From: Harimon, Jocelyn, EMNRD
To: ABarnhill@chevron.com
Subject: Regarding Application ID 131409 for Incident # NCLB0523732298 MARKHAM #001
Date: Friday, November 18, 2022 9:57:00 AM

To whom it may concern,

Regarding Application ID 131409 for Incident # NCLB0523732298 MARKHAM #001.
We have received your Workplan/Remediation Proposal for NCLB0523732298 MARKHAM #001, thank you. This Workplan/Remediation proposal is approved with the following conditions:

- As this release is not fully horizontally and vertically delineated any remediation efforts will be at-risk. All remediation efforts will be assessed by the OCD at the time of the incident closure submittal.
- All areas must contain a minimum of 4 feet non-waste containing uncontaminated, earthen material with chloride concentrations less than 600 mg/kg. Surface to 4' below ground surface sidewall/floor samples need to comply with the strictest closure criteria limits (600 mg/kg, Chlorides, 100 mg/kg TPH, etc.).
- All (floor/sidewall) closure samples on pad will need to meet closure criteria standards for depth to water of <50' in Table 1 of the Spill Rule.
- Please collect more confirmation samples, representing no more than 200 square feet. *Alternately, without division approval, the responsible party may elect to perform a composite and grab sample plan of the remediated area where each composite sample is not representative of more than 200 square feet 19.15.29.12D(1)(c)*. Please have soil samples analyzed for all components in Table 1 of the spill rule. The current spill rule may be viewed here: http://164.64.110.134/parts/title19/19.015.0029.html
- Please continue to horizontally delineate sample points to 600 mg/kg for chlorides and TPH to 100 mg/kg on the outer edges/periphery and include sample points in your next report after closure criteria limits have been met. Surface sample points and sidewalls on the edge of the release need to be delineated to 600 mg/kg for chlorides and 100 mg/kg for TPH for the spill to be horizontally delineated. While vertical definition of contamination that may be acceptable is almost exclusively driven by depth to water, as determined, and as driven by Table I in rule, horizontal definition is different. The edges (horizontal definition) of a liquid release must be determined as well. The only value for determination of horizontal impact are derived by either "background" value as determined appropriate to Rule 29, or, for chloride, 600 mg/Kg in soils. This 600 mg/Kg value is discussed in detail in 19.15.29.13 D. (1). Therefore, horizontal soils delineation for chloride should be 600 mg/KG (again, or background) for all liquid releases, either on or off production pad.

JH

Jocelyn Harimon ● Environmental Specialist

Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
http:// **www.emnrd.nm.gov**

August 2, 2022

Robert Hamlet
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
PH #: 575-748-1283
Robert.Hamlet@state.nm.us

Re: Soil Remediation Workplan
Chevron USA
Markham #001 Release (nCLB0523732298)
GPS: N 32.29687° W 104.07689°
Unit Letter "C", Section 22, Township 23 South, Range 28 East
Eddy County, New Mexico

Dear Mr. Hamlet,

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Chevron USA (Chevron), has prepared this Soil Remediation Workplan for the Markham #001 Release Site (Release Site). The legal description of the Release Site is Unit Letter "C", Section 22, Township 23 South, Range 28 East, in Eddy County, New Mexico. The GPS coordinates for the site are N 32.29687° W 104.07689°. A Site Location Map and Aerial Proximity Map are provided as Figure 1 and Figure 2, respectively.

INTRODUCTION

On June 9, 2005, a reportable release occurred at the Release Site. The release was the result of human error in which, a truck driver offloading crude oil overfilled the tank. Approximately three (3) barrels (bbls) of crude oil and seventy (70) bbls of produced water was released with approximately two (2) bbls of crude oil and sixty-eight (28) bbls of produced water was recovered via vacuum trucks, for a net loss of one (1) bbl of crude oil and two (2) bbls of produced water. The initial Form C-141 is provided in Appendix A.

NMOCD SITE CLASSIFICATION

New Mexico Oil Conservation Division (NMOCD) assessment and cleanup levels for hydrocarbon and produced water releases are based on depth to groundwater and karst status and follow the criteria in the revised August 2018 Title 19 Chapter 15 part 29 New Mexico Administrative Code (19.15.29 NMAC) regulations. Groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE), New Mexico Bureau of Geology & Mineral Resources (NMBGMR), and United States Geological Survey (USGS) were accessed to determine if any registered water wells were located within a half-mile of the site. The databases identified ten (10) water wells within a ½-mile radius. One (1) water well is located within one thousand (1,000) ft of the release. The closest water well is NMOSE Well # C-01872 with a depth to water of forty-eight (48) feet below ground surface (bgs). The average depth to water in a half mile radius is forty (40) feet bgs. In addition, the site is listed as being in a medium Karst Topography region. See Appendix B for maps, along with water well data, detailing the site relative to groundwater locations. Based on the NMOCD site classification system, the following soil remediation levels were assigned to the Release Site:

- Benzene – 10 mg/Kg (ppm)
- Total BTEX – 50 mg/Kg (ppm)
- Total TPH – 100 mg/Kg (ppm)
- Chloride – 600 mg/Kg (ppm)

INITIAL ASSESSMENT AND DELINEATION ACTIVITIES

On May 2, 2022, Etech was onsite to perform the initial assessment and delineation of the release. Since the pad has been reclaimed, Etech inferred the location of the release utilizing historical Google Earth imagery. Two (2) auger holes (Auger Hole 1 and Auger Hole 2) were installed in the inferred spill area to depths ranging from six (6) inches bgs to forty-eight (48) inches bgs. Samples were collected and submitted to Europhins Laboratory in Midland, Texas for analysis of Benzene, Toulene, Ethylbenzene, and Xylenes (BTEX) by EPA method 8021B, Total Petroleum Hydrocarbons (TPH) by EPA method 8015M, and Chlorides by EPA method 300.0. Analytical concentrations for chloride were above the method detection limit (MDL) and/or the NMOCD remediation standards in Auger Hole 2 (AH-2) in interval 42-48”. All other analysis were below both the NMOCD Closure Criteria or Reclamation Standards. See Table 1 for analytical results. See Appendix C for attached photos detailing release and impact to pad. See Figure 3 for Delineation Plat.

SOIL DELINEATION AND REMEDIATION WORKPLAN

Etech proposes to complete delineation and remediation in accordance with NMOCD rules and regulations which will entail the following:

- Impacted soils will be excavated to appropriate depths based on delineation data and stockpiled on plastic awaiting disposal.
- During excavation activities soils will be field screened utilizing chloride test kits and a PID meter for determination of laboratory sampling and additional excavation, if warranted.
- Upon completion of the excavation, confirmation soil samples will be collected every two hundred (200) square feet from the base and sidewalls (representing no more than 50 linear feet) of the excavated areas. Additional, discrete grab samples will be collected from wet or visibly stained areas inferred to have been affected by the release, as necessary. Samples will be submitted to Permian Basin Environmental Labs of Texas (PBELAB) for analysis of BTEX by EPA Method 8021B, TPH by EPA Method 8015M, and Chlorides by EPA method 300.0.
- The impacted soils will be transported off-site for disposal at an NMOCD approved disposal facility.
- Upon completion of additional delineation/remediation and requisite soil sampling, the site will be backfilled with locally sourced, non-impacted "like" material from an approved off-site facility and brought back to grade.
- A closure report with final C-141 will be submitted to the NMOCD upon completion of remediation activities.

Once the soil remediation work plan has been approved by the NMOCD, Chevron will commence remediation activities. Upon completion of remediation activities, Chevron will complete the activities within ninety (90) days of approval and submit a *"Remediation Summary and Site Closure Request Report"* to the NMOCD.

If you have any questions, or if additional information is required, please feel free to call me at 432-563-2200 (office) or 432-894-6038 (cell).

Thank you,

Blake Estep
Project Manager
Etech Environmental & Safety Solutions, Inc.

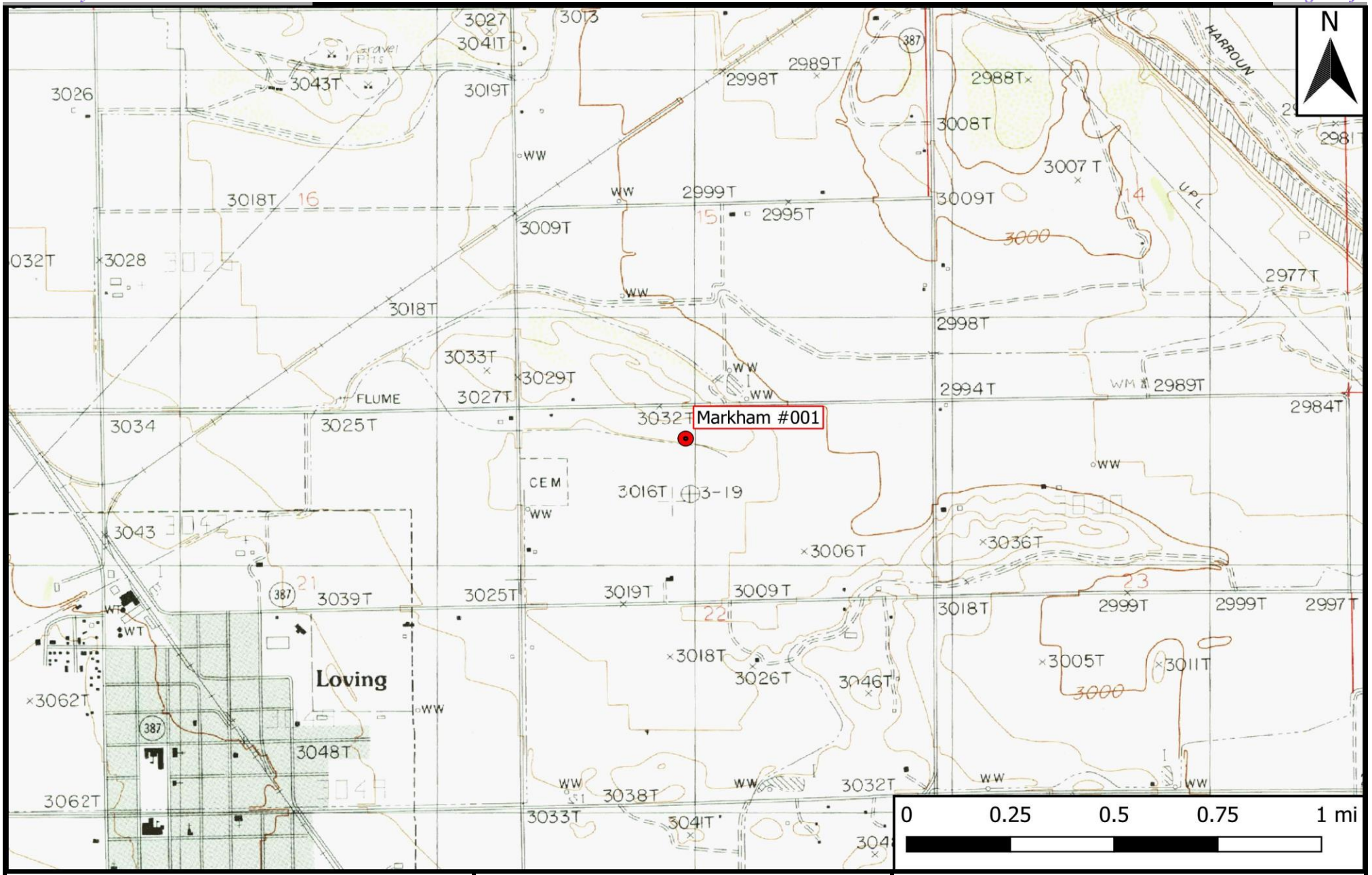
Jeffrey Kindley, P.G.
Senior Project Manager/Geologist
Etech Environmental & Safety Solutions, Inc.

Attachments:

Figure 1 – Topographic Map
Figure 2 – Aerial Proximity Map
Figure 3 – Delineation Plat
Table 1 – Initial Concentrations of BTEX, TPH, and Chloride in Soil
Appendix A: Initial Release Notification and Corrective Action Form C-141
Appendix B: Groundwater Data Maps and Supporting Water Well Data
Appendix C: Photographic Documentation
Appendix D: Laboratory Analytical

cc: File

Figure 1
Topographic Map



Legend

Site Location

Figure 1

Topographic Map

Chevron USA

Markham #001

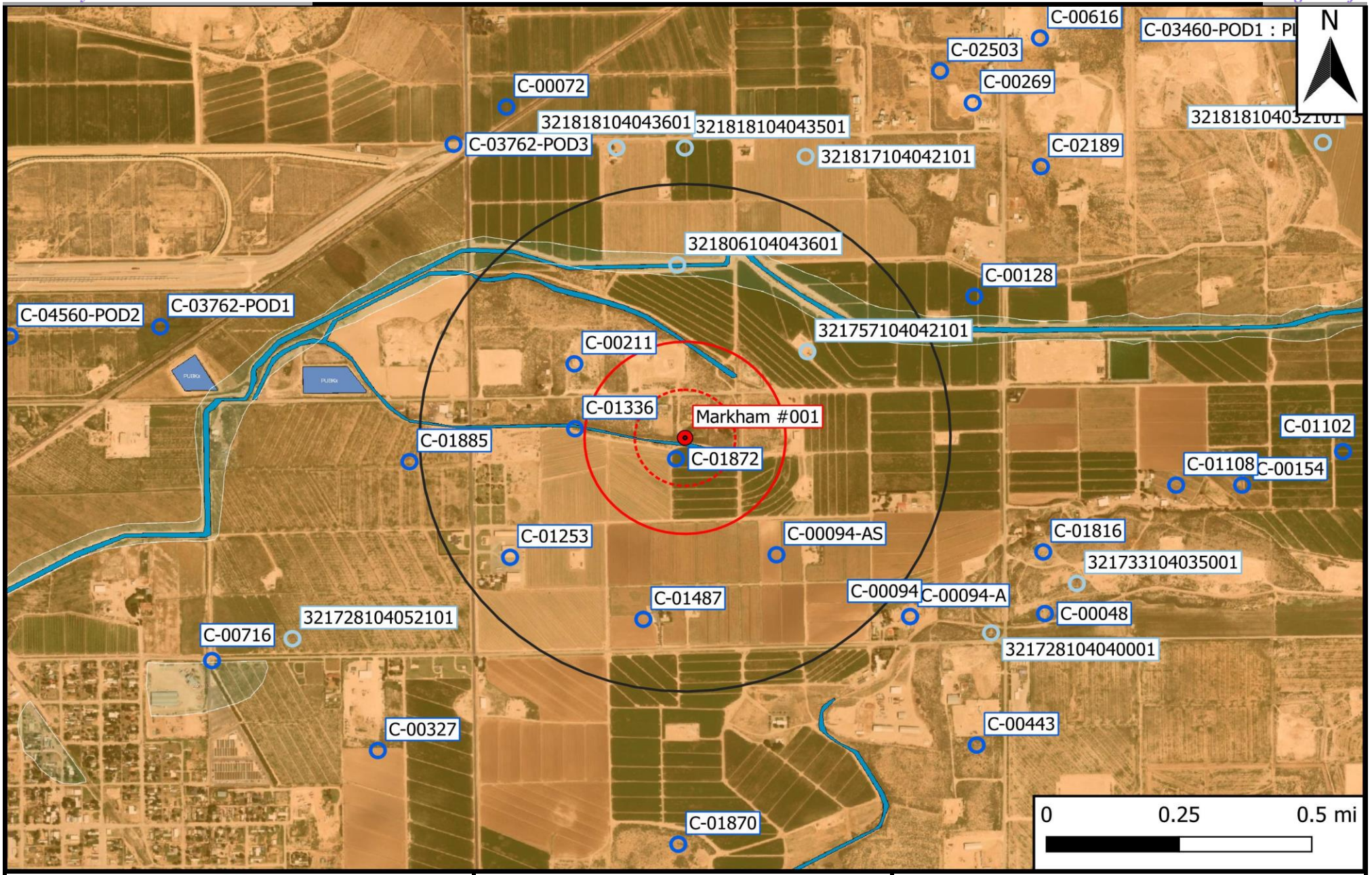
GPS: 32.296862, -104.07696

Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: mag Checked: be Date: 7/27/22

Figure 2
Aerial Proximity Map



Legend

- Site Location
- Well - NMOSE
- Well - USGS
- Potash Mine Workings
- Medium/High Karst
- 500 Ft Radius
- 1000 Ft Radius
- 0.5 Mi Radius
- 1% Annual Flood Chance
- Lake/Freshwater Pond
- Emergent/Forested Wetlands
- Riverine

Figure 2
Aerial Proximity Map
Chevron USA
Markham #001
GPS: 32.296862, -104.07696
Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: mag Checked: be Date: 7/27/22

Figure 3
Delineation Plat

Environmental & Safety Solutions, Inc.

Delineation Plat©

Project Name:	Markham #001	Project No.:	15315
Date Sampled:	May 2, 2022	GPS:	32.29692, -104.07687

Table 1
Concentrations of BTEX, TPH, and Chloride in Soil

Table 1
Concentrations of BTEX, TPH, and Chloride in Soil
Chevron USA
Markham #001
NMOCD Ref. #: Pending

NMOCD Closure Criteria				**10**	**50**	**-**	**-**	**-**	**-**	**100**	**600**
NMOCD Reclamation Standard				**10**	**50**	**-**	**-**	**-**	**-**	**100**	**600**
Sample ID	**Date**	**Depth (Feet)**	**Soil Status**	**SW 846 8021B**		**SW 846 8015M Ext.**					**4500 Cl**
				Benzene (mg/kg)	**BTEX (mg/kg)**	**GRO C_6-C_{10} (mg/kg)**	**DRO C_{10}-C_{28} (mg/kg)**	**GRO + DRO C_6-C_{28} (mg/kg)**	**ORO C_{28}-C_{36} (mg/kg)**	**TPH C_6-C_{36} (mg/kg)**	**Chloride (mg/kg)**
Auger Hole 1	5/2/2022	0-0.5	In-Situ	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	16.9
Auger Hole 1	5/2/2022	3.5-4	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	32.3
Auger Hole 2	5/2/2022	0-0.5	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	20.5
Auger Hole 2	5/2/2022	3.5-4	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	**3,000**

Dash (-): Sample not analyzed for that constituent.
Bold: NMOCD Closure Criteria exceedance.
Red: NMOCD Reclamation Standard exceedance.

Appendix A

Initial Release Notification and Corrective Action Form C-141

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-14
Revised October 10, 200

Submit 2 Copies to appropriat
District Office in accordanc
with Rule 116 on bac
side of forr

30-015-26544
nCLB0523732298

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Repo

Name of Company: Chesapeake Energy	**Contact:** Bradley Blevins
Address: 5014 Carlsbad Highway	**Telephone No.:** (505) 391-1462 ext. 24
Facility Name: Markham #1	**Facility Type:** Tank Battery

Surface Owner: Portions of Unit Letter C of this section are owned by Floyd Markham, Peggy Doyle, John Armsburst, Roy and Janice Shugart and Samuel Burkham.	**Mineral Owner:** Fee	**Lease No.:**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	22	23 S	28 E	300	North	2,250	West	Eddy

Latitude: N 32º 17' 48.737" **Longitude:** W 104º 04' 36.957"

NATURE OF RELEASE

Type of Release: Water (70 barrels) and Oil (3 barrels)	**Volume of Release:** 73 barrels	**Volume Recovered:** 70 barrels
Source of Release: Tank	**Date and Hour of Occurrence:** 09 June 2005 @ 0200 hours	**Date and Hour of Discovery:** 09 June 2005 @ 0200 hrs
Was Immediate Notice Given? ☒ Yes ☐ No ☒ Not Required	**If YES, To Whom?** Mike Bratcher, NMOCD Artesia	RECEIVED
By Whom? Bradley Blevins, Chesapeake Energy Corporation	**Date and Hour:** 09 June 2005 @ 1500 hrs	JUN 27 2005
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse:** Not Applicable	OCD-ARTESIA

If a Watercourse was Impacted, Describe Fully.* Not Applicable

Describe Cause of Problem and Remedial Action Taken.* Truck driver failed to notice the tank was spilling over during off-loading activities, resulting in the release of approxiamtely 73 barrels of crude oil and water. A vacuum truck was retained immediately to recover the liquid, with 70 barrels being recovered.

Describe Area Affected and Cleanup Action Taken.* Approximately 2,300 square feet of surface area was impacted by the release, all of which was within the bermed area. All liquid was recovered utilizing a vacuum truck. Saturated soil was excavated and stockpiled on plastic on June 10, 2005. The soil remains stockpiled on site until a remediation plan is developed.

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	OIL CONSERVATION DIVISION
Printed Name: Bradley Blevins	**Approved by District Supervisor:** TIM GUM by MB Mike Bratcher
Title: Field Technician	**Approval Date:** 9/14/05 **Expiration Date:** N/A
E-mail Address: bblevins@chkenergy.com	**Conditions of Approval:** **Attached** ☒
Date: 06-23-05 **Phone:** (505) 391-1462 ext. 24	

*** Attach Additional Sheets If Necessary**

State of New Mexico
Oil Conservation Division

Incident ID	nCLB0523732298
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?	>30 (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	nCLB0523732298
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: Amy Barnhill Title: Water Advisor

Signature: Amy Barnhill Date: 8-4-22

email: ABarnhill@chevron.com Telephone: 432-687-7108

OCD Only

Received by: Jocelyn Harimon Date: 08/04/2022

State of New Mexico
Oil Conservation Division

Incident ID	nCLB0523732298
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: _Amy Barnhill_____ Title: _Water Advisor_____

Signature: _____ Date: _8-4-22_____

email: _ABarnhill@chevopn.com_____ Telephone: _432-687-7108_____

OCD Only

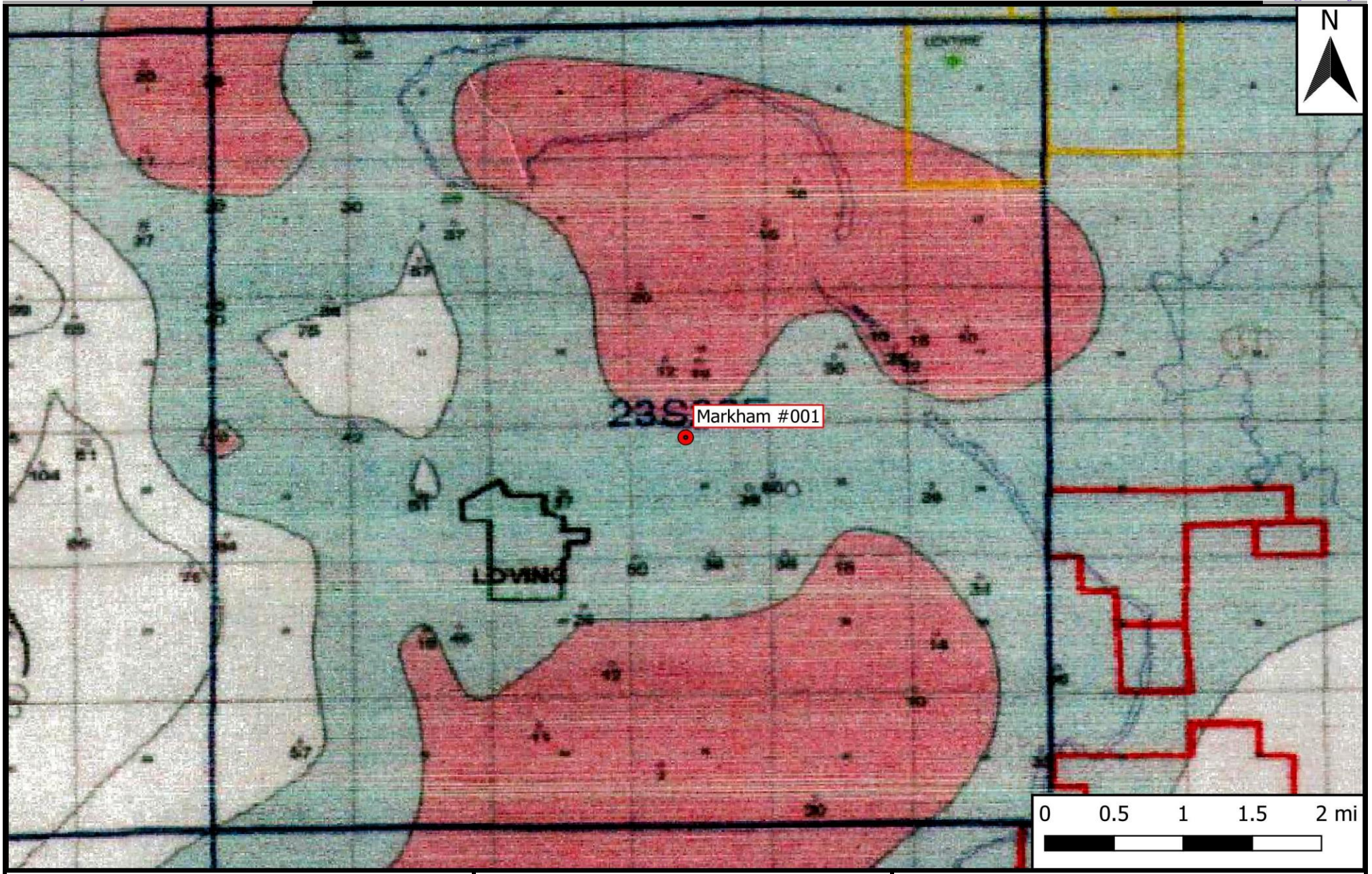
Received by: Jocelyn Harimon Date: 08/04/2022

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

Signature: _____ Date: 11/18/2022

Appendix B

Groundwater Data Maps and Supporting Water Well Data



Legend

Site Location

Figure 4

Inferred Depth to Groundwater Trend Map

Chevron USA

Markham #001

GPS: 32.296862, -104.07696

Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: mag Checked: be Date: 7/27/22

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

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 01872		C	ED		2	1	22	23S	28E	586878	3573649*	71	68	48	20
C 01336		C	ED	2	1	1	22	23S	28E	586572	3573744*	334	190	30	160
C 00211		C	ED	4	3	3	15	23S	28E	586570	3573949*	408	89	48	41
C 00094 AS	C	CUB	ED	1	3	2	22	23S	28E	587183	3573346*	461	165	40	125
C 01487		CUB	ED	3	4	1	22	23S	28E	586779	3573142*	587	150	38	112
C 01487 CLW201796	O	CUB	ED		3	2	22	23S	28E	587284	3573247*	602	90	30	60
C 01253		CUB	ED	1	3	1	22	23S	28E	586375	3573338*	651	179	50	129

Average Depth to Water: **40 feet**
Minimum Depth: **30 feet**
Maximum Depth: **50 feet**

Record Count: 7

UTMNAD83 Radius Search (in meters):

Easting (X): 586905.61 **Northing (Y):** 3573715.43 **Radius:** 804.67

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

7/27/22 10:47 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 00094 AS	1	3	2	22	23S	28E	587183	3573346*

Driller License: 46 **Driller Company:** ABBOTT BROTHERS COMPANY

Driller Name: MURRELL ABBOTT

Drill Start Date:	04/23/1976	**Drill Finish Date:**	04/30/1976	**Plug Date:**	
Log File Date:	05/11/1976	**PCW Rcv Date:**	06/01/1976	**Source:**	Shallow
Pump Type:	TURBIN	**Pipe Discharge Size:**	8	**Estimated Yield:**	1900 GPM
Casing Size:	16.00	**Depth Well:**	165 feet	**Depth Water:**	40 feet

Water Bearing Stratifications:	Top	Bottom	Description
	40	165	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	85	165

Meter Number:	569	**Meter Make:**	WATER SPEC
Meter Serial Number:	934630	**Meter Multiplier:**	1.0000
Number of Dials:	4	**Meter Type:**	Diversion
Unit of Measure:	Acre-Feet	**Return Flow Percent:**	
Usage Multiplier:		**Reading Frequency:**	Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
12/29/1998	1999	0	A	ms		0	
06/15/1999	1999	0	A	ms		0	
09/29/1999	1999	0	A	ms		0	
12/28/1999	1999	0	A	mb		0	
04/06/2000	2000	0	A	mb		0	
07/07/2000	2000	0	A	mb		0	
10/17/2000	2000	0	A	mb		0	
01/05/2001	2000	0	A	ms		0	
05/03/2001	2001	0	A	ms		0	
07/20/2001	2001	0	A	ms		0	
09/27/2001	2001	0	A	ms		0	
11/08/2001	2001	0	A	AM		0	
04/10/2002	2002	0	A	MB		0	
06/12/2002	2002	11	A	MS		11.300	
09/03/2002	2002	20	A	ms		8.820	
10/22/2002	2002	20	A	ms		0	
01/13/2003	2002	20	A	ms		0	
06/03/2003	2003	45	A	ms		24.690	
07/10/2003	2003	55	A	ms		9.730	
08/20/2003	2003	79	A	ab		24.440	

12/02/2003	2003	85	A	ab	6.270
04/10/2004	2004	85	A	RPT	0
07/10/2004	2004	85	A	RPT	0
10/30/2004	2004	85	A	RPT	0
01/03/2005	2004	85	A	TW	0
07/06/2005	2005	85	A	JW	0
04/01/2006	2006	85	A	RPT	0

x

**YTD Meter Amounts:	Year	Amount
	1999	0
	2000	0
	2001	0
	2002	20.120
	2003	65.130
	2004	0
	2005	0
	2006	0

x

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

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 00211	4	3	3	15	23S	28E	586570	3573949*

Driller License: 592 **Driller Company:** TOMBLIN DRILLING

Driller Name: J. W. TOMBLIN

Drill Start Date:	06/19/1979	**Drill Finish Date:**	06/20/1979	**Plug Date:**	
Log File Date:	09/26/1979	**PCW Rcv Date:**	12/08/1950	**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	18 GPM
Casing Size:	7.00	**Depth Well:**	89 feet	**Depth Water:**	48 feet

Water Bearing Stratifications:	Top	Bottom	Description
	75	88	Sandstone/Gravel/Conglomerate

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

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	C 01253	1	3	1	22	23S	28E	586375	3573338*

Driller License: 410 **Driller Company:** BRININSTOOL, A.M.

Driller Name: BRININSTOOL, A.M.

Drill Start Date: 05/15/1965 **Drill Finish Date:** 06/04/1965 **Plug Date:**

Log File Date: 07/09/1965 **PCW Rcv Date:** 04/22/1966 **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 20.00 **Depth Well:** 179 feet **Depth Water:** 50 feet

Water Bearing Stratifications:

Top	Bottom	Description
80	100	Other/Unknown
122	170	Sandstone/Gravel/Conglomerate
170	179	Other/Unknown

Meter Number: 571 **Meter Make:** MCCROMETER

Meter Serial Number: 02-5617-10 **Meter Multiplier:** 1.0000

Number of Dials: 3 **Meter Type:** Diversion

Unit of Measure: Acre-Feet **Return Flow Percent:**

Usage Multiplier: **Reading Frequency:**

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
12/29/1998	1999	10	A	ms		0	
04/01/1999	1999	10	A	ms		0.110	
06/15/1999	1999	11	A	ms		0.660	
09/29/1999	1999	11	A	ms		0.420	
01/04/2000	1999	11	A	ms		0.070	
04/06/2000	2000	11	A	mb		0.010	
07/07/2000	2000	11	A	mb		0.180	
10/19/2000	2000	12	A	mb		0.300	
01/05/2001	2000	12	A	ms		0	
05/03/2001	2001	12	A	ms		0.140	
07/20/2001	2001	12	A	ms		0	
09/27/2001	2001	15	A	ms		2.620	
11/08/2001	2001	64	A	AM		49.290	
04/10/2002	2002	105	A	MB		41.410	
06/07/2002	2002	210	A	MS		105.240	
09/03/2002	2002	274	A	ms		63.480	
01/13/2003	2002	308	A	ms		34.440	
04/02/2003	2003	308	A	ms		0	
06/03/2003	2003	322	A	ms		13.550	
08/20/2003	2003	357	A	ab		35.370	

10/27/2003	2003	357	A	TW		0
01/06/2004	2003	0	A	RPT		0
01/06/2004	2003	357	A	ab		0
04/27/2004	2004	119	A	RPT		119.240
07/14/2004	2004	119	A	TW		0
10/20/2004	2004	119	A	TW		0
01/03/2005	2004	119	A	TW		0
03/30/2005	2005	119	A	JW		0
07/06/2005	2005	119	A	JW		0
01/05/2006	2005	119	A	TW	PUMP PULLED	0

**YTD Meter Amounts:	Year	Amount
	1999	1.260
	2000	0.490
	2001	52.050
	2002	244.570
	2003	48.920
	2004	119.240
	2005	0

Meter Number: 572 **Meter Make:** ELECTRIC

Meter Serial Number: 15082467 **Meter Multiplier:** 1.0000

Number of Dials: 5 **Meter Type:** Power Child

Unit of Measure: Kilowatt Hours **Return Flow Percent:**

Usage Multiplier: **Reading Frequency:**

Meter Readings in (Kilowatt Hours)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
12/29/1998	1999	46229	A	ms		0	
04/01/1999	1999	46240	A	ms		11.000	
06/15/1999	1999	46275	A	ms		35.000	
09/29/1999	1999	46307	A	ms		32.000	
04/06/2000	2000	5318	C	mb	Meter Reading Correction	-40989.000	
07/07/2000	2000	6318	A	mb		1000.000	
10/19/2000	2000	6336	A	mb		18.000	
07/20/2001	2001	6336	A	ms		0	
06/03/2003	2003	0	A	ms		0	

**YTD Meter Amounts:	Year	Amount
	1999	78.000
	2000	-39971.000
	2001	0
	2003	0

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

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 01336	2	1	1	22	23S	28E	586572	3573744*

Driller License: 24 **Driller Company:** BRININSTOOL, M.D.

Driller Name: HOWARD HEMLER

Drill Start Date: 09/03/1966 **Drill Finish Date:** 09/20/1966 **Plug Date:**

Log File Date: 01/26/1967 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 7.00 **Depth Well:** 190 feet **Depth Water:** 30 feet

Water Bearing Stratifications:	Top	Bottom	Description
	38	42	Sandstone/Gravel/Conglomerate
	66	75	Sandstone/Gravel/Conglomerate
	155	160	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	38	42

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

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 01487 CLW201796		3	2	22	23S	28E	587284	3573247*

Driller License: 30 **Driller Company:** BARRON, EMMETT

Driller Name: BARRON, EMMETT

Drill Start Date:	10/26/1974	**Drill Finish Date:**	10/28/1974	**Plug Date:**	
Log File Date:	12/02/1974	**PCW Rcv Date:**	10/22/1974	**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	16.00	**Depth Well:**	90 feet	**Depth Water:**	30 feet

Water Bearing Stratifications:	Top	Bottom	Description
	30	90	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	20	41

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

New Mexico Office of the State Engineer
Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	C 01487	3	4	1	22	23S	28E	586779	3573142*

Driller License: 655 **Driller Company:** TAYLOR, BILL G.

Driller Name: BILL G. TAYLOR, JR.

Drill Start Date: 12/07/1977 **Drill Finish Date:** 12/22/1977 **Plug Date:**

Log File Date: 01/13/1978 **PCW Rcv Date:** 10/22/1974 **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 16.00 **Depth Well:** 150 feet **Depth Water:** 38 feet

Water Bearing Stratifications:	Top	Bottom	Description
	38	90	Sandstone/Gravel/Conglomerate
	90	102	Sandstone/Gravel/Conglomerate
	102	114	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	0	107

Meter Number: 570 **Meter Make:** WATER SPEC

Meter Serial Number: 934618 **Meter Multiplier:** 1.0000

Number of Dials: 4 **Meter Type:** Diversion

Unit of Measure: Acre-Feet **Return Flow Percent:**

Usage Multiplier: **Reading Frequency:** Quarterly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
10/29/1998	1999	0	A	ms		0	
06/15/1999	1999	0	A	ms		0	
09/29/1999	1999	0	A	ms		0	
04/06/2000	2000	0	A	mb	Nonoperational	0	
07/07/2000	2000	0	A	mb		0	
10/19/2000	2000	0	A	mb		0	
01/03/2001	2000	0	A	ms		0	
05/03/2001	2001	0	A	ms		0	
07/20/2001	2001	0	A	ms		0	
09/27/2001	2001	0	A	ms		0	
11/08/2001	2001	0	A	AM		0	
04/10/2002	2002	3	A	MB		3.140	
06/11/2002	2002	41	A	MS	adjustment	37.770	
06/11/2002	2002	9965	A	MS	adjustment	0	
09/03/2002	2002	14	R	ms	Meter Rollover	48.620	
04/01/2003	2002	49	A	MS		35.220	
06/03/2003	2003	70	A	ms		20.610	
08/20/2003	2003	118	A	ab		48.240	

10/28/2003	2003	137	A	TW	18.910
01/06/2004	2003	137	A	ab	0
04/27/2004	2004	170	A	RPT	32.610
07/14/2004	2004	194	A	TW	24.010
10/20/2004	2004	194	A	TW	0
01/03/2005	2004	194	A	TW	0
03/30/2005	2005	194	A	JW	0
07/06/2005	2005	194	A	JW	0
01/05/2006	2005	194	A	TW	0
04/05/2006	2006	194	A	tw	0
07/06/2006	2006	197	A	tw	3.150
01/04/2007	2006	204	A	tw	7.410
04/27/2007	2007	204	A	tw	0
07/03/2007	2007	204	A	tw	0
10/10/2007	2007	204	A	tw	0
01/03/2008	2007	204	A	tw	0
04/24/2008	2008	204	A	tw	0
07/16/2008	2008	204	A	tw	0
10/02/2008	2008	205	A	tw	0.880
01/15/2009	2008	205	A	tw	0
04/22/2009	2009	206	A	tw	0.930
06/07/2009	2009	206	A	tw	0
01/06/2010	2009	206	A	tw	0
06/02/2010	2010	206	A	tw	0.010
01/12/2011	2010	206	A	tw	0
01/23/2012	2011	214	A	tw	7.660
03/12/2012	2012	214	A	tw	0
07/02/2012	2012	217	A	tw	2.960
02/12/2013	2012	225	A	tw	8.530
11/05/2013	2013	286	A	tw	60.430
06/10/2014	2014	286	A	tw	0
01/27/2015	2014	286	A	tw	0
07/24/2015	2015	286	A	tw	0
02/24/2016	2015	286	A	tw	0
08/19/2016	2016	286	A	tw	0
12/28/2016	2016	286	A	tw	0
07/20/2017	2017	286	A	tw	0
01/08/2018	2017	286	A	tw	0

**YTD Meter Amounts:	Year	Amount
	1999	0
	2000	0
	2001	0
	2002	124.750
	2003	87.760
	2004	56.620
	2005	0
	2006	10.560
	2007	0
	2008	0.880

2009	0.930
2010	0.010
2011	7.660
2012	11.490
2013	60.430
2014	0
2015	0
2016	0
2017	0

x

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

New Mexico Office of the State Engineer
Point of Diversion Summary

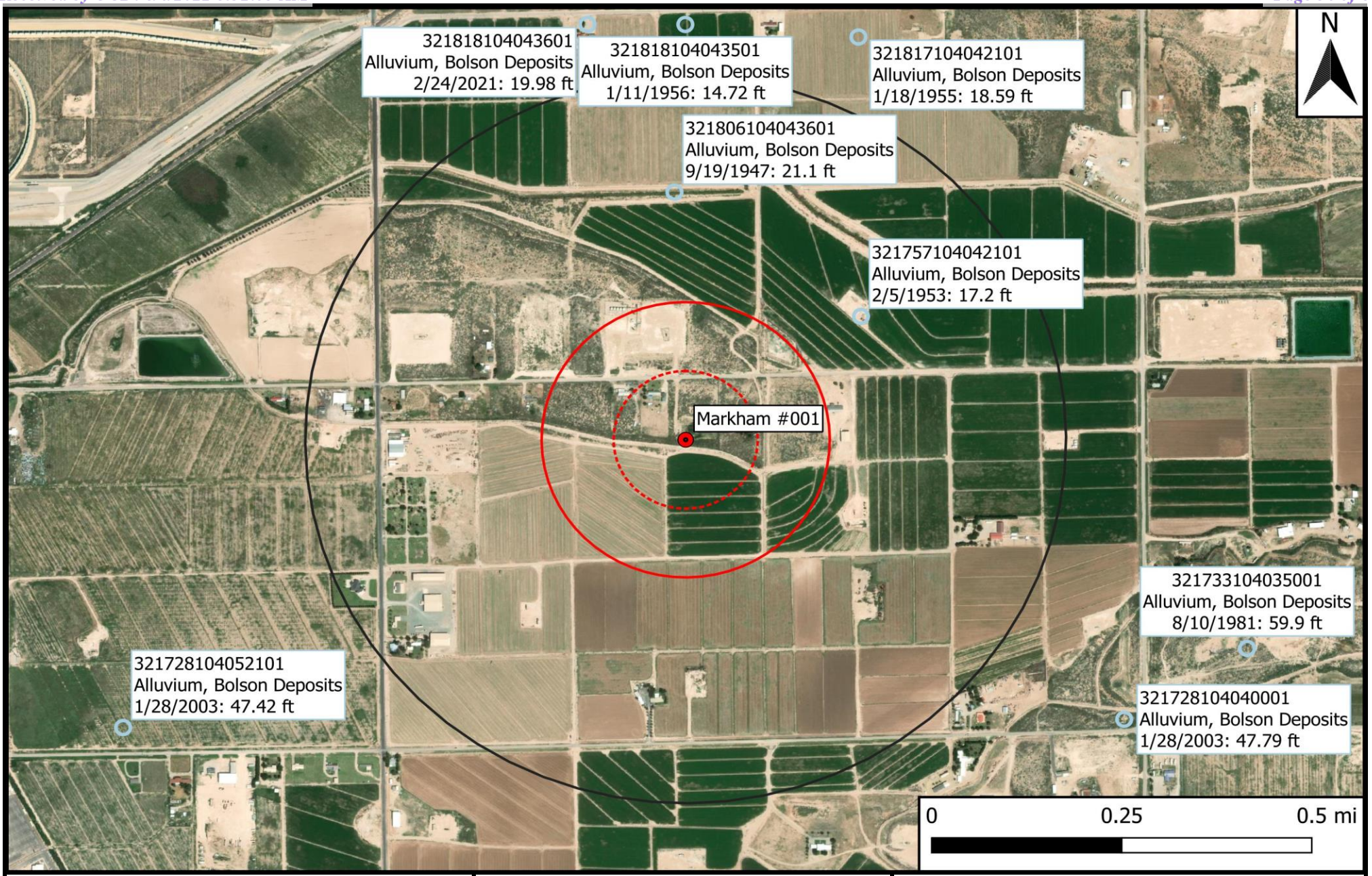
(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 01872		2	1	22	23S	28E	586878	3573649*

Driller License:	113	**Driller Company:**	MORELAND, A.J.		
Driller Name:	MORELAND, A.J.				
Drill Start Date:	04/07/1980	**Drill Finish Date:**	06/12/1980	**Plug Date:**	
Log File Date:	07/02/1980	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	300 GPM
Casing Size:	7.00	**Depth Well:**	68 feet	**Depth Water:**	48 feet

Water Bearing Stratifications:	Top	Bottom	Description
	52	68	Sandstone/Gravel/Conglomerate

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



Legend
- Site Location
- Well - USGS
- 500 Ft Radius
- 1000 Ft Radius
- 0.5 Mi Radius

Figure 5
USGS Well Proximity Map
Chevron USA
Markham #001
GPS: 32.296862, -104.07696
Eddy County

eTECH Environmental & Safety Solutions, Inc.

Drafted: mag Checked: be Date: 7/27/22

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

* We've detected you're using a mobile device. Find our Next Generation Station Page here.

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Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 321757104042101

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

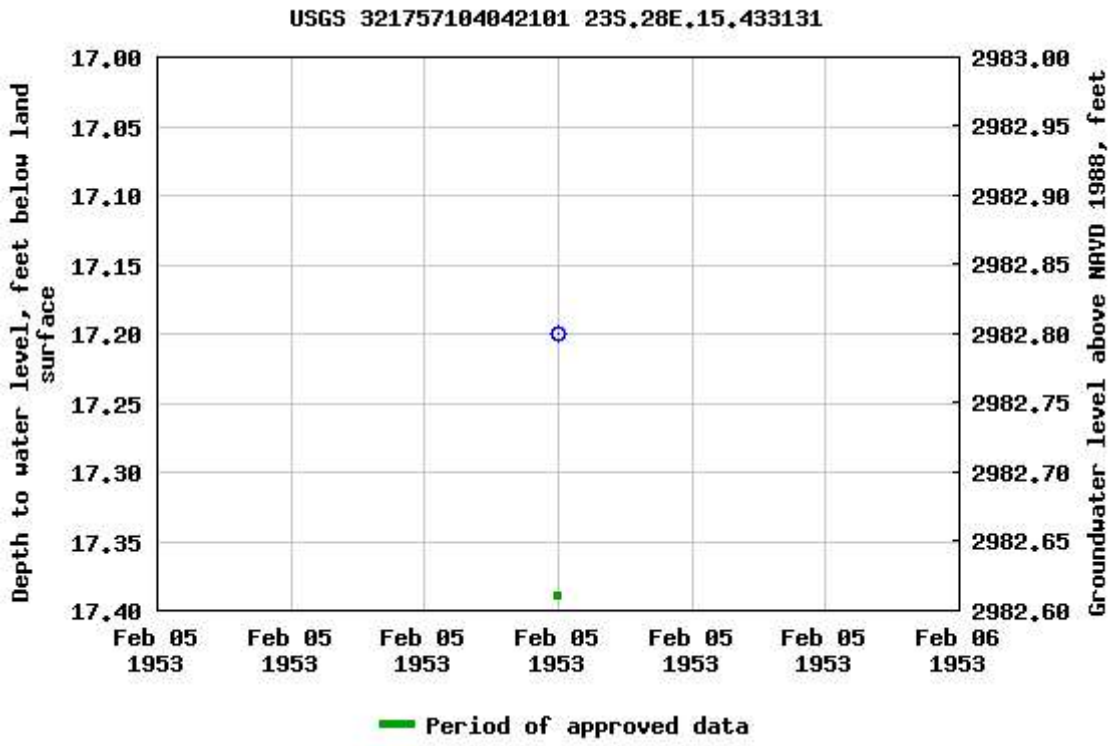
USGS 321757104042101 23S.28E.15.433131

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°17'57", Longitude 104°04'21" NAD27
Land-surface elevation 3,000 feet above NAVD88
The depth of the well is 149 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
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Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2022-07-27 12:44:54 EDT
0.6 0.48 nadww01

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

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Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs

site_no list =

- 321806104043601

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

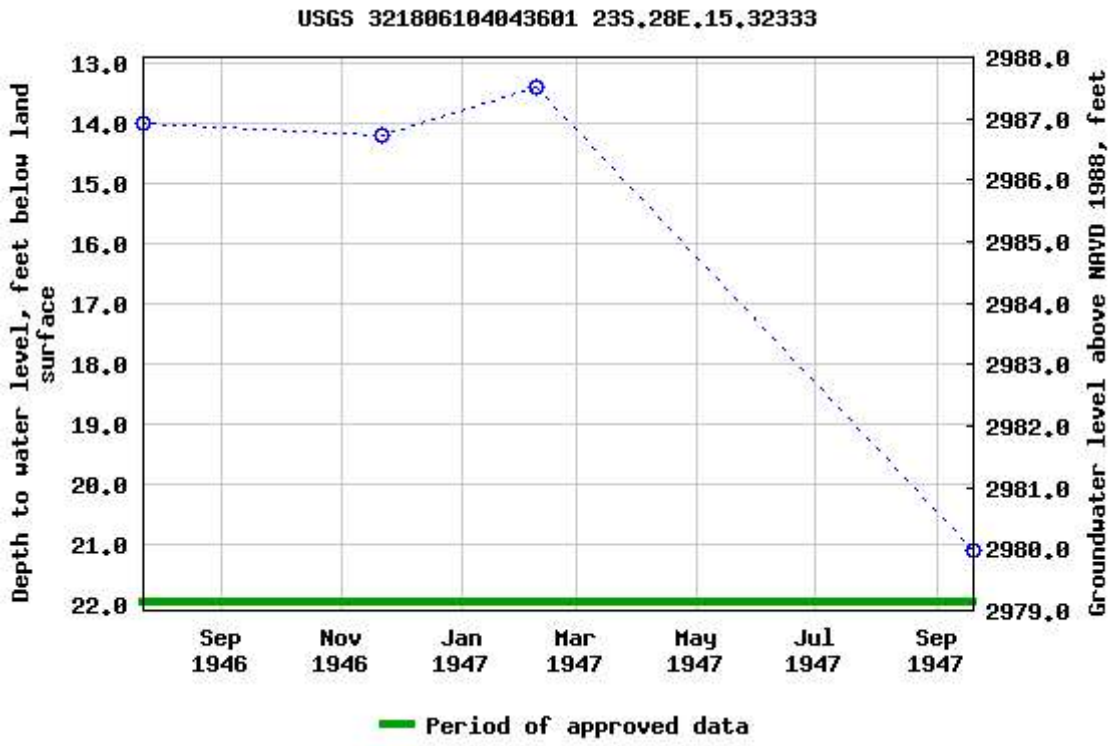
USGS 321806104043601 23S.28E.15.32333

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°18'06", Longitude 104°04'36" NAD27
Land-surface elevation 3,001 feet above NAVD88
The depth of the well is 145 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
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U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2022-07-27 12:44:55 EDT
0.57 0.52 nadww01

Appendix C

Photographic Documentation

Photographic Log

Photo Number: 1	
Photo Direction: Southeast	
Photo Description: View of impacted area and auger hole 1.	

Photo Number: 2	
Photo Direction: West	
Photo Description: View of impacted area and auger hole 2.	

Photographic Log

Photo Number: 3	
Photo Direction: South	
Photo Description: View of impacted area and auger holes 1 and 2.	

Photo Number: 4	
Photo Direction: South	
Photo Description: View of impacted area and auger holes 1 and 2.	

Appendix D

Laboratory Analytical

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 880-14332-1
Laboratory Sample Delivery Group: 15315
Client Project/Site: Markham #001

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

Attn: Brandon Wilson

JKramer

Authorized for release by:
5/11/2022 3:27:58 PM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Markham #001

Laboratory Job ID: 880-14332-1
SDG: 15315

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Sample Summary 19
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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Job ID: 880-14332-1
Project/Site: Markham #001
SDG: 15315

Qualifiers

GC VOA

Qualifier	Qualifier Description
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
F1	MS and/or MSD recovery exceeds control limits.
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: Markham #001

Job ID: 880-14332-1
SDG: 15315

Job ID: 880-14332-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-14332-1

Receipt
The samples were received on 5/3/2022 11:39 AM. 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 5.7°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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-24814 and analytical batch 880-24887 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

Client Sample ID: Auger Hole 1

Lab Sample ID: 880-14332-1
Matrix: Solid
Date Collected: 05/02/22 13:00
Date Received: 05/03/22 11:39
Sample Depth: 0 - 6"

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/10/22 10:52	05/11/22 05:36	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/10/22 10:52	05/11/22 05:36	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/10/22 10:52	05/11/22 05:36	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		05/10/22 10:52	05/11/22 05:36	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/10/22 10:52	05/11/22 05:36	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		05/10/22 10:52	05/11/22 05:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/10/22 10:52*	*05/11/22 05:36*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/10/22 10:52*	*05/11/22 05:36*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			05/11/22 08:13	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			05/06/22 10:31	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		05/04/22 14:31	05/05/22 16:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/04/22 14:31	05/05/22 16:06	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/04/22 14:31	05/05/22 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*05/04/22 14:31*	*05/05/22 16:06*	*1*
o-Terphenyl	*91*		*70 - 130*	*05/04/22 14:31*	*05/05/22 16:06*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16.9**		5.04		mg/Kg			05/06/22 07:34	1

Client Sample ID: Auger Hole 1

Lab Sample ID: 880-14332-2
Matrix: Solid
Date Collected: 05/02/22 13:05
Date Received: 05/03/22 11:39
Sample Depth: 42 - 48"

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		05/10/22 10:52	05/11/22 08:39	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/10/22 10:52	05/11/22 08:39	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/10/22 10:52	05/11/22 08:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/10/22 10:52	05/11/22 08:39	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/10/22 10:52	05/11/22 08:39	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/10/22 10:52	05/11/22 08:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*05/10/22 10:52*	*05/11/22 08:39*	*1*

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Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

Client Sample ID: Auger Hole 1

Lab Sample ID: 880-14332-2
Matrix: Solid
Date Collected: 05/02/22 13:05
Date Received: 05/03/22 11:39
Sample Depth: 42 - 48"

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/10/22 10:52*	*05/11/22 08:39*	*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			05/11/22 08:13	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			05/06/22 10:31	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		05/04/22 14:31	05/05/22 16:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/04/22 14:31	05/05/22 16:27	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/04/22 14:31	05/05/22 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*05/04/22 14:31*	*05/05/22 16:27*	*1*
o-Terphenyl	*103*		*70 - 130*	*05/04/22 14:31*	*05/05/22 16:27*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.3**		4.99		mg/Kg			05/06/22 07:53	1

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-14332-3
Matrix: Solid
Date Collected: 05/02/22 13:10
Date Received: 05/03/22 11:39
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		05/10/22 10:52	05/11/22 08:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/10/22 10:52	05/11/22 08:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/10/22 10:52	05/11/22 08:59	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/10/22 10:52	05/11/22 08:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/10/22 10:52	05/11/22 08:59	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/10/22 10:52	05/11/22 08:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/10/22 10:52*	*05/11/22 08:59*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/10/22 10:52*	*05/11/22 08:59*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/11/22 08:13	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			05/06/22 10:31	1

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-14332-3
Matrix: Solid
Date Collected: 05/02/22 13:10
Date Received: 05/03/22 11:39
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		05/04/22 14:31	05/05/22 17:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/04/22 14:31	05/05/22 17:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/04/22 14:31	05/05/22 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*05/04/22 14:31*	*05/05/22 17:10*	*1*
o-Terphenyl	*115*		*70 - 130*	*05/04/22 14:31*	*05/05/22 17:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.5**		5.05		mg/Kg			05/06/22 07:59	1

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-14332-4
Matrix: Solid
Date Collected: 05/02/22 13:15
Date Received: 05/03/22 11:39
Sample Depth: 42 - 48"

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		05/10/22 10:52	05/11/22 09:19	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/10/22 10:52	05/11/22 09:19	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/10/22 10:52	05/11/22 09:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/10/22 10:52	05/11/22 09:19	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/10/22 10:52	05/11/22 09:19	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/10/22 10:52	05/11/22 09:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/10/22 10:52*	*05/11/22 09:19*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/10/22 10:52*	*05/11/22 09:19*	*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			05/11/22 08:13	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			05/06/22 10:31	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		05/04/22 14:31	05/05/22 17:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/04/22 14:31	05/05/22 17:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/04/22 14:31	05/05/22 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/04/22 14:31*	*05/05/22 17:31*	*1*
o-Terphenyl	*100*		*70 - 130*	*05/04/22 14:31*	*05/05/22 17:31*	*1*

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

Client Sample ID: Auger Hole 2

Lab Sample ID: 880-14332-4

Date Collected: 05/02/22 13:15
Matrix: Solid
Date Received: 05/03/22 11:39
Sample Depth: 42 - 48"

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3000		25.0		mg/Kg			05/06/22 08:06	5

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

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)										
880-14332-1	Auger Hole 1	108	99										
880-14332-2	Auger Hole 1	107	98										
880-14332-3	Auger Hole 2	109	100										
880-14332-4	Auger Hole 2	110	100										
880-14580-A-4-B MS	Matrix Spike	104	98										
880-14580-A-4-C MSD	Matrix Spike Duplicate	106	101										
LCS 880-25266/1-A	Lab Control Sample	99	99										
LCSD 880-25266/2-A	Lab Control Sample Dup	100	97										
MB 880-25110/5-A	Method Blank	101	95										
MB 880-25266/5-A	Method Blank	98	95										

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)										
880-14332-1	Auger Hole 1	90	91										
880-14332-2	Auger Hole 1	102	103										
880-14332-3	Auger Hole 2	114	115										
880-14332-4	Auger Hole 2	96	100										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25110/5-A
Matrix: Solid
Analysis Batch: 25224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25110

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/09/22 13:08	05/10/22 12:02	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/09/22 13:08	05/10/22 12:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/09/22 13:08	05/10/22 12:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/09/22 13:08	05/10/22 12:02	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/09/22 13:08	05/10/22 12:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/09/22 13:08	05/10/22 12:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*05/09/22 13:08*	*05/10/22 12:02*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/09/22 13:08*	*05/10/22 12:02*	*1*

Lab Sample ID: MB 880-25266/5-A
Matrix: Solid
Analysis Batch: 25224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25266

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/10/22 10:52	05/11/22 03:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/10/22 10:52	05/11/22 03:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/10/22 10:52	05/11/22 03:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/10/22 10:52	05/11/22 03:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/10/22 10:52	05/11/22 03:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/10/22 10:52	05/11/22 03:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*05/10/22 10:52*	*05/11/22 03:04*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/10/22 10:52*	*05/11/22 03:04*	*1*

Lab Sample ID: LCS 880-25266/1-A
Matrix: Solid
Analysis Batch: 25224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25266

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08603		mg/Kg		86	70 - 130
Toluene	0.100	0.08465		mg/Kg		85	70 - 130
Ethylbenzene	0.100	0.08620		mg/Kg		86	70 - 130
m-Xylene & p-Xylene	0.200	0.1796		mg/Kg		90	70 - 130
o-Xylene	0.100	0.09780		mg/Kg		98	70 - 130

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

Lab Sample ID: LCSD 880-25266/2-A
Matrix: Solid
Analysis Batch: 25224

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25266

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.07230		mg/Kg		72	70 - 130	17	35

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QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

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

Lab Sample ID: LCSD 880-25266/2-A
Matrix: Solid
Analysis Batch: 25224

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25266

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.07434		mg/Kg		74	70 - 130	13	35
Ethylbenzene			0.100	0.07575		mg/Kg		76	70 - 130	13	35
m-Xylene & p-Xylene			0.200	0.1592		mg/Kg		80	70 - 130	12	35
o-Xylene			0.100	0.08755		mg/Kg		88	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-14580-A-4-B MS
Matrix: Solid
Analysis Batch: 25224

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 25266

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.0998	0.07959		mg/Kg		80	70 - 130
Toluene	<0.00201	U	0.0998	0.07831		mg/Kg		78	70 - 130
Ethylbenzene	<0.00201	U	0.0998	0.08032		mg/Kg		80	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1674		mg/Kg		84	70 - 130
o-Xylene	<0.00201	U	0.0998	0.09136		mg/Kg		92	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 880-14580-A-4-C MSD
Matrix: Solid
Analysis Batch: 25224

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 25266

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.08680		mg/Kg		87	70 - 130	9	35
Toluene	<0.00201	U	0.100	0.08529		mg/Kg		85	70 - 130	9	35
Ethylbenzene	<0.00201	U	0.100	0.08679		mg/Kg		87	70 - 130	8	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1811		mg/Kg		90	70 - 130	8	35
o-Xylene	<0.00201	U	0.100	0.09802		mg/Kg		98	70 - 130	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-24814/1-A
Matrix: Solid
Analysis Batch: 24887

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			05/06/22 06:37	1

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-24814/2-A
Matrix: Solid
Analysis Batch: 24887

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	266.7		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-24814/3-A
Matrix: Solid
Analysis Batch: 24887

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	273.0		mg/Kg		109	90 - 110	2	20

Lab Sample ID: 880-14331-A-1-C MS
Matrix: Solid
Analysis Batch: 24887

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	11.1	F1	250	305.4	F1	mg/Kg		118	90 - 110		

Lab Sample ID: 880-14331-A-1-D MSD
Matrix: Solid
Analysis Batch: 24887

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	11.1	F1	250	281.0		mg/Kg		108	90 - 110	8	20

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

GC VOA

Prep Batch: 25110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-25110/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 25224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14332-1	Auger Hole 1	Total/NA	Solid	8021B	25266
880-14332-2	Auger Hole 1	Total/NA	Solid	8021B	25266
880-14332-3	Auger Hole 2	Total/NA	Solid	8021B	25266
880-14332-4	Auger Hole 2	Total/NA	Solid	8021B	25266
MB 880-25110/5-A	Method Blank	Total/NA	Solid	8021B	25110
MB 880-25266/5-A	Method Blank	Total/NA	Solid	8021B	25266
LCS 880-25266/1-A	Lab Control Sample	Total/NA	Solid	8021B	25266
LCSD 880-25266/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25266
880-14580-A-4-B MS	Matrix Spike	Total/NA	Solid	8021B	25266
880-14580-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	25266

Prep Batch: 25266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14332-1	Auger Hole 1	Total/NA	Solid	5035	
880-14332-2	Auger Hole 1	Total/NA	Solid	5035	
880-14332-3	Auger Hole 2	Total/NA	Solid	5035	
880-14332-4	Auger Hole 2	Total/NA	Solid	5035	
MB 880-25266/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25266/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25266/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-14580-A-4-B MS	Matrix Spike	Total/NA	Solid	5035	
880-14580-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 25301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14332-1	Auger Hole 1	Total/NA	Solid	Total BTEX	
880-14332-2	Auger Hole 1	Total/NA	Solid	Total BTEX	
880-14332-3	Auger Hole 2	Total/NA	Solid	Total BTEX	
880-14332-4	Auger Hole 2	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 24832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14332-1	Auger Hole 1	Total/NA	Solid	8015NM Prep	
880-14332-2	Auger Hole 1	Total/NA	Solid	8015NM Prep	
880-14332-3	Auger Hole 2	Total/NA	Solid	8015NM Prep	
880-14332-4	Auger Hole 2	Total/NA	Solid	8015NM Prep	

Analysis Batch: 24856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14332-1	Auger Hole 1	Total/NA	Solid	8015B NM	24832
880-14332-2	Auger Hole 1	Total/NA	Solid	8015B NM	24832
880-14332-3	Auger Hole 2	Total/NA	Solid	8015B NM	24832
880-14332-4	Auger Hole 2	Total/NA	Solid	8015B NM	24832

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

GC Semi VOA

Analysis Batch: 24956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14332-1	Auger Hole 1	Total/NA	Solid	8015 NM	
880-14332-2	Auger Hole 1	Total/NA	Solid	8015 NM	
880-14332-3	Auger Hole 2	Total/NA	Solid	8015 NM	
880-14332-4	Auger Hole 2	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 24814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14332-1	Auger Hole 1	Soluble	Solid	DI Leach	
880-14332-2	Auger Hole 1	Soluble	Solid	DI Leach	
880-14332-3	Auger Hole 2	Soluble	Solid	DI Leach	
880-14332-4	Auger Hole 2	Soluble	Solid	DI Leach	
MB 880-24814/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-24814/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-24814/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-14331-A-1-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-14331-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 24887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14332-1	Auger Hole 1	Soluble	Solid	300.0	24814
880-14332-2	Auger Hole 1	Soluble	Solid	300.0	24814
880-14332-3	Auger Hole 2	Soluble	Solid	300.0	24814
880-14332-4	Auger Hole 2	Soluble	Solid	300.0	24814
MB 880-24814/1-A	Method Blank	Soluble	Solid	300.0	24814
LCS 880-24814/2-A	Lab Control Sample	Soluble	Solid	300.0	24814
LCSD 880-24814/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	24814
880-14331-A-1-C MS	Matrix Spike	Soluble	Solid	300.0	24814
880-14331-A-1-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	24814

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

Client Sample ID: Auger Hole 1
Date Collected: 05/02/22 13:00
Date Received: 05/03/22 11:39

Lab Sample ID: 880-14332-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	25266	05/10/22 10:52	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25224	05/11/22 05:36	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25301	05/11/22 08:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24956	05/06/22 10:31	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	24832	05/04/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24856	05/05/22 16:06	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	24814	05/04/22 12:07	SC	XEN MID
Soluble	Analysis	300.0		1			24887	05/06/22 07:34	CH	XEN MID

Client Sample ID: Auger Hole 1
Date Collected: 05/02/22 13:05
Date Received: 05/03/22 11:39

Lab Sample ID: 880-14332-2
Matrix: Solid

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	25266	05/10/22 10:52	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25224	05/11/22 08:39	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25301	05/11/22 08:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24956	05/06/22 10:31	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	24832	05/04/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24856	05/05/22 16:27	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	24814	05/04/22 12:07	SC	XEN MID
Soluble	Analysis	300.0		1			24887	05/06/22 07:53	CH	XEN MID

Client Sample ID: Auger Hole 2
Date Collected: 05/02/22 13:10
Date Received: 05/03/22 11:39

Lab Sample ID: 880-14332-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	25266	05/10/22 10:52	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25224	05/11/22 08:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25301	05/11/22 08:13	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24956	05/06/22 10:31	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	24832	05/04/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24856	05/05/22 17:10	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	24814	05/04/22 12:07	SC	XEN MID
Soluble	Analysis	300.0		1			24887	05/06/22 07:59	CH	XEN MID

Client Sample ID: Auger Hole 2
Date Collected: 05/02/22 13:15
Date Received: 05/03/22 11:39

Lab Sample ID: 880-14332-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25266	05/10/22 10:52	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	25224	05/11/22 09:19	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25301	05/11/22 08:13	AJ	XEN MID

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Job ID: 880-14332-1
Project/Site: Markham #001
SDG: 15315

Client Sample ID: Auger Hole 2
Lab Sample ID: 880-14332-4

Date Collected: 05/02/22 13:15
Matrix: Solid
Date Received: 05/03/22 11:39

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			24956	05/06/22 10:31	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	24832	05/04/22 14:31	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24856	05/05/22 17:31	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	24814	05/04/22 12:07	SC	XEN MID
Soluble	Analysis	300.0		5			24887	05/06/22 08:06	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: 880-14332-1
Project/Site: Markham #001
SDG: 15315

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
Project/Site: Markham #001

Job ID: 880-14332-1
SDG: 15315

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: Markham #001

Job ID: 880-14332-1
SDG: 15315

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-14332-1	Auger Hole 1	Solid	05/02/22 13:00	05/03/22 11:39	0 - 6"
880-14332-2	Auger Hole 1	Solid	05/02/22 13:05	05/03/22 11:39	42 - 48"
880-14332-3	Auger Hole 2	Solid	05/02/22 13:10	05/03/22 11:39	0 - 6"
880-14332-4	Auger Hole 2	Solid	05/02/22 13:15	05/03/22 11:39	42 - 48"

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)

Work Order No: 14332

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5/11/2022

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

Work Order Comments

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

Project Name.	MacKhan # 001	Turn Around	
Project Number:	15315	Routine ☐	
P O. Number:		Rush	
Sampler's Name:	Arturo Rebollo	Due Date	

SAMPLE RECEIPT			
Temp Blank.	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C)	5.9/5.7	Thermometer ID	IR8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

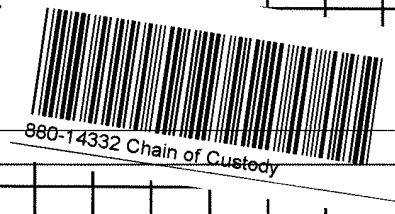
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (8015M)	BTEX (8021B)	Chlorides 300
Auger Hole 1	S	5-3-22	13:00	0-6"	1	—	—	—
Auger Hole 1	S		13:05	42-48"	1	—	—	—
Auger Hole 2	S		13:10	0-6"	1	—	—	—
Auger Hole 2	S		13:15	42-48"	1	—	—	—

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments



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

Notice Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed These terms will be enforced unless previously negotiated

Relinquished by: (Signature)	Received by. (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5/3/22	2		
3		11.39	4		
5			6		

Revised Date 051418 Rev 2018.1

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-14332-1
SDG Number: 15315

Login Number: 14332
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	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	

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

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

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 131409
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	• As this release is not fully horizontally and vertically delineated any remediation efforts will be at-risk. All remediation efforts will be assessed by the OCD at the time of the incident closure submittal. • All areas must contain a minimum of 4 feet non-waste containing uncontaminated, earthen material with chloride concentrations less than 600 mg/kg. • All (floor/sidewall) closure samples on pad will need to meet closure criteria standards for depth to water of <50' in Table 1 of the Spill Rule. • Please collect more confirmation samples, representing no more than 200 square feet. • Please continue to horizontally delineate sample points to 600 mg/kg for chlorides and TPH to 100 mg/kg on the outer edges/periphery and include sample points in your next report after closure criteria limits have been met.	11/18/2022