

Accepted - 02/21/2025



ENSOLUM

NV

September 23, 2024

**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 2024 – 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 2024 - 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 2024 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 and 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 solar power increases throughout the day.

Ten SVE wells (SVE01 through SVE06 and SVE-PT-01 through SVE-PT-04) are currently installed at the Site, as depicted on Figure 2. In order to target total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) soil impacts at different depth intervals, the screened intervals of the SVE wells were installed 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**

During the third quarter of 2024, 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 as Appendix A.

During the third quarter of 2024, vapor extraction was applied to all SVE wells except for SVE03 and SVE06 (as recommended in the *Second Quarter 2023 - Solar SVE System Update*) to remove hydrocarbon impacts from the impacted zones at the Site. Between July 2 and September 12, 2024, approximately 941 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 901.0 hours, equating to a runtime efficiency of 95.7 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.

## VAPOR SAMPLING RESULTS

A third quarter 2024 vapor sample was collected on September 12, 2024. The vapor sample was collected from a sample port located between the SVE piping manifold and the SVE blower using a high vacuum air sampler. Prior to collection, the vapor sample was field screened with a photoionization detector (PID) for organic vapor monitoring (OVM). The vapor 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.

TVPH concentrations account for the majority contaminant mass and system emissions, with a result of 841 micrograms per liter ( $\mu\text{g/L}$ ). In comparison, individual BTEX constituent concentrations ranged from below the laboratory reporting limits up to 36.7  $\mu\text{g/L}$  in the third quarter of 2024. 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.

Vapor 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 18,791 pounds (9.40 tons) of TVPH have been removed by the system to date.

## SYSTEM ADJUSTMENTS AND RECOMMENDATIONS

A notable drop in TVPH was observed between the first quarter of 2024 and the second quarter of 2024. The drop persisted in the third quarter of 2024. Flow rates from the individual extraction wells are not currently obtained on a routine basis; however, individual well PID readings were collected in September 2024 and indicated mass removal rates from four of the extraction wells are likely much higher than those from the other four extraction wells. Ensolum personnel will collect individual extraction well flow rates during the fourth quarter of 2024 and make adjustments to maximize extraction from SVE-PT-01, SVE-PT-03, SVE-PT-04, and SVE04. Adjustments to system operation will continue to be made in order to maximize mass removal.

Monthly O&M visits will continue to be performed by Ensolum personnel to verify 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

XTO Energy, Inc.  
Third Quarter 2024 - Solar SVE System Update  
James Ranch Unit #10 Battery

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1,000 µg/L for several consecutive quarters following system optimization 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  
Senior Managing Geologist  
(970) 903-1607  
shyde@ensolum.com



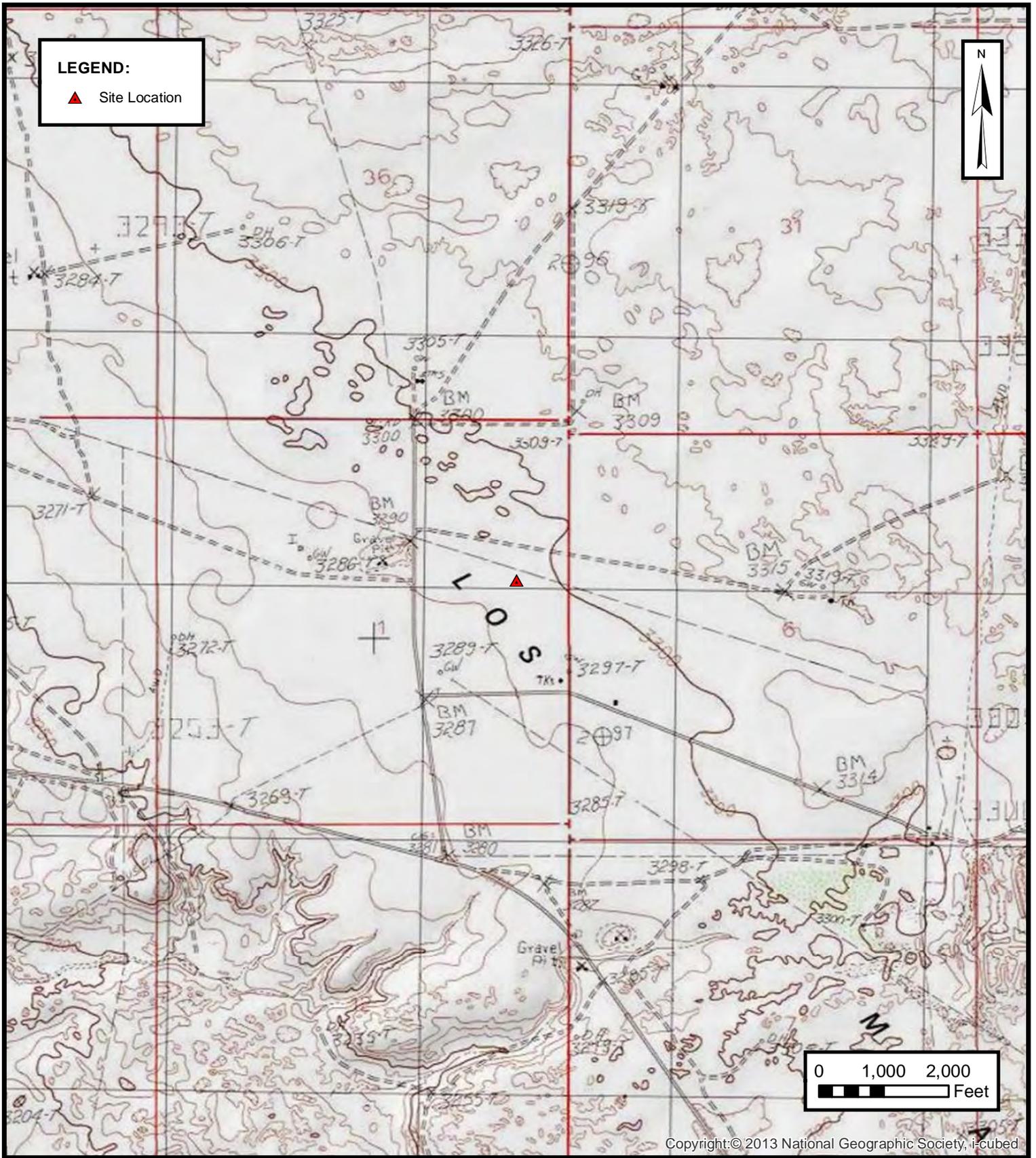
Daniel R. Moir  
Senior Managing Geologist  
(303) 887-2946  
dmoir@ensolum.com

**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



FIGURES



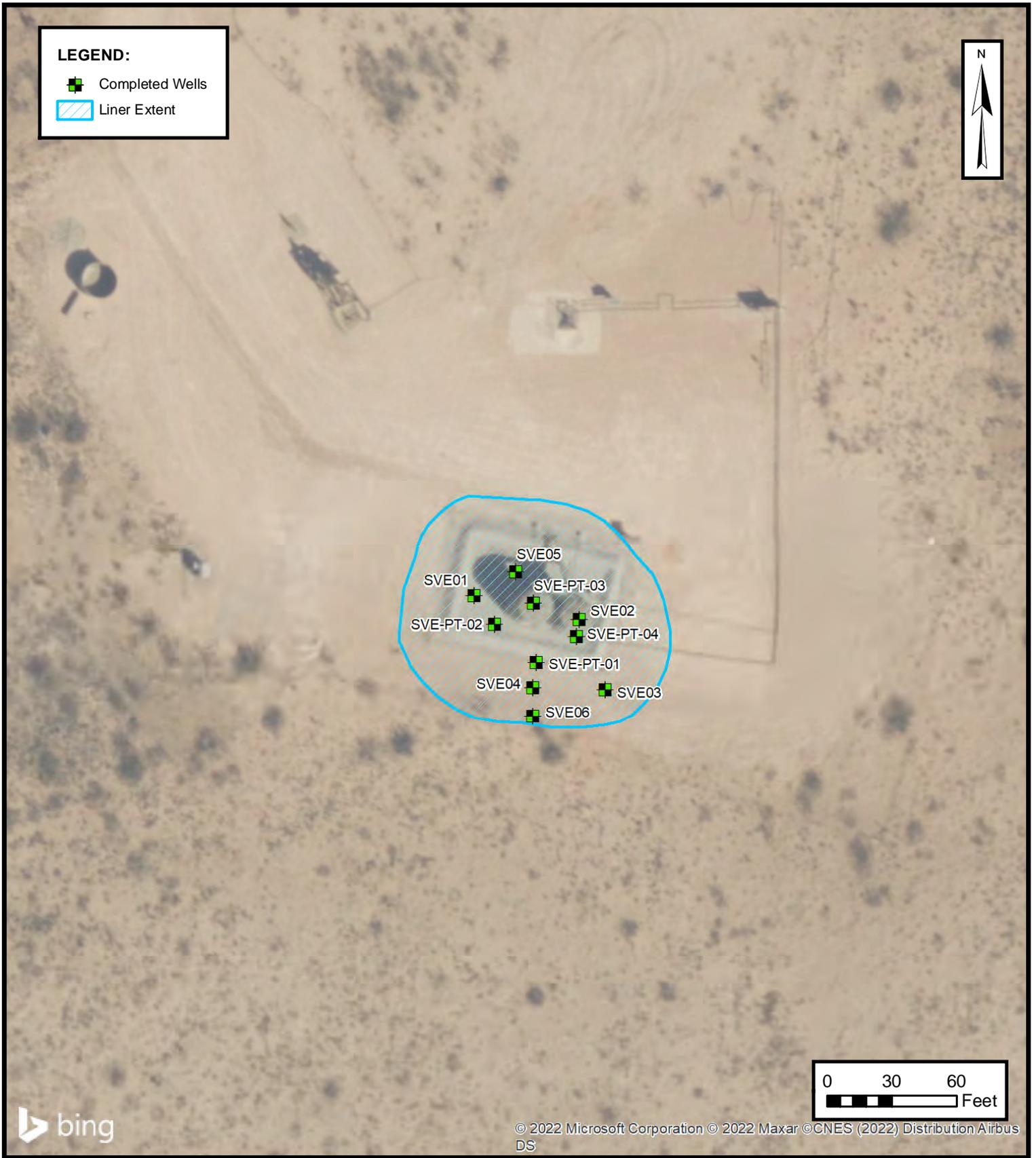
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**ENSOLUM**  
Environmental & Hydrogeologic Consultants

**SITE LOCATION MAP**

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

**FIGURE**  
**1**



**SVE SYSTEM CONFIGURATION**

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

**FIGURE**  
**2**



TABLES



**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
7/2/2024	7,847.0	--
9/12/2024	8,748.0	901.0

Time Period	July 2 to July 31, 2024	August 1 to August 31, 2024	September 1 to September 12, 2024
Days	29	31	11
Avg. Nominal Daylight Hours	14	13	12
Available Runtime Hours	406	403	132

**Quarterly Available Daylight Runtime Hours      941**  
**Quarterly Runtime Hours                              901.0**  
**Quarterly % Runtime                                    95.7%**

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



**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
12/14/2023	278	10.0	30.3	10.0	78.4	3,820
3/13/2024	358	10.0	29.0	10.0	80.8	2,900
7/2/2024	260	10.0	16.9	10.0	29.5	870
9/12/2024	391	10.0	17.4	10.0	36.7	841
<b>Average</b>	517	15.1	71	12.9	125	8,551

**Flow and Vapor Extraction Summary**

Date	Flow Rate (cfm) <sup>(1)</sup>	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
12/14/2023	149	45,377,598	6,648,678	0.00557	0.0205	0.00557	0.0514	2.52
3/13/2024 <sup>(2)</sup>	133	50,950,830	5,573,232	0.00497	0.0147	0.00497	0.0396	1.67
7/2/2024	146	62,898,594	11,947,764	0.00546	0.0125	0.00546	0.0301	1.03
9/12/2024	149	70,953,534	8,054,940	0.00557	0.0096	0.00557	0.0184	0.48
<b>Average</b>				0.00696	0.0309	0.00615	0.0562	3.59

**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	1.10
12/14/2023	5,785	744	4.14	15.3	4.14	38.2	1,871	0.936
3/13/2024	6,483	698	3.47	10.3	3.47	27.7	1,167	0.584
7/2/2024	7,847	1,364	7.45	17.1	7.45	41.1	1,404	0.702
9/12/2024	8,748	901	5.02	8.6	5.02	16.6	430	0.215
<b>Total Mass Recovery to Date</b>			53.1	186.1	50.8	361	18,791	9.40

**Notes:**

(1): average flow calculated from telemetry data beginning 9/21/2023

(2): flow rate for 3/13/2024 calcs based on January and February telemetry plus March site visit due to telemetry issues

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



# APPENDIX A

## Field Notes

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Location \_\_\_\_\_

Date 7-22-24

Project / Client XTO JALO SWE O+M

CW

12:10

onsite

Stormy / Cloudy light rain

Main Vae 10 in H<sub>2</sub>O

Runtime 8090 Hrs.

Flow 48 cfm

Wells in H<sub>2</sub>O

02 3

PT04 10

PT01 8

03 N/A

05 10

PT03 8

01 8

04 8

06 N/A

PT02 10

12:30

at site

*[Signature]*

Location \_\_\_\_\_

Date 8-19-24

Project / Client XTO JAV 10 SVE OSM

CW

9:30 on site System running, sunny/clear.

Main Val: 30 in H<sub>2</sub>O

Run time: 84 51 hrs

Flow: 117 cfm

Wells (in H<sub>2</sub>O)

02 22

PT04 24

PT01 23

03 N/A valve closed

05 24

PT03 22

01 22

04 23

06 N/A valve closed

PT02 24

9:55 off site

CW

52

Location \_\_\_\_\_ Date 9-22-24

Project / Client XTO JRU 10 Sampling

CW

10:45 on site sunny / hazy system running

Main val 36 (in H<sub>2</sub>O)  
 Flow 135 (cfm)  
 Runtime 8748 (hrs)

Effluent all wells PID (ppm) 49.1 140.4  
 Inflow all wells 330.9

Wells	(in H <sub>2</sub> O)	(PID ppm)	
02	45.27	45.7	
PT04	29	452.7	
PT01	28	2759	
03	N/A	valve closed	—
05	28	362.8	
PT03	26	494.9	
01	27	64.8	Knob sheared off
04	27	40.6	
06	N/A	valve closed	—
PT02	29	43.9	

Inflow all wells sampled 11:20 am

2 fudlow bags (1 liter) x 2

Pick up from crew @ 11:43 am



## APPENDIX B

# Laboratory Analytical Reports & Chain-of-Custody Documentation

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Environment Testing

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Tacoma Morrissey  
 Ensolum  
 601 N. Marienfeld St.  
 Suite 400  
 Midland, Texas 79701

Generated 9/16/2024 6:09:04 AM

## JOB DESCRIPTION

JAMES RANCH UNIT #10  
 03E1558041

## JOB NUMBER

890-7089-1

Eurofins Carlsbad  
 1089 N Canal St.  
 Carlsbad NM 88220



# 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



Generated  
9/16/2024 6:09:04 AM

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

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Client: Ensolum  
Project/Site: JAMES RANCH UNIT #10

Laboratory Job ID: 890-7089-1  
SDG: 03E1558041

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## Definitions/Glossary

Client: Ensolum  
Project/Site: JAMES RANCH UNIT #10

Job ID: 890-7089-1  
SDG: 03E1558041

## 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.
α	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: JAMES RANCH UNIT #10

Job ID: 890-7089-1

**Job ID: 890-7089-1**

**Eurofins Carlsbad**

## Job Narrative 890-7089-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 9/12/2024 12:25 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

### Gasoline Range Organics

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

### GC/MS VOA

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

Eurofins Carlsbad



### Client Sample Results

Client: Ensolum  
 Project/Site: JAMES RANCH UNIT #10

Job ID: 890-7089-1  
 SDG: 03E1558041

**Client Sample ID: INFLUENT ALL WELLS**

**Lab Sample ID: 890-7089-1**

Date Collected: 09/12/24 11:20

Matrix: Air

Date Received: 09/12/24 12:25

Sample Container: Tedlar Bag 1L

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Gasoline Range Organics</b>	<b>841000</b>		50000	ug/m3			09/13/24 15:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		60 - 140				09/13/24 15:54	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<10000	U	10000	ug/m3			09/13/24 15:54	1
<b>Toluene</b>	<b>17400</b>		10000	ug/m3			09/13/24 15:54	1
Ethylbenzene	<10000	U	10000	ug/m3			09/13/24 15:54	1
<b>m,p-Xylenes</b>	<b>36700</b>		20000	ug/m3			09/13/24 15:54	1
o-Xylene	<10000	U	10000	ug/m3			09/13/24 15:54	1
<b>Xylenes, Total</b>	<b>36700</b>		20000	ug/m3			09/13/24 15:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 135				09/13/24 15:54	1

### Surrogate Summary

Client: Ensolum  
 Project/Site: JAMES RANCH UNIT #10

Job ID: 890-7089-1  
 SDG: 03E1558041

**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)
890-7089-1	INFLUENT ALL WELLS	104
LCS 860-187049/3	Lab Control Sample	109
LCSD 860-187049/4	Lab Control Sample Dup	108
MB 860-187049/6	Method Blank	94

**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)
890-7089-1	INFLUENT ALL WELLS	95
LCS 860-187039/4	Lab Control Sample	98
LCSD 860-187039/5	Lab Control Sample Dup	98
MB 860-187039/7	Method Blank	98

**Surrogate Legend**

BFB = 4-Bromofluorobenzene (Surr)

### QC Sample Results

Client: Ensolum  
Project/Site: JAMES RANCH UNIT #10

Job ID: 890-7089-1  
SDG: 03E1558041

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

Lab Sample ID: MB 860-187049/6  
Matrix: Air  
Analysis Batch: 187049

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			09/13/24 15:33	1
Toluene	<10000	U	10000	ug/m3			09/13/24 15:33	1
Ethylbenzene	<10000	U	10000	ug/m3			09/13/24 15:33	1
m,p-Xylenes	<20000	U	20000	ug/m3			09/13/24 15:33	1
o-Xylene	<10000	U	10000	ug/m3			09/13/24 15:33	1
Xylenes, Total	<20000	U	20000	ug/m3			09/13/24 15:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 135		09/13/24 15:33	1

Lab Sample ID: LCS 860-187049/3  
Matrix: Air  
Analysis Batch: 187049

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	50000	47990		ug/m3		96	70 - 125
Toluene	50000	52380		ug/m3		105	70 - 125
Ethylbenzene	50000	54660		ug/m3		109	70 - 125
m,p-Xylenes	50000	52000		ug/m3		104	70 - 125
o-Xylene	50000	57530		ug/m3		115	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 135

Lab Sample ID: LCSD 860-187049/4  
Matrix: Air  
Analysis Batch: 187049

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	47680		ug/m3		95	70 - 125	1	35
Toluene	50000	50190		ug/m3		100	70 - 125	4	35
Ethylbenzene	50000	51560		ug/m3		103	70 - 125	6	35
m,p-Xylenes	50000	49550		ug/m3		99	70 - 125	5	35
o-Xylene	50000	55140		ug/m3		110	70 - 125	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 135

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

Lab Sample ID: MB 860-187039/7  
Matrix: Air  
Analysis Batch: 187039

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			09/13/24 15:13	1

Eurofins Carlsbad

### QC Sample Results

Client: Ensolum  
 Project/Site: JAMES RANCH UNIT #10

Job ID: 890-7089-1  
 SDG: 03E1558041

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

Lab Sample ID: MB 860-187039/7  
 Matrix: Air  
 Analysis Batch: 187039

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140		09/13/24 15:13	1

Lab Sample ID: LCS 860-187039/4  
 Matrix: Air  
 Analysis Batch: 187039

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	412000		ug/m3		82	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		60 - 140

Lab Sample ID: LCSD 860-187039/5  
 Matrix: Air  
 Analysis Batch: 187039

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	411600		ug/m3		82	60 - 140	0	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		60 - 140

### QC Association Summary

Client: Ensolum  
Project/Site: JAMES RANCH UNIT #10

Job ID: 890-7089-1  
SDG: 03E1558041

#### GC/MS VOA

##### Analysis Batch: 187039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7089-1	INFLUENT ALL WELLS	Total/NA	Air	8260C GRO	
MB 860-187039/7	Method Blank	Total/NA	Air	8260C GRO	
LCS 860-187039/4	Lab Control Sample	Total/NA	Air	8260C GRO	
LCSD 860-187039/5	Lab Control Sample Dup	Total/NA	Air	8260C GRO	

##### Analysis Batch: 187049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7089-1	INFLUENT ALL WELLS	Total/NA	Air	8260C	
MB 860-187049/6	Method Blank	Total/NA	Air	8260C	
LCS 860-187049/3	Lab Control Sample	Total/NA	Air	8260C	
LCSD 860-187049/4	Lab Control Sample Dup	Total/NA	Air	8260C	

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### Lab Chronicle

Client: Ensolum  
Project/Site: JAMES RANCH UNIT #10

Job ID: 890-7089-1  
SDG: 03E1558041

**Client Sample ID: INFLUENT ALL WELLS**

**Lab Sample ID: 890-7089-1**

Date Collected: 09/12/24 11:20

Matrix: Air

Date Received: 09/12/24 12:25

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	187049	09/13/24 15:54	KLV	EET HOU
Total/NA	Analysis	8260C GRO		1	5 mL	5 mL	187039	09/13/24 15:54	KLV	EET HOU

**Laboratory References:**

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

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### Accreditation/Certification Summary

Client: Ensolum  
Project/Site: JAMES RANCH UNIT #10

Job ID: 890-7089-1  
SDG: 03E1558041

#### 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	06-30-25

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

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### Method Summary

Client: Ensolum

Job ID: 890-7089-1

Project/Site: JAMES RANCH UNIT #10

SDG: 03E1558041

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

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### Sample Summary

Client: Ensolum  
Project/Site: JAMES RANCH UNIT #10

Job ID: 890-7089-1  
SDG: 03E1558041

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-7089-1	INFLUENT ALL WELLS	Air	09/12/24 11:20	09/12/24 12:25

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-7089-1

SDG Number: 03E1558041

Login Number: 7089

List Source: Eurofins Carlsbad

List Number: 1

Creator: Lopez, Abraham

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.	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	

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### Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-7089-1

SDG Number: 03E1558041

Login Number: 7089

List Number: 2

Creator: Baker, Jeremiah

List Source: Eurofins Houston

List Creation: 09/13/24 11:42 AM

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	

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Sante Fe Main Office  
Phone: (505) 476-3441

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Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 397375

**CONDITIONS**

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 397375
	Action Type: [REPORT] Alternative Remediation Report (C-141AR)

**CONDITIONS**

Created By	Condition	Condition Date
nvelez	Accepted for the record. See App ID 425791 for most updated status.	2/21/2025