCSD 880-16315/3-A
Matrix: Solid
Analysis Batch: 16336

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16315

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	731.9		mg/Kg		73	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	797.4		mg/Kg		80	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*90*		*70 - 130*

Lab Sample ID: 880-9960-1 MS
Matrix: Solid
Analysis Batch: 16336

Client Sample ID: Auger Hole 1
Prep Type: Total/NA
Prep Batch: 16315

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	989.7		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	850.3		mg/Kg		85	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*82*		*70 - 130*
o-Terphenyl	*76*		*70 - 130*

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Quail Queen Unit #001 (6243)

Job ID: 880-9960-1

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

Lab Sample ID: 880-9960-1 MSD
Matrix: Solid
Analysis Batch: 16336

Client Sample ID: Auger Hole 1
Prep Type: Total/NA
Prep Batch: 16315

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1056		mg/Kg		104	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	920.9		mg/Kg		92	70 - 130	8	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*80*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-16437/1-A
Matrix: Solid
Analysis Batch: 16545

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/12/22 10:42	1

Lab Sample ID: LCS 880-16437/2-A
Matrix: Solid
Analysis Batch: 16545

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	257.9		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-16437/3-A
Matrix: Solid
Analysis Batch: 16545

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	260.2		mg/Kg		104	90 - 110	1	20

Lab Sample ID: 880-9960-4 MS
Matrix: Solid
Analysis Batch: 16545

Client Sample ID: Auger Hole 2
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	15.0		250	290.0		mg/Kg		110	90 - 110

Lab Sample ID: 880-9960-4 MSD
Matrix: Solid
Analysis Batch: 16545

Client Sample ID: Auger Hole 2
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	15.0		250	286.0		mg/Kg		108	90 - 110	1	20

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Quail Queen Unit #001 (6243)

Job ID: 880-9960-1

GC VOA

Prep Batch: 16220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-16220/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 16279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9960-1	Auger Hole 1	Total/NA	Solid	5035	
880-9960-2	Auger Hole 1	Total/NA	Solid	5035	
880-9960-3	Auger Hole 2	Total/NA	Solid	5035	
880-9960-4	Auger Hole 2	Total/NA	Solid	5035	
MB 880-16279/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16279/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16279/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-9960-1 MS	Auger Hole 1	Total/NA	Solid	5035	
880-9960-1 MSD	Auger Hole 1	Total/NA	Solid	5035	

Analysis Batch: 16342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9960-1	Auger Hole 1	Total/NA	Solid	8021B	16279
880-9960-2	Auger Hole 1	Total/NA	Solid	8021B	16279
880-9960-3	Auger Hole 2	Total/NA	Solid	8021B	16279
880-9960-4	Auger Hole 2	Total/NA	Solid	8021B	16279
MB 880-16220/5-A	Method Blank	Total/NA	Solid	8021B	16220
MB 880-16279/5-A	Method Blank	Total/NA	Solid	8021B	16279
LCS 880-16279/1-A	Lab Control Sample	Total/NA	Solid	8021B	16279
LCSD 880-16279/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16279
880-9960-1 MS	Auger Hole 1	Total/NA	Solid	8021B	16279
880-9960-1 MSD	Auger Hole 1	Total/NA	Solid	8021B	16279

Analysis Batch: 16516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9960-1	Auger Hole 1	Total/NA	Solid	Total BTEX	
880-9960-2	Auger Hole 1	Total/NA	Solid	Total BTEX	
880-9960-3	Auger Hole 2	Total/NA	Solid	Total BTEX	
880-9960-4	Auger Hole 2	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 16315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9960-1	Auger Hole 1	Total/NA	Solid	8015NM Prep	
880-9960-2	Auger Hole 1	Total/NA	Solid	8015NM Prep	
880-9960-3	Auger Hole 2	Total/NA	Solid	8015NM Prep	
880-9960-4	Auger Hole 2	Total/NA	Solid	8015NM Prep	
MB 880-16315/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-16315/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-16315/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-9960-1 MS	Auger Hole 1	Total/NA	Solid	8015NM Prep	
880-9960-1 MSD	Auger Hole 1	Total/NA	Solid	8015NM Prep	

Analysis Batch: 16336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9960-1	Auger Hole 1	Total/NA	Solid	8015B NM	16315

QC Association Summary

Client: Etech Environmental & Safety Solutions
Job ID: 880-9960-1
Project/Site: Quail Queen Unit #001 (6243)

GC Semi VOA (Continued)

Analysis Batch: 16336 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9960-2	Auger Hole 1	Total/NA	Solid	8015B NM	16315
880-9960-3	Auger Hole 2	Total/NA	Solid	8015B NM	16315
880-9960-4	Auger Hole 2	Total/NA	Solid	8015B NM	16315
MB 880-16315/1-A	Method Blank	Total/NA	Solid	8015B NM	16315
LCS 880-16315/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16315
LCSD 880-16315/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16315
880-9960-1 MS	Auger Hole 1	Total/NA	Solid	8015B NM	16315
880-9960-1 MSD	Auger Hole 1	Total/NA	Solid	8015B NM	16315

Analysis Batch: 16554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9960-1	Auger Hole 1	Total/NA	Solid	8015 NM	
880-9960-2	Auger Hole 1	Total/NA	Solid	8015 NM	
880-9960-3	Auger Hole 2	Total/NA	Solid	8015 NM	
880-9960-4	Auger Hole 2	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 16437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9960-1	Auger Hole 1	Soluble	Solid	DI Leach	
880-9960-2	Auger Hole 1	Soluble	Solid	DI Leach	
880-9960-3	Auger Hole 2	Soluble	Solid	DI Leach	
880-9960-4	Auger Hole 2	Soluble	Solid	DI Leach	
MB 880-16437/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-16437/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-16437/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-9960-4 MS	Auger Hole 2	Soluble	Solid	DI Leach	
880-9960-4 MSD	Auger Hole 2	Soluble	Solid	DI Leach	

Analysis Batch: 16545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9960-1	Auger Hole 1	Soluble	Solid	300.0	16437
880-9960-2	Auger Hole 1	Soluble	Solid	300.0	16437
880-9960-3	Auger Hole 2	Soluble	Solid	300.0	16437
880-9960-4	Auger Hole 2	Soluble	Solid	300.0	16437
MB 880-16437/1-A	Method Blank	Soluble	Solid	300.0	16437
LCS 880-16437/2-A	Lab Control Sample	Soluble	Solid	300.0	16437
LCSD 880-16437/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	16437
880-9960-4 MS	Auger Hole 2	Soluble	Solid	300.0	16437
880-9960-4 MSD	Auger Hole 2	Soluble	Solid	300.0	16437

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Job ID: 880-9960-1
Project/Site: Quail Queen Unit #001 (6243)

Client Sample ID: Auger Hole 1
Lab Sample ID: 880-9960-1
Date Collected: 01/06/22 10:00
Matrix: Solid
Date Received: 01/07/22 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	16279	01/07/22 14:31	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16342	01/10/22 22:00	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16516	01/11/22 12:59	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16315	01/07/22 16:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16336	01/10/22 12:17	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	16437	01/10/22 13:11	CH	XEN MID
Soluble	Analysis	300.0		5			16545	01/12/22 13:00	CH	XEN MID

Client Sample ID: Auger Hole 1
Lab Sample ID: 880-9960-2
Date Collected: 01/06/22 10:02
Matrix: Solid
Date Received: 01/07/22 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	16279	01/07/22 14:31	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16342	01/10/22 22:21	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16516	01/11/22 12:59	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16315	01/07/22 16:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16336	01/10/22 13:20	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	16437	01/10/22 13:11	CH	XEN MID
Soluble	Analysis	300.0		5			16545	01/12/22 13:10	CH	XEN MID

Client Sample ID: Auger Hole 2
Lab Sample ID: 880-9960-3
Date Collected: 01/06/22 10:04
Matrix: Solid
Date Received: 01/07/22 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	16279	01/07/22 14:31	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16342	01/10/22 22:41	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16516	01/11/22 12:59	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16315	01/07/22 16:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16336	01/10/22 13:40	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	16437	01/10/22 13:11	CH	XEN MID
Soluble	Analysis	300.0		1			16545	01/12/22 13:20	CH	XEN MID

Client Sample ID: Auger Hole 2
Lab Sample ID: 880-9960-4
Date Collected: 01/06/22 10:06
Matrix: Solid
Date Received: 01/07/22 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	16279	01/07/22 14:31	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16342	01/10/22 23:02	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16516	01/11/22 12:59	AJ	XEN MID

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Job ID: 880-9960-1
Project/Site: Quail Queen Unit #001 (6243)

Client Sample ID: Auger Hole 2
Lab Sample ID: 880-9960-4
Date Collected: 01/06/22 10:06
Matrix: Solid
Date Received: 01/07/22 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	16315	01/07/22 16:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16336	01/10/22 14:01	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	16437	01/10/22 13:11	CH	XEN MID
Soluble	Analysis	300.0		1			16545	01/12/22 13:29	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Job ID: 880-9960-1
Project/Site: Quail Queen Unit #001 (6243)

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Etech Environmental & Safety Solutions

Job ID: 880-9960-1

Project/Site: Quail Queen Unit #001 (6243)

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Quail Queen Unit #001 (6243)

Job ID: 880-9960-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-9960-1	Auger Hole 1	Solid	01/06/22 10:00	01/07/22 13:05	0-6"
880-9960-2	Auger Hole 1	Solid	01/06/22 10:02	01/07/22 13:05	24-30"
880-9960-3	Auger Hole 2	Solid	01/06/22 10:04	01/07/22 13:05	0-6"
880-9960-4	Auger Hole 2	Solid	01/06/22 10:06	01/07/22 13:05	6-12"

Chain of Custody

XENCO LABORATORIES

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
Midland TX (432-704-5440) EL Paso TX (915)585-3443 Lubbock TX (806)794-1296
Hobbs NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813-620-2000) www xenco com

Work Order No: 9960

Page 1 of 1

Project Manager	Brandon Wilson	Bill to (if different)	
Company Name	Etech Environmental	Company Name	
Address	13000 W CR 100	Address	
City, State ZIP	Odessa, Tx 79765	City, State ZIP	
Phone	432-563-2200	Email	brandon@etechenv com, blake@etechenv com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting Level II ☐ Level III ☐ PST/UST ☐ RRP ☐ Level IV ☐
Deliverables EDD ☐ ADaPT ☐ Other

Project Name	Quail Queen Unit #001 (6243)	Turn Around	
Project Number	15317	Routine	X
P O Number	15317	Rush	
Sampler's Name	Blake Estep	Due Date	

SAMPLE RECEIPT				
Temp Blank	Yes (No)	Wet Ice	(Yes) No	
Temperature (°C)	5.3/5.4	Thermometer ID	IR8	
Received Intact:	(Yes) No			
Cooler Custody Seals	Yes No (N/A)	Correction Factor	1.0	
Sample Custody Seals	Yes No (N/A)	Total Containers		

ANALYSIS REQUEST

Work Order Notes

TAT starts the day recevied by the lab if received by 4 30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH 8015M	BETEX 8021B	Chlorides	Sample Comments
Auger Hole 1	S	1/6/2022	10 00	0-6"	1	X	X	X	
Auger Hole 1	S	1/6/2022	10 02	24-30"	1	X	X	X	
Auger Hole 2	S	1/6/2022	10 04	0-6"	1	X	X	X	
Auger Hole 2	S	1/6/2022	10 06	6-12"	1	X	X	X	

880-9960 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** Hg

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1 Blake Estep		1-7-22 1305	2		
3			4		
5			6		

Revised Date 051418 Rev 2018 1

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions Job Number: 880-9960-1

Login Number: 9960 **List Source: Eurofins Midland**
List Number: 1
Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Appendix D – Release Notification and Corrective Action (Form C-141)

AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.

App Number: pJXK1604136316

1RP - 2740

CHESAPEAKE ENERGY CORP.

2/10/2016

HOBBS OCD

AUG 29 2011

RECEIVED

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Chesapeake Energy	**Contact:** Bradley Blevins
Address: P.O. Box 190, Hobbs, NM 88240	**Telephone No.:** (505) 391-1462 ext. 6224
Facility Name: Quail Queen #1 water transfer line	**Facility Type:** pipe line

Surface Owner: BLM	**Mineral Owner:** Chesapeake Energy	**Lease No.:**

LOCATION OF RELEASE

API #30-025-25536-00-00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Lne	County
N	25	19S	34E					Lea

Latitude: Longitude:

NATURE OF RELEASE

GW@901

Type of Release: Produced water	**Volume of Release:** 60 barrels	**Volume Recovered:** 50 barrels
Source of Release: Poly line	**Date and Hour of Occurrence:** 8/26/2011	**Date and Hour of Discovery:** 8/26/2011 11:00
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** Geoffrey Leking	
By Whom? Bradley Blevins	**Date and Hour:** 8/26/2011 2:30 PM via e-mail	
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse:**	

Depth to water: 100 ft.

If a Watercourse was Impacted, Describe Fully:

Describe Cause of Problem and Remedial Action Taken: Pipeline ruptured causing release of produced water onto surface. Water collected in pit and majority was removed by vacuum truck.

Describe Area Affected and Cleanup Action Taken: Contaminated soil to be removed and transported to State approved land farm for remediation. Site to be backfilled upon approval.

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

Signature: Bradley Blevins

Printed Name: Bradley Blevins

Title: Field Supervisor

E-mail Address: Bradley.blevins@chk.com

Date: 8-29-2011 **Phone:** (505) 391-1462 ext. 6224

OIL CONSERVATION DIVISION

Approved by ~~District Supervisor~~: ENV ENGINEER: Geoffrey Leking

Approval Date: 09/16/11 **Expiration Date:** 11/16/11

Conditions of Approval: SUBMIT FINAL C-141 BY 11/16/11

Attached ☐

IRP-09-11-2740

* Attach Additional Sheets If Necessary

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature: _____ Date: 3-8-22_____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 95169

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 95169
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	None	5/31/2022