ENSOLUM

Review of the 3Q 2023-Solar SVE system Update:
Content Satisfactory
1. Continue to operate solar SVE system and conduct all necessary O&M activities.
2. Please submit system updates as required in 2024.

October 16, 2023

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

Re: Third Quarter 2023 – Solar SVE System Update
James Ranch Unit #10 Battery
Eddy County, New Mexico
XTO Energy, Inc.
NMOCD Incident Numbers NAB1535754357, NAB1521257588, and NAB1904653072

To Whom it May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), presents this *Third Quarter 2023 - Solar SVE System Update* report summarizing the solar soil vapor extraction (SVE) system performance at the James Ranch Unit #10 Battery (Site), located in Unit H, Section 1, Township 23 South, Range 30 East in Eddy County, New Mexico (Figure 1). The SVE system has operated since May 27, 2022, to remediate residual subsurface soil impacts at the Site. This report summarizes Site activities performed in July, August, and September of 2023 for the New Mexico Oil Conservation Division (NMOCD).

SVE SYSTEM SPECIFICATIONS

Currently, a VariSun Direct Solar SVE system is installed at the Site. This system consists of a 6.2 horsepower (HP) Pentair SST65 high efficiency regenerative blower capable of producing 250 cubic feet per minute (cfm) flow at a vacuum of 110 inches of water column (IWC). The system is powered by 12, 415-watt solar modules capable of producing 5 kilowatts (KW) of electricity. A motor controller automatically starts the system as soon as sunlight is available and increases the electrical output to the blower as sun power increases throughout the day.

Ten SVE wells are currently installed at the Site as depicted on Figure 2. In order to target soil impacts, including total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and total xylenes (BTEX), at different depth intervals, the screened intervals of the SVE wells were constructed in shallow, medium, and deep zones. Specifically, SVE wells SVE01, SVE02, SVE03, and SVE04 target shallow zone impacts and are screened at depths between 5 feet and 20 feet below ground surface (bgs). SVE wells SVE-PT-02, SVE-PT-03, and SVE-PT-04 target medium zone impacts and are screened between 15 feet and 30 feet bgs. SVE wells SVE05, SVE06, and SVE-PT-01 target deep zone impacts and are screened at depths between 25 feet and 65 feet bgs.

SUMMARY OF SVE OPERATIONS

Between July and September 2023, Ensolum personnel performed routine operation and maintenance (O&M) visits to verify that the system was operating as designed and to perform any required maintenance. In accordance with the approved *Revised Remediation Work Plan – SVE*

System prepared by LT Environmental, Inc. (LTE, dated October 30, 2019), O&M inspections were performed at least monthly during this time period. Field notes taken during O&M visits are included in Appendix A.

During the third quarter of 2023, all SVE wells were open and operational (except for SVE03 and SVE06 as recommended in the *Second Quarter 2023 - Solar SVE System Update)* to induce air flow in the impacted zones at the Site. Between June 14 and September 20, 2023, approximately 1,301 total hours of nominal daylight were available for the solar SVE system to operate. Available nominal daylight hours are based on estimates by the National Oceanic and Atmospheric Administration's (NOAA's) National Weather Service (NWS) for the Site location. Between these dates, the actual runtime for the system was 1,200.6 hours, equating to a runtime efficiency of 92.3 percent (%). Run time for solar SVE systems can be less than the nominal hours due to cloud cover or other adverse weather preventing sufficient sunlight to generate electrical energy through solar conversion. Table 1 presents the SVE system runtime compared to nominal available daylight hours per month.

AIR SAMPLING RESULTS

A third quarter 2023 air emissions sample was collected on September 20, 2023, from a sample port located between the SVE piping manifold and the SVE blower using a high vacuum air sampler. Prior to collection, the emission sample was field screened with a photoionization detector (PID) for organic vapor monitoring (OVM). The emission sample was collected directly into two 1-Liter Tedlar® bags and submitted to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico for analysis of total volatile petroleum hydrocarbons (TVPH – also known as TPH – gasoline range organics (GRO)) and BTEX following Environmental Protection Agency (EPA) Method 8260C.

In general, TVPH concentrations account for the majority contaminant mass and system emissions, with a result of 5,210 micrograms per liter (µg/L). In comparison, BTEX concentrations range from below the laboratory reporting limits up to 106 µg/L. Table 2 presents a summary of TVPH and BTEX analytical data collected during the sampling events, with the full laboratory analytical reports included in Appendix B.

Air sample data and measured stack flow rates are used to estimate total mass recovered and total emissions generated by the SVE system (Table 2). Based on these estimates, approximately 13,919 pounds (6.96 tons) of TVPH have been removed by the system to date.

SYSTEM ADJUSTMENTS AND RECOMMENDATIONS

Monthly O&M visits will continue to be performed by Ensolum personnel to verify that the SVE system is operating within normal working ranges (i.e., temperature, pressure, and vacuum). Deviations from regular operations will be noted on field logs and included in the following update report. XTO will continue operating the SVE system until TVPH concentrations decrease to below 1,000 µg/L and/or asymptotic conditions are observed. At that time, an evaluation of residual petroleum hydrocarbons will be assessed and further recommendations for remedial actions, if any, will be provided to the NMOCD.

We appreciate the opportunity to provide this report to the NMOCD. If you should have any questions or comments regarding this report, please contact the undersigned.

Sincerely,
Ensolum, LLC

Stuart Hyde, LG
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Senior Managing Geologist
(303) 887-2946
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Attachments:

Figure 1	Site Location Map
Figure 2	SVE System Configuration
Table 1	Soil Vapor Extraction System Runtime Calculations
Table 2	Soil Vapor Extraction System Mass Removal and Emissions
Appendix A	Field Notes
Appendix B	Laboratory Analytical Reports & Chain-of-Custody Documentation

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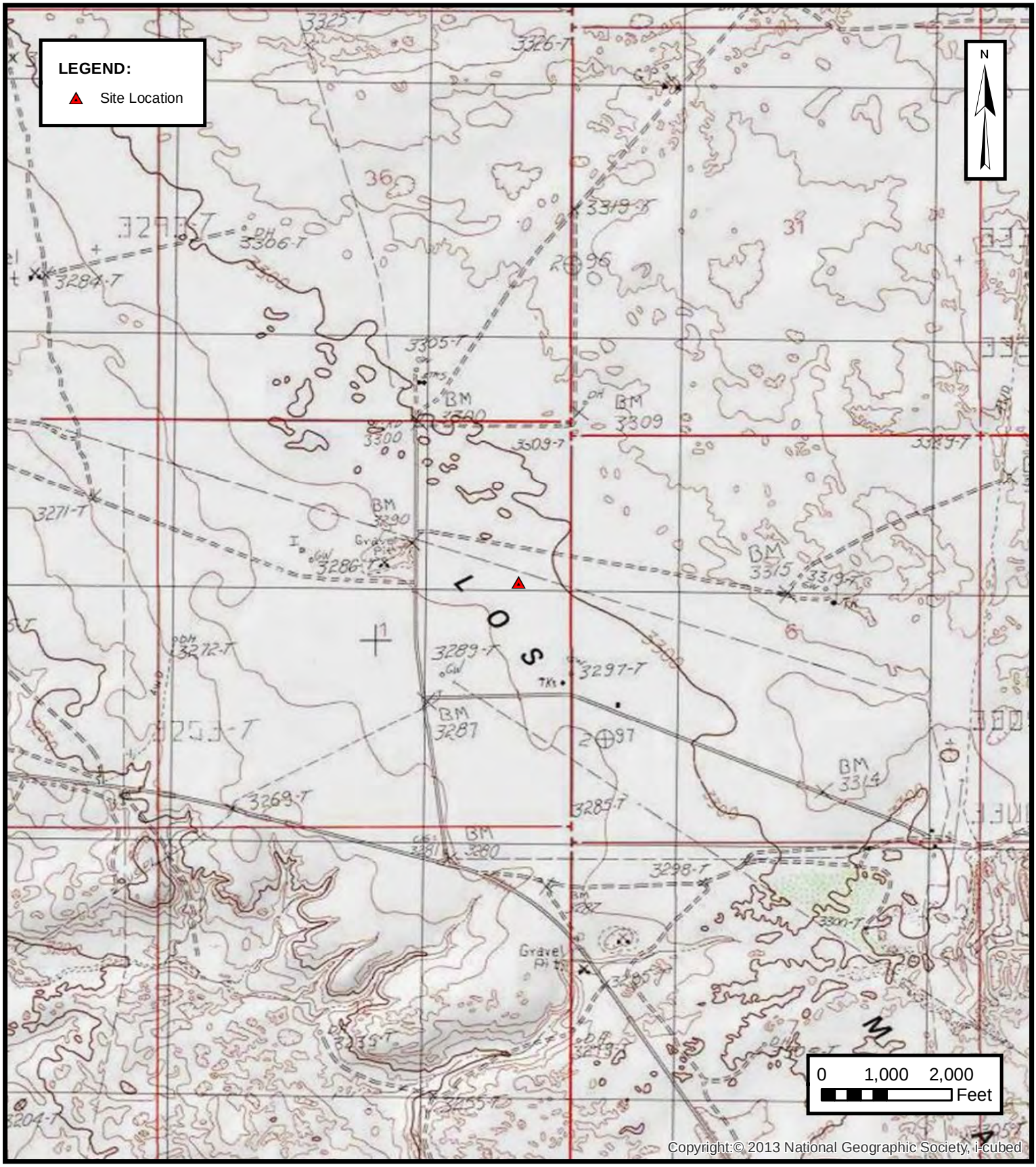
FIGURES



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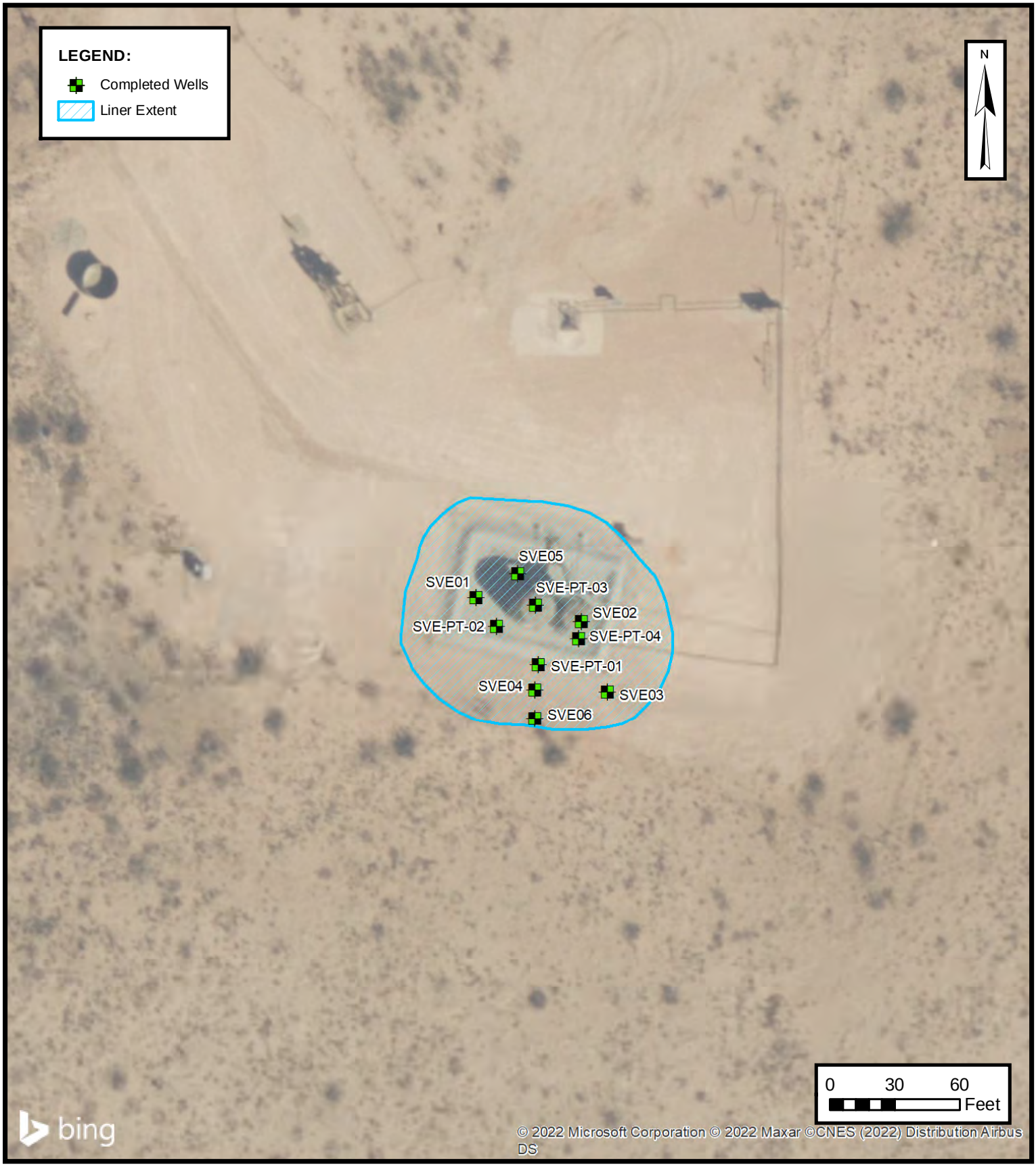
Environmental & Hydrogeologic Consultants

SITE LOCATION MAP

XTO ENERGY, INC
JAMES RANCH UNIT #10 BATTERY
Unit H, Sec 1, T23S, R30E
Eddy County, New Mexico

FIGURE
1



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Environmental & Hydrogeologic Consultants

SVE SYSTEM CONFIGURATION

XTO ENERGY, INC
JAMES RANCH UNIT #10 BATTERY
Unit H, Sec 1, T23S, R30E
Eddy County, New Mexico

FIGURE
2

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TABLES

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TABLE 1
SOIL VAPOR EXTRACTION SYSTEM RUNTIME CALCULATIONS
James Ranch Unit #10 Battery
XTO Energy
Eddy County, New Mexico

Date	Runtime Meter Hours	Delta Hours
6/14/2023	3,840.4	--
9/20/2023	5,041.0	1,200.6

Time Period	June 14 to June 30, 2023	July 1 to July 31, 2023	August 1 to August 31, 2023	September 1 to September 20, 2023
Days	16	31	31	20
Avg. Nominal Daylight Hours	14	14	13	12
Available Runtime Hours	224	434	403	240

Quarterly Available Daylight Runtime Hours	**1,301**
Quarterly Runtime Hours	**1,200.6**
Quarterly % Runtime	**92.3%**

Month	Days	Nominal Daylight Hours	Total Month Hours
January	31	9	279
February	28	10	280
March	31	11	341
April	30	12	360
May	31	13	403
June	30	14	420
July	31	14	434
August	31	13	403
September	30	12	360
October	31	11	341
November	30	10	300
December	31	9	279

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TABLE 2
SOIL VAPOR EXTRACTION SYSTEM MASS REMOVAL AND EMISSIONS
James Ranch Unit #10 Battery
XTO Energy
Eddy County, New Mexico

Laboratory Analytical Results

Date	PID (ppm)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TVPH (µg/L)
5/27/2022*	679	12.6	40.5	*10.0*	34.6	12,500
6/8/2022*	901	21.0	210	9.90	434	35,000
6/20/2022*	960	21.2	199	*10*	225	20,200
7/18/2022*	535	17.1	138	11.1	252	14,400
8/15/2022*	987	*50.0*	135	*50.0*	227	12,300
9/19/2022	380	*10.0*	54.9	*10.0*	110	4,830
12/19/2022	337	*10.0*	27.7	*10.0*	47.1	3,030
3/15/2023	245	*10.0*	25.2	*10.0*	29.4	1,630
6/14/2023	323	*10.0*	29.2	*10.0*	54.9	2,180
9/20/2023	611	*10.0*	43.4	*10.0*	106	5,210
Average	596	17.2	90	14.1	152	11,128

Flow and Vapor Extraction Summary

Date	Flow Rate (cfm)	Total System Flow (cf)	Delta Flow (cf)	Benzene (lb/hr)	Toluene (lb/hr)	Ethylbenzene (lb/hr)	Total Xylenes (lb/hr)	TVPH (lb/hr)
5/27/2022	140	0	--	--	--	--	--	--
6/8/2022	113	1,046,154	1,046,154	0.00710	0.0529	0.00421	0.0990	10.0
6/20/2022	105	2,047,854	1,001,700	0.00829	0.0803	0.00391	0.129	10.8
7/18/2022	70	3,572,454	1,524,600	0.00501	0.0441	0.00276	0.0624	4.53
8/15/2022	98	5,656,098	2,083,644	0.0123	0.0501	0.0112	0.0879	4.90
9/19/2022	138	8,742,054	3,085,956	0.0155	0.0490	0.0155	0.0870	4.42
12/19/2022	150	15,449,754	6,707,700	0.00561	0.0232	0.00561	0.0441	2.20
3/15/2023	141	21,230,472	5,780,718	0.00527	0.0139	0.00527	0.0202	1.23
6/14/2023	132	29,220,168	7,989,696	0.00494	0.0134	0.00494	0.0208	0.940
9/20/2023	132	38,728,920	9,508,752	0.00494	0.0179	0.00494	0.0397	1.82
			Average	0.00766	0.0383	0.00648	0.0656	5.45

Mass Removal and Emissions Summary

Date	Total SVE System Hours	Delta Hours	Benzene (pounds)	Toluene (pounds)	Ethylbenzene (pounds)	Total Xylenes (pounds)	TVPH (pounds)	TVPH (tons)
5/27/2022	0	0	--	--	--	--	--	--
6/8/2022	154	154	1.10	8.17	0.649	15.3	1,549	0.774
6/20/2022	313	159	1.32	12.8	0.621	20.6	1,723	0.862
7/18/2022	676	363	1.82	16.0	1.00	22.7	1,644	0.822
8/15/2022	1,030	354	4.36	17.7	3.97	31.1	1,734	0.867
9/19/2022	1,403	373	5.77	18.3	5.77	32.4	1,648	0.824
12/19/2022	2,148	745	4.18	17.3	4.18	32.8	1,643	0.822
3/15/2023	2,832	683	3.60	9.5	3.60	13.8	840	0.420
6/14/2023	3,840	1,009	4.98	13.5	4.98	21.0	949	0.474
9/20/2023	5,041	1,201	5.93	21.5	5.93	47.7	2,190	1.095
		Total Mass Recovery to Date	33.1	134.8	30.7	237	13,919	6.96

Notes:

cf: cubic feet
cfm: cubic feet per minute
µg/L: micrograms per liter
lb/hr: pounds per hour
--: not sampled
PID: photoionization detector
ppm: parts per million
SVE: soil vapor extraction
TVPH: total volatile petroleum hydrocarbons
gray: laboratory reporting limit used for calculating emissions

**: analytical results differ from those reported in the August 23, 2022 "Solar SVE System Update" due to unit conversion errors*

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APPENDIX A

Field Notes

34

Location _____ Date 7/12/23

Project / Client XTO JRU 1e O&M vDit

Connor White man

1000am	Onsite	Clear	and Sunny		
	System	running	, KO tank ~1/4 full		
	Runtime:	4170.9 (hrs.)			
	Mark Vac:	34 (in H_2O)			
	Flow:	120 (cfm)			
		(in H_2O)			
	SVE02	26			
	SVEPT04	30			
	SVEPT01	30			
	SVE03	N/A	turned off		
	SVE05	30			
	SVEPT03	30			
	SVE01	30			
	SVE04	30			
	SVE06	N/A	turned	off	
	SVEPT02	31			
10:45	offsite				

Location _____ Date 8/14/23

Project / Client XTO JRV 10 O&M

Construction

9:30 am Onsite Partly Cloudy

System running Intermittantly KO ~1/4 full

Runtime: 4585.6 hrs

Main Vac: 36 in H_2O

CFM: 124.6 cfm

(in H_2O)

SVE02: 32

SVEPTO4: 36

SVEPTO1: 34

SVE03: Valve closed

SVE05: 33

SVEPTO3: 33

SVE01: 32

SVE04: 34

SVE06: Valve closed

SEEPTO2: 36

9:45 offsite

36

Location _____ Date 9/20/23

Project / Client XTO JRV 10 sampling

8:40am	onsite, system running. Clear sunny			
9:00	SVE02	full of water will need maintenance		
	Ko tank empty <1/4 full.			
	Runtime: 5041 hrs.			
	Main Vac: 37 in H_2O			
	Flow: 132 cfm (PID)			
	Effluent: 850 ppm			
	Influent: 611 ppm			
9:15	Sample collected via Influent All wells			
	(PID ppm)	(in H_2O)		
	SVE02	N/A	29	← valve full of water when vents vacuum
	SVEPT04	563	31	
	SVEPT01	2,747	30	
	SVE03	Valve off		
	SVE05	670	30	
	SVEPT03	598	30	
	SVE01	241	30	
	SVE04	113	30	
	SVE06	Valve off		
	SVEPT02	100	32	
10:15	offsite			

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APPENDIX B

Laboratory Analytical Reports & Chain-of-Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Stuart Hyde
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

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JOB DESCRIPTION

James Ranch Unit #10,03E1558041
SDG NUMBER Rural Eddy, NM

JOB NUMBER

890-5299-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

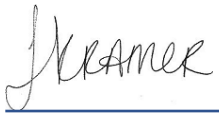
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Revision 1

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

Client: Ensolum
Project/Site: James Ranch Unit #10,03E1558041

Laboratory Job ID: 890-5299-1
SDG: Rural Eddy, NM

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-5299-1
Project/Site: James Ranch Unit #10,03E1558041 SDG: Rural Eddy, NM

Qualifiers

GC/MS VOA

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: Ensolum
Project/Site: James Ranch Unit #10,03E1558041

Job ID: 890-5299-1
SDG: Rural Eddy, NM

Job ID: 890-5299-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5299-1

REVISION

The report being provided is a revision of the original report sent on 9/21/2023. The report (revision 1) is being revised due to Per client email, correcting reporting units.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 9/20/2023 10:42 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

GC/MS VOA
Method 8260C_GRO: The following sample was diluted to bring the concentration of target analytes within the calibration range: Influent All Wells (890-5299-1). Elevated reporting limits (RLs) are provided.

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

Client Sample Results

Client: Ensolum
Project/Site: James Ranch Unit #10,03E1558041

Job ID: 890-5299-1
SDG: Rural Eddy, NM

Client Sample ID: Influent All Wells

Lab Sample ID: 890-5299-1
Matrix: Air
Date Collected: 09/20/23 09:15
Date Received: 09/20/23 10:42
Sample Container: Tedlar Bag 1L

Method: SW846 8260C GRO - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	**5210000**		250000		ug/m3			09/21/23 17:03	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*60 - 140*		*09/21/23 13:38*	*1*
4-Bromofluorobenzene (Surr)	*111*		*60 - 140*		*09/21/23 17:03*	*5*

Method: SW846 8260C - Volatile Organic Compounds (GCMS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<10000	U	10000		ug/m3			09/21/23 13:38	1
Toluene	**43400**		10000		ug/m3			09/21/23 13:38	1
Ethylbenzene	<10000	U	10000		ug/m3			09/21/23 13:38	1
m,p-Xylenes	**87000**		20000		ug/m3			09/21/23 13:38	1
o-Xylene	**18500**		10000		ug/m3			09/21/23 13:38	1
Xylenes, Total	**106000**		20000		ug/m3			09/21/23 13:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 135*		*09/21/23 13:38*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 135*		*09/21/23 17:03*	*5*

Surrogate Summary

Client: Ensolum
Project/Site: James Ranch Unit #10,03E1558041

Job ID: 890-5299-1
SDG: Rural Eddy, NM

Method: 8260C - Volatile Organic Compounds (GCMS)

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

		Percent Surrogate Recovery (Acceptance Limits)										
Lab Sample ID	Client Sample ID	BFB (70-135)										
890-5299-1	Influent All Wells	95										
890-5299-1	Influent All Wells	103										
LCS 860-122775/3	Lab Control Sample	105										
LCSD 860-122775/4	Lab Control Sample Dup	106										
MB 860-122775/6	Method Blank	91										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: 8260C GRO - Volatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)										
Lab Sample ID	Client Sample ID	BFB (60-140)										
890-5299-1	Influent All Wells	111										
890-5299-1	Influent All Wells	109										
LCS 860-122754/4	Lab Control Sample	104										
LCSD 860-122754/5	Lab Control Sample Dup	103										
MB 860-122754/7	Method Blank	112										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Ensolum
Project/Site: James Ranch Unit #10,03E1558041

Job ID: 890-5299-1
SDG: Rural Eddy, NM

Method: 8260C - Volatile Organic Compounds (GCMS)

Lab Sample ID: MB 860-122775/6
Matrix: Air
Analysis Batch: 122775

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<10000	U	10000		ug/m3			09/21/23 12:16	1
Toluene	<10000	U	10000		ug/m3			09/21/23 12:16	1
Ethylbenzene	<10000	U	10000		ug/m3			09/21/23 12:16	1
m,p-Xylenes	<20000	U	20000		ug/m3			09/21/23 12:16	1
o-Xylene	<10000	U	10000		ug/m3			09/21/23 12:16	1
Xylenes, Total	<20000	U	20000		ug/m3			09/21/23 12:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 135*		*09/21/23 12:16*	*1*

Lab Sample ID: LCS 860-122775/3
Matrix: Air
Analysis Batch: 122775

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			50000	57170		ug/m3		114	70 - 125		
Toluene			50000	54050		ug/m3		108	70 - 125		
Ethylbenzene			50000	52290		ug/m3		105	70 - 125		
m,p-Xylenes			50000	53310		ug/m3		107	70 - 125		
o-Xylene			50000	53840		ug/m3		108	70 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 135*

Lab Sample ID: LCSD 860-122775/4
Matrix: Air
Analysis Batch: 122775

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			50000	54320		ug/m3		109	70 - 125	5	35
Toluene			50000	53280		ug/m3		107	70 - 125	1	35
Ethylbenzene			50000	51740		ug/m3		103	70 - 125	1	35
m,p-Xylenes			50000	53320		ug/m3		107	70 - 125	0	35
o-Xylene			50000	53320		ug/m3		107	70 - 125	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 135*

Method: 8260C GRO - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 860-122754/7
Matrix: Air
Analysis Batch: 122754

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50000	U	50000		ug/m3			09/21/23 11:55	1

QC Sample Results

Client: Ensolum
Project/Site: James Ranch Unit #10,03E1558041

Job ID: 890-5299-1
SDG: Rural Eddy, NM

Method: 8260C GRO - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 860-122754/7
Matrix: Air
Analysis Batch: 122754

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		60 - 140		09/21/23 11:55	1

Lab Sample ID: LCS 860-122754/4
Matrix: Air
Analysis Batch: 122754

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics			500000	555200		ug/m3		111	60 - 140		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		60 - 140

Lab Sample ID: LCSD 860-122754/5
Matrix: Air
Analysis Batch: 122754

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics			500000	519700		ug/m3		104	60 - 140	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		60 - 140

QC Association Summary

Client: Ensolum
Project/Site: James Ranch Unit #10,03E1558041

Job ID: 890-5299-1
SDG: Rural Eddy, NM

GC/MS VOA

Analysis Batch: 122754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5299-1	Influent All Wells	Total/NA	Air	8260C GRO	
890-5299-1	Influent All Wells	Total/NA	Air	8260C GRO	
MB 860-122754/7	Method Blank	Total/NA	Air	8260C GRO	
LCS 860-122754/4	Lab Control Sample	Total/NA	Air	8260C GRO	
LCSD 860-122754/5	Lab Control Sample Dup	Total/NA	Air	8260C GRO	

Analysis Batch: 122775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5299-1	Influent All Wells	Total/NA	Air	8260C	
890-5299-1	Influent All Wells	Total/NA	Air	8260C	
MB 860-122775/6	Method Blank	Total/NA	Air	8260C	
LCS 860-122775/3	Lab Control Sample	Total/NA	Air	8260C	
LCSD 860-122775/4	Lab Control Sample Dup	Total/NA	Air	8260C	

Lab Chronicle

Client: Ensolum
Project/Site: James Ranch Unit #10,03E1558041

Job ID: 890-5299-1
SDG: Rural Eddy, NM

Client Sample ID: Influent All Wells

Date Collected: 09/20/23 09:15
Date Received: 09/20/23 10:42

Lab Sample ID: 890-5299-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	122775	09/21/23 13:38	AN	EET HOU
Total/NA	Analysis	8260C		5	5 mL	5 mL	122775	09/21/23 17:03	AN	EET HOU
Total/NA	Analysis	8260C GRO		1	5 mL	5 mL	122754	09/21/23 13:38	AN	EET HOU
Total/NA	Analysis	8260C GRO		5	5 mL	5 mL	122754	09/21/23 17:03	AN	EET HOU

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Ensolum
Project/Site: James Ranch Unit #10,03E1558041

Job ID: 890-5299-1
SDG: Rural Eddy, NM

Laboratory: Eurofins Houston

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-23-53	06-30-24

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
8260C		Air	Benzene
8260C		Air	Ethylbenzene
8260C		Air	m,p-Xylenes
8260C		Air	o-Xylene
8260C		Air	Toluene
8260C		Air	Xylenes, Total
8260C GRO		Air	Gasoline Range Organics

Method Summary

Client: Ensolum
Project/Site: James Ranch Unit #10,03E1558041

Job ID: 890-5299-1
SDG: Rural Eddy, NM

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GCMS)	SW846	EET HOU
8260C GRO	Volatile Organic Compounds (GC/MS)	SW846	EET HOU
5030C	Collection/Prep Tedlar Bag (P&T)	SW846	EET HOU

Protocol References:

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

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Ensolum
Project/Site: James Ranch Unit #10,03E1558041

Job ID: 890-5299-1
SDG: Rural Eddy, NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-5299-1	Influent All Wells	Air	09/20/23 09:15	09/20/23 10:42

XENCO LABORATORIES

Setting the Standard since 1990

AIR SAMPLING CHAIN OF CUSTODY

Xenco Job #:

Stafford,Texas (281-240-4200) San Antonio, Texas (210-509-3334) Phoenix, Arizona (480-355-0900)
Dallas, Texas (214-902-0300) Lubbock, TX (806-794-1296) Midland, TX (432-704-5251) El Paso, TX (915-585-3443)

Page 1 of 1

Client/Project Information

Company Name: Ensolum
Project Contact: Stuart Hyde
Email: shyde@ensolum.com Ph.No.: 337-257-8307
Project Name & No.: James Ranch Unit #10, 03E1558041
Site Location: Rural Eddy, NM
Cost Center: 1136831001 AFE: EW.2019.03368.EXP.01
Sampler(s): Connor Whitman

AIR TYPE (I = Indoor SV = Soil Vapor A = Ambient)

Sampling Equipment Information

Analysis Requested

Lab #	Field ID/Point of Collection	Start Date	Start Time	Stop Date	Stop Time	AIR TYPE	Canister ID	Flow Regulator ID	Canister Pressure in field ("Hg) Start	Canister Pressure in field ("Hg) Stop	Incoming Canister Pressure ("Hg) Lab	TVPH(8015)	BTEX(8021)				Remarks
	Influent All Wells	9/20/23	9:15		9:15am	SV						X	X				2 Tedlar bags

890-5299 Chain of Custody

	Date/Time		
(1) Relinquished By: Connor Whitman		(1) Received By:	
(2) Relinquished By:	9/20 10:42	(2) Received By:	
(3) Relinquished By:	Date/Time	(3) Received By:	
(4) Relinquished By:	Date/Time	(4) Received By:	

Requested TAT

☐ Contract TAT ☐ 3 Day ☐ Same Day
☐ 7 Day ☐ 2 Day Need By:
☐ 5 Day ☒ 1 Day

Shipping Information

☐ FedEx ☐ Other:
☐ UPS Tracking No.:
☐ LSO

Special Requests/Instructions: Collected 2-1 Liter Tedlar bags.
Bill to: Garret Green, XTO Energy, Inc., Address: 3104 E. Green St. Carlsbad, NM

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5299-1
SDG Number: Rural Eddy, NM

Login Number: 5299
List Number: 1
Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

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.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5299-1
SDG Number: Rural Eddy, NM

Login Number: 5299
List Number: 2
Creator: Baker, Jeremiah

List Source: Eurofins Houston
List Creation: 09/21/23 12:50 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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 281134

CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 281134
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 3Q 2023-Solar SVE system Update: Content Satisfactory 1. Continue to operate solar SVE system and conduct all necessary O&M activities. 2. Please submit system updates as required in 2024.	11/17/2023